GROUP ON EARTH OBSERVATIONS

BLUE PLANET Oceans and Society

Oceans and Society: Blue planet

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A Personal View on GEOSS

GEOSS is a political driven initiative that lives from **voluntary contributions** of their member states and related organizations

Although it appears differently it follows a truly **bottom-up approach**

GEOSS has been established on a very broad thematic and contributor base

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Implementation of GEOSS

10-Year Implementation Plan

GEO Workplan 2012-15 as a guideline for achieving the Strategic Targets

The establishment of the **GEOSS Common** (Data) **Infrastructure** is the central tangible outcome

Task groups/working groups/meetings

GEO Community of Practices (CoP)

- Coastal Zone
- Ocean Observation founded 2011

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Components of Task SB-01

C1: Global Ocean Information Coordination and Access
C2: Operational Systems for Monitoring of Marine and Coastal Ecosystems
C3: A Global Operational Ocean Forecasting Network
C4: Applications of Earth Observations and Information to Sustainable Fishery and Aquaculture Management

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Scope of Task SB-01

Building on strong existing international, regional and natioanl activity

- **GMES –** Marine Core Services (MyOCEAN)
- **GlobalPOGO** Partnership for Observation of the Global Oceans
- **GOOS** Global Ocean Observing System (IOC, WMO, UNEP, ICSU)
- **OceanSITES** time series sites
- **ChloroGIN** Chlorophyll Global Integrated network
- **GACS** Global Alliance of Continuous Plankton Recorder Surveys
- **IQOE** International Quiet Ocean Experiment

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Scope of Task SB-01

Expected Achievements by 2015

Provide **sustained ocean observations and information** to underpin the development, and assess the efficacy, of global-change adaptation measures (such as those related to vulnerability and impacts of sea-level rise).

Improve the global coverage and data accuracy of coastal and open-ocean observing systems (remote-sensing and in-situ).

Coordinate and promote the gathering, processing, and analysis of **ocean observations**.

Establish a global ocean information system by **making observations and information, generated on a routine basis, available through the GEOSS Common Infrastructure**.

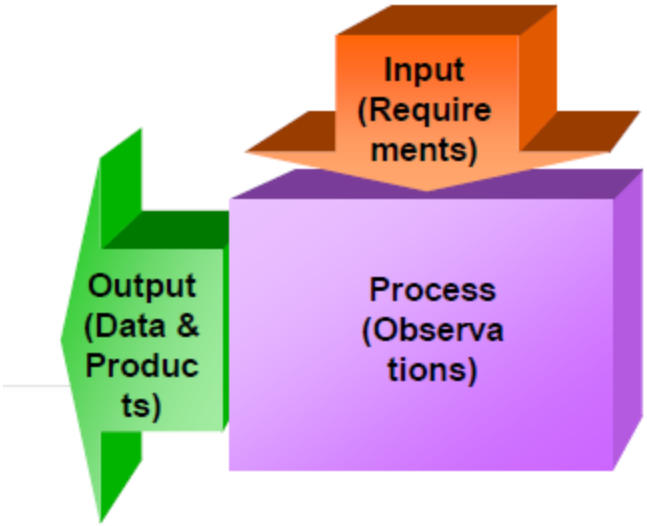
Develop a **global operational ocean forecasting network**. Provide advanced training in ocean observations, especially for developing countries.

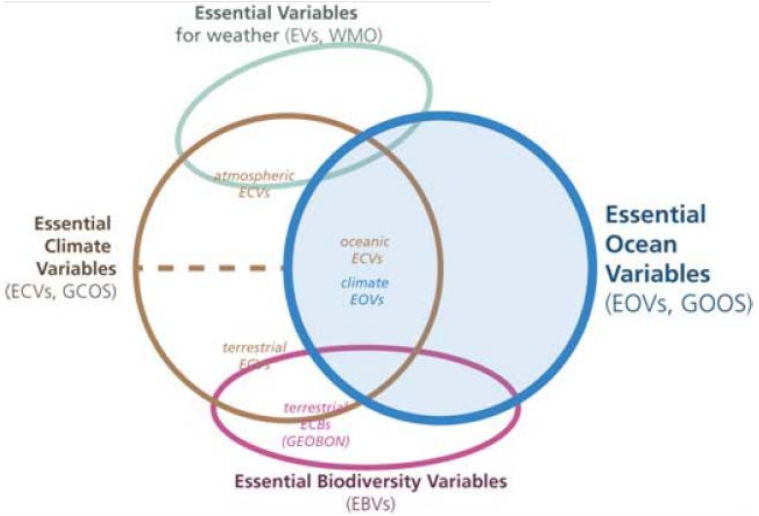
Raise awareness of **biodiversity issues in the ocean**.

C1: Global Ocean Information Coordination and Access

IOC/GOOS Framework on Ocean Observing

Driven by requirements, negotiated with feasibility Essential Ocean Variables





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How is Europe is contributing to GEOSS

ARCHITECTURE

GEOWOW
EuroGEOSS

SCIENCE AND TECHNOLOGY

EGIDA

CAPACITY BUILDING

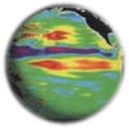
EnviroGRIDS
GENESI-DEC

EC funded Research Projects

Water

CEOP-AEGIS
HYPOX
EUGENE

Climate



COCOS
EuroSITES
ACOBAR
EUGENE
ERACLIM

Ecosystem

e-SOTER
EnviroGRIDS
HYPOX
EO-MINERS
Impact Min

Biodiversity

EBONE

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Observing platforms and infrastructures

100% **Surface measurements** from volunteer ships (VOS)

250 ships in VOSclim pilot project

100% Global **drifting surface buoy** array

Ice buoys

5° resolution array: 1250 floats

66% **Tide gauge** network (GCOS subset of GLOSS core network)

170 real-time reporting gauges

81% **XBT** sub-surface temperature section network

51 lines occupied

100% Argo **profiling float** network

3° resolution array: 3000 floats

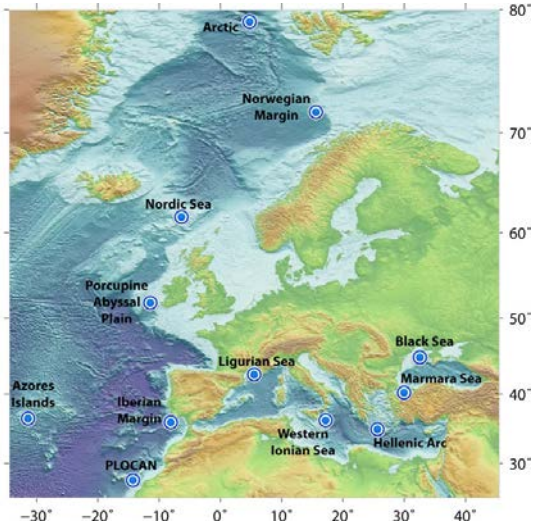
62% Repeat **hydrography** and **carbon inventory**

Full ocean survey in 10 years

Ocean observatories

EC funded projects
ESONET, HYPOX

EMSO



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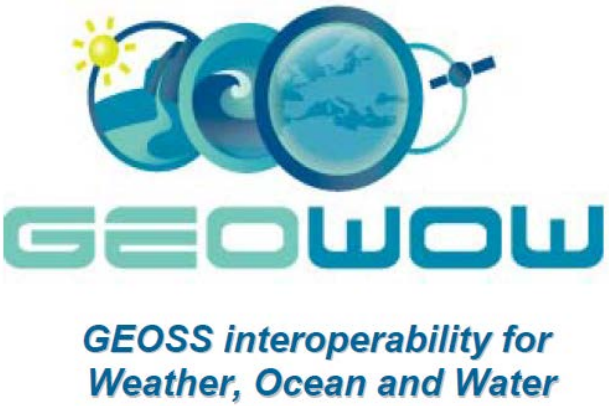
GEOWOW



Developing applications and integrating ocean data streams into the GEOSS Common Infrastructure

- particular focus on ocean assessments, ecosystem applications
- including all ocean data streams

Lead by GOOS

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How Europe will benefit from GEOSS implementation in the area of "Oceans and Society

GEOSS is ensuring a more effective exchange of knowledge and information across different disciplines

- Learning from other discipline‘s best practices
- Developing optimal data products and services
- Integrating existing data infrastructures
- Improving the assessment of the status of the ocean environment (“Good environmental status“ as mentioned in MSFD)

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Future needs in terms of resources, collaboration and governance

- Prioritization of services and adaptation of the GCI to the needs of
  geohazards, algae blooms, ocean forecasting and sustainable fisheries
- Improve the linkage between weather and ocean data services
- Strenghtening the engagement of GMES to give Europe a stronger voice in GEOSS and giving directions

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CONCLUSIONS

There is a need for demonstrating the importance and relevance of continous ocean monitoring within GEOSS (**GEOWOW**)

Architectural concepts like **brokering service approach** as in **EGIDA** should be used to build up demonstrators and operational services

Besides research institutions other stakeholders like **companies** and **NGOs** have to get more strongly involved

European legislation should support the idea of establishing independently operated environmental **monitoring infrastructures** alongside to ongoing offshore activities