Mid-term review, 12 December 2013, Brussels

PAN-EUROPEAN INFRASTRUCTURE
FOR OCEAN & MARINE DATA
MANAGEMENT

DESCRIPTION OF WORK FOR NEXT PERIOD

SeaDataNet

Summary

- Present status and main goals for 2014-2015

- Postponed deliverables

- Contractual deliverables until the end of SDN2

- Contractual milestones until the end of SDN2
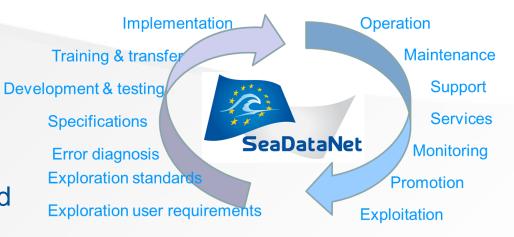
- Work plan per work package

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Present status

- End of 1st innovation cycle

  – Adopting INSPIRE compliant ISO 19139 based XML schema's for CDI and CSR (new versions of the tools and services)

Implementation · Operation
Training & transfer · Maintenance
Development & testing · Support
Specifications · Services
Error diagnosis · Monitoring
Exploration standards · Promotion
Exploration user requirements · Exploitation

  – Adopting Common Vocabularies Version 2 (NVS 2.0) in all metadata directories (CDI, CSR, EDMED, EDMERP, EDIOS) and data formats (SeaDataNet ODV, SeaDataNet NetCDF)

  – Adopting a more effective transfer of updated and new metadata entries for CDI and CSR by applying OGC CS-W harvesting between central portals and distributed data centres

  – Continue to operate without interruption, while the infrastructure is gradually upgraded

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Main goals for the next 2 years

- Implementation of the 2nd innovation cycle
  - Extending the capabilities for handling a wide range of data types in a standardised way, both for archived and real-time data, by adopting the OGC Sensor Web Enablement (SWE) standards, adding visualisation services, and machine to machine interfaces for a number of applications.

- Products catalogue and products delivery

- Future governance for a sustain infrastructure

Postponed deliverables and milestones

- D9.5 – Machine interface for CDI (CS-W)
  - Testing phase at present, delayed to end of January
- D10.2 – First release of aggregated dataset
  - Phase 1 report: draft ready, delivered internally
    - **Describes all the procedures**
  - Phase 2 : after the 2nd version of the aggregated dataset . February 2014
    - **Linked to the regional data sets**

35 new deliverables (1)

- WP 2: 8 new deliverables (2014 and 2015)
  - Steering committees and plenary meetings minutes
  - Annual metric reports
- WP3: 2 new deliverables (2014)
  - 2nd training course
- WP5: 2 new deliverables
  - End of 2nd innovation cycle with O&M and SensorML for support of Operational oceanography (2014)
  - New visualisation services, new data types (2015)

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35 new deliverables (2)

- WP6: 11 new deliverables for new versions of
  - Posters, leaflets (2014 and 2015)
  - Electronic newsletters (2014 and 2015)
  - Strategic promotion progress report (2014 and 2015)
  - Progress report on IPR issues (2014 and 2015)
- WP8 : 3 new deliverables
  - Vocabularies (2015)
  - Standard submissions to JCOMM/IODE (2014)
  - ISO-19139 product catalogue (2014)

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35 new deliverables (2)

- WP9: 6 new deliverables for new versions of
  - MIKADO, DM, ODV and DIVA software (2014 and 2015)
  - Upgraded central CDI discovery and access service (2014)
- WP10: 3 new deliverables
  - Example data products (2014)
  - Final data products (2015)
  - Products catalogue (2015)

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7 Milestones

Milestone	N°	Contract Del. month	Leader
2nd training workshop	9	32 (05/2014)	RBINS-BMDC
Proposal of possible legal models for a sustain operation of SeaDataNet	10	36 (09/2014)	RBINS-BMDC
Metadata and data interoperability with global portals (IODE, ODP, GEOSS)	11	40 (01/2015)	RIHMI
End of 2nd innovation cycle – 2nd major upgrade of SDN infrastructure ready (with O&M and SensorML, new visualisation services, new data types)	12	42 (03/2015)	MARIS
Final version of aggregated dataset products	13	46 (07/2015)	INGV
Final project meeting	14	48 (09/2015)	IFREMER
Final reporting	15	50 (11/2015)	IFREMER

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WP2 Monitoring

- Definition and calculation of the total availability index
    - Definition of a formula
    - Calculation of weights of services (from statistics)
    - Software development
- Compare critical events with 2nd monitoring centre (OGS) to avoid false alarms
- Improve monitoring portal with more statistics, information and results from availability index calculations

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WP 3 - 2nd training course

- Planned on Month 32 : May 2013
  - 20, 21, 22 May 2014 in Ostend, IOC-IODE
  - Programme (short presentations, plenty of time for exercise and questions, partners will be trained on their own data)
    - Biological data population (CDI, ODV)
    - New DM with NetCDF
    - Sensor ML and O&M profiles for operational stations
    - QC data, duplicate prevention
    - NetCDF files with NEMO
    - Upgrading CD entries with CSR ids, EDMED reference and publications

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WP5 – *upgraded CDI data access*

- CS-W for CDI exchange to GEOSS and ODP (early 2014)

- Inclusion of SeaDataNet NetCDF (CF) format next to ODV format in shopping and download services (during 2014)

- Population of marine biology data sets (2014 and further)

- Wider deployment of CS-W harvesting procedure for CDI updating (during 2014)

- Extending CDI with O&M and SensorML profiles for operational oceanography stations to give access to SOS services, incl visualisation of time series (pilot for selected EuroGOOS providers) (start mid 2014 via Training WS)

- Automated maintenance of data buffers and regulated access by API for agreed user communities (2014 - 2015)

- Further upgrading of CDI user interfaces

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WP6 – Future governance – Working group conclusions

- 3 possible future governance
  - European Research Infrastructure Consortium (ERIC)
  - European Economic Interest Group (EEIG)
  - Non-Profit (International) Organisation (NPO)

- ERIC: involves a very long-term "roadmap" and must proceed at the Ministerial level (this "road" may prove to be impossible, such as in France),

- EEIG: the main goals of SDN are not related to economic interests

- **NPO**: the most effort-effective approach seems to be the Non-Profit International Organization (Belgian)

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WP6 – Future governance – Following actions

- **Write a MoU** (internal contract) (2014) and have it signed by all partners (2015)
- WG conducting the process towards the application for the adopted legal framework (involving experts in legal affair)=
- **Writing all document**s required to apply for the chosen legal entity (to be done by the WG within 6 months)
  - Name, seat, …, statutes of the legal entity
  - implementing rules which complement the statutes and may include Data Policy
  - potential contributions of the partners and MS, and their breakdown
- **Formal approval** of the steering committee and formal presentation during the SDN final plenary meeting (2015)
- **Formal signature** of partners (end 2015)

WP6 – Intellectual Property Rights

- For SeaDataNet there could be 2 official licenses
    - For SeaDataNet software like (MIKADO, NEMO…) one could think to generalise the ODV license
    - For free software like DIVA, the license used is the European license

- Current outstanding issues
    - Appropriate citation of data sources (DOIs?)
    - IPR issues in the perspective of giving SeaDataNet a legal form.
    - The particular case of the non-EU partners

WP8 – SDN standards to IODE/JCOMM

- Standards to be submitted to JCOMM/Ocean data Standards and Best Practices (ODSBP) for adoption as a global standard
  - International feedback and input for tuning
  - Global dissemination
  - Interoperability
- To be submitted:
  - Vocabularies
  - SeaDataNet NetCDF and ODV format
  - CSR and CDI ISO-19139

WP8 – O&M, SensorML

- Finalisation of O&M and SensorML profiles for selected sensors from operational oceanography stations and research vessels (2014)

- Including development and population of relevant vocabs (2014)

- Development and testing of SOS service, incl visualisation of time series (2014 – 2015)

- Linkage to CDI and EDIOS services

- Synergy with EuroFleets 2, JERICO and ODIP (EU – USA – Australia)

WP8, WP10 – SDN product catalogue (1)

- SeaDataNet products ISO19139 profile (analysis and buffer collection) has been circulated and validated. Shared with MyOcean and EMODNet

- Required functions have been realised by IFREMER in Sextant (GeoNetwork open-source): Thesauri, workflow, DOI and landing pages.

- Development of CMS with editing form (early 2014)

- DIVAtoXML templates product descriptions (March 2014)

- Launch in SeaDataNet web portal (including integration with OceanBrowser viewing component) (mid 2014).

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WP9 – Machine to machine

- CS-W for CDI exchange to GEOSS and ODP (early 2014)

- Facility for setting and governance of regulated harvesting and aggregation of data sets for specific user communities (2014)

- Automated maintenance of data buffers by means of Robot harvesting following user profiles (2014)

- Validation of data buffers into aggregated data sets (2014)

- Arranging storage and regulated access to the buffers of aggregated data sets (2014)

- Deployment of Oceanotron on top of buffers for OGC visualisation services (WMS, WFS,) and OGC API (2014 – 2015)

- Possible use of OpenDAP (2014 – 2015)

WP10 – Data aggregation and climatologies

CDI

↓

TS aggregated dataset
free-access data + under SDN
licence + restricted data (new!)

↓

REGIONAL TS COLLECTIONS
Arctic - North Atlantic - North Sea - Baltic Sea - Med Sea - Black Sea

↓   ↓

1900-2012
COMPLETE DATA
COLLECTIONS (containing
restricting data)
for internal use only
-> SDN STAT PRODUCTS

1. 1900-2012
DATA COLLECTIONS
(unrestricting data only)
for external SDN release
2. 1990-2012 SUB-SETS
MyOcean

Allows to

- Deliver the best aggregated data sets which mirror the true infrastructure content
- Retrieve also restricted data that have to be used for the SDN climatologies computation
- Higher quality of resulting SDN climatologies

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Conclusions

- Work is well underway and no surprises foreseen

- Excellent teamwork

- Good international cooperation (ODIP, GEOSS, ODP, IODE, JCOMM/OPS, ICES)

- Closer cooperation with operational oceanography communities

- Volume of metadata and data steadily increasing and quality improving via data product cycles

- Uptake of extra data centres under influence of related projects that are adopting the SeaDataNet infrastructure (EMODNet lots, COCONET, JERICO, EuroFleets 2, ……..)

- Ideas and motivation for SeaDataNet 3 for innovations, maintaining state of the art, and serving society