SeaDataNet

PAN-EUROPEAN INFRASTRUCTURE FOR OCEAN & MARINE DATA MANAGEMENT

WP10 Synthesis on Products

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OUTLINE

- Objectives
- Overview of the activities
- QC strategy implemented
- Results (1) → Aggregated datasets
- Results (2) → Climatologies
- Product dissemination and publications
- Conclusions
- Lesson learned

Objectives

1. To **validate data access** and processing services
2. To analyze coherency, coverage and quality of the datasets at full basin scale
3. To create regional **aggregated datasets**
4. To compute **statistical products** (climatologies) from data collections
5. To use ODV and DIVA tools for QC and climatology computation
6. To coordinate and support the harmonization of products
7. To make products and relative documentation available to the users

WP10 ACTIVITIES

D10.1 COMMON SPECIFICTIONS

YR1

1. Overview of SDN infrastructure content per sea region
2. Specification of aggregated datasets and statistical products
3. Definition of **aggregation procedure**
4. Definition of **QC strategy** and data **QC procedure**
5. Start of **SDN-MyOcean INSITU TAC collaboration**

   → 1st Joint Meeting SDN-MyO

WP10 ACTIVITIES

D10.1 COMMON SPECIFICTIONS

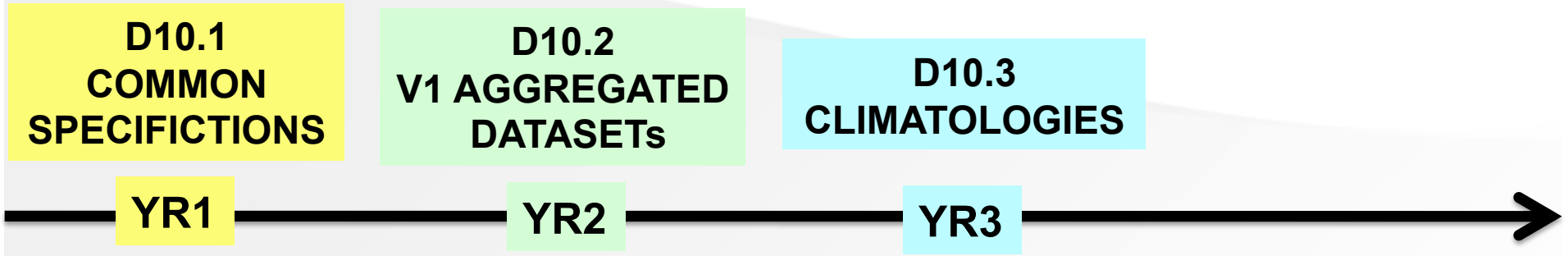
D10.2 V1 AGGREGATED DATASET

YR1 → **YR2**

1. 1st data harvesting and aggregation exercise (V1)
2. QC analysis of V1 datasets
3. Release of sub-sets (1990-2012) to MyOcean INSITU TAC
4. Analysis of data anomalies and feedback to data providers
5. Decision to repeat aggregation procedure and QC assessment → V1.1

   → 2nd Joint Meeting SDN-MyO

WP10 ACTIVITIES



1. 2nd data harvesting and aggregation (V1.1)
2. QC analysis of V1.1 datasets **+ restricted data**
3. 2nd feedback to data providers on data anomalies
4. Preliminary work on climatology: DIVA settings, resolution, background field definition
5. Release of V1.1

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WP10 ACTIVITIES

1. 3rd data harvesting and aggregation (V2)
2. climatologies → Product Meeting (Athens, April 8th, 2015)
3. QC analysis of V2 datasets
4. 3rd feedback to data providers
5. 2nd release of sub-sets to Copernicus Marine Service
6. Release of V2 datasets and climatologies

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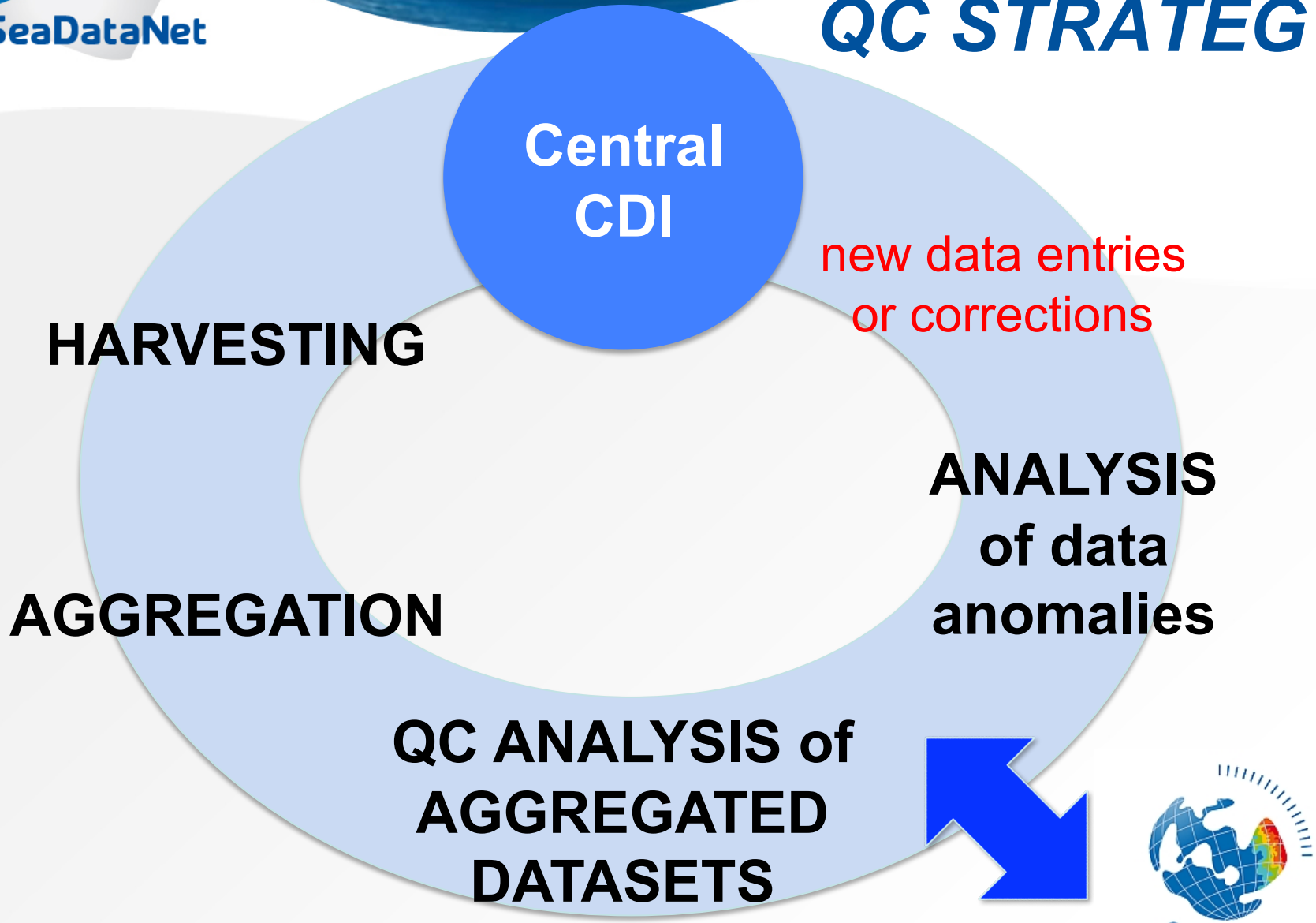
QC STRATEGY



myOcean

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Results (1): aggregated datasets

	AVAILABILITY		release to MyO		Feedback to data providers	
	V1.1	V2	V1.1	V2	V1.1	V2
MED SEA						
BALTIC SEA						
BLACK SEA						
NORTH SEA						
ARCTIC						
ATLANTIC						

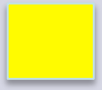
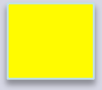
Results (2): V1.1 climatologies

RCs presented their results at the Product Meeting in Athens (8th of April 2015)

- decision to keep working on the V1.1 climatologies
- switch to 4.6.9 DIVA version
- better tuning of DIVA parameters
- harmonization of the reference and error fields computation
- common consistency analysis approach which considers WOA13 and previos climatologies

Final outcome: need to increase the number of data to get a more omogeneous data coverage and increase horizontal and vertical resolution

Results (2): V1.1 climatologies

	AVAILABILITY
MED SEA	
BALTIC SEA	
BLACK SEA	
NORTH SEA	
ARCTIC	
ATLANTIC	

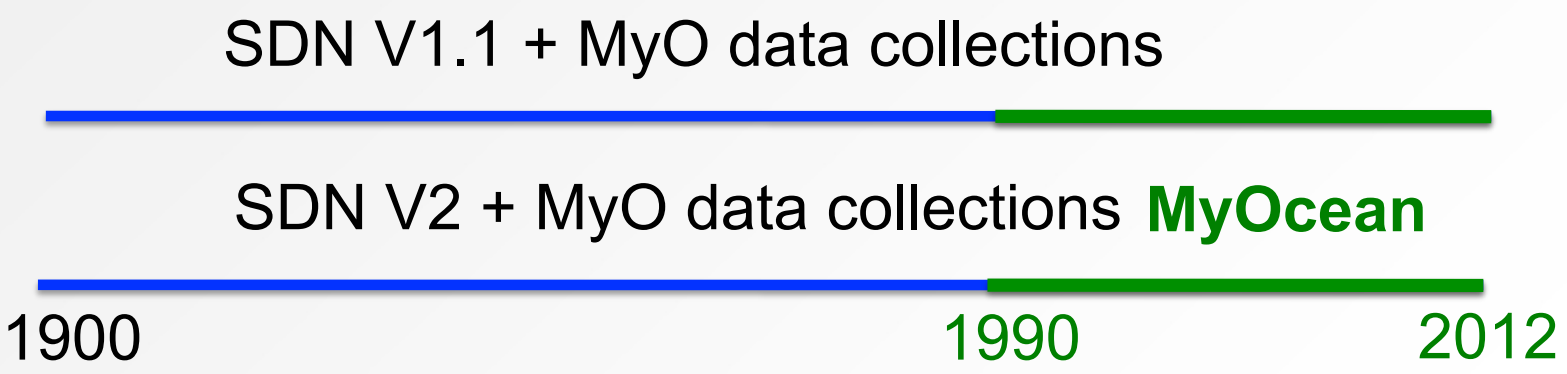
- Consistency analysis is on going
- some additional work is on going (seasonal→ monthly, annual to seasonal)
- harmonizing approach on the setting → maximize the quality of the final products

Scientific Papers

- 2 papers: one on data collections and one on climatologies
- A first draft on data collections will circulate soon
- Precondition to submit a manuscript in Earth System Science Data (ESSD): the data sets referenced are submitted to a long-term repository and have a DOI
- Need to finalize product dissemination before paper submission
- Specific publications on climatologies in some regions are under evaluation

MyO data in SDN products?

- Webex Meeting (Feb 2015): it was decided to evaluate whether to include MyO data from international sources into SDN products to improve their quality
- products definition and their relative time schedule was revised accordingly



MyO data in SDN products?

Feasibility study on V1.1 metadata was launched at Ifremer (T. Carval) to detect the amount of data available per sea region and to evaluate the time required to fulfill it

- the amount of "new" data per sea basin was surprising

  Med**+158%** Baltic**+58%** Black Sea**+35%** Arctic**+57%**
- Ifremer re-run this procedure considering the V2 collections → results on the Atlantic
- decision to postpone SDN-MyO data merging for future projects and use the results of this feasibility study as motivation to continue SDN activities in the future

Conclusions

- **Data Aggregation**: an extensive exercise to manage more than 1M data and huge distributed effort involving 62 data centers and more than 300 data originators
- **QC Strategy** was successfully implemented and consolidated
- **QC Strategy** permitted to identify and correct lots of data and to highly improve the quality of SDN infrastructure content
- **SDN-MyO collaboration** was crucial for the QC strategy implementation (definition of formats and information flow)
- WP10 activities contributed to improve ODV and DIVA tools
- WP10 promoted collaborations and communication
- WP10 objectives have been fulfilled
- RCs were active and collaborative bringing about an **overall good quality of products**

LESSON LEARNED

- A lot of time was spent to implement and consolidate the QC strategy, the information flow, formats. This left few time to work on climatologies
- Need to further populate the infrastructure and reduce the amount of restricted data to improve the quality of products
- SDN-Copernicus MS collaboration should continue to include CMS data and to complement DM and RT QC procedures and data
- regional data collections provided also in NetCDF format could serve a wider user community
- from the interaction with Copernicus, EMODNET and Checkpoints come out the increasing need of ocean synthesis computed by in situ data for validation purposes