Building a reliable and standardized long-term data set of surface coastal ocean currents from the European HF radars

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REAL TIME
DATASETS

COASTAL
PROCESSES

S A R
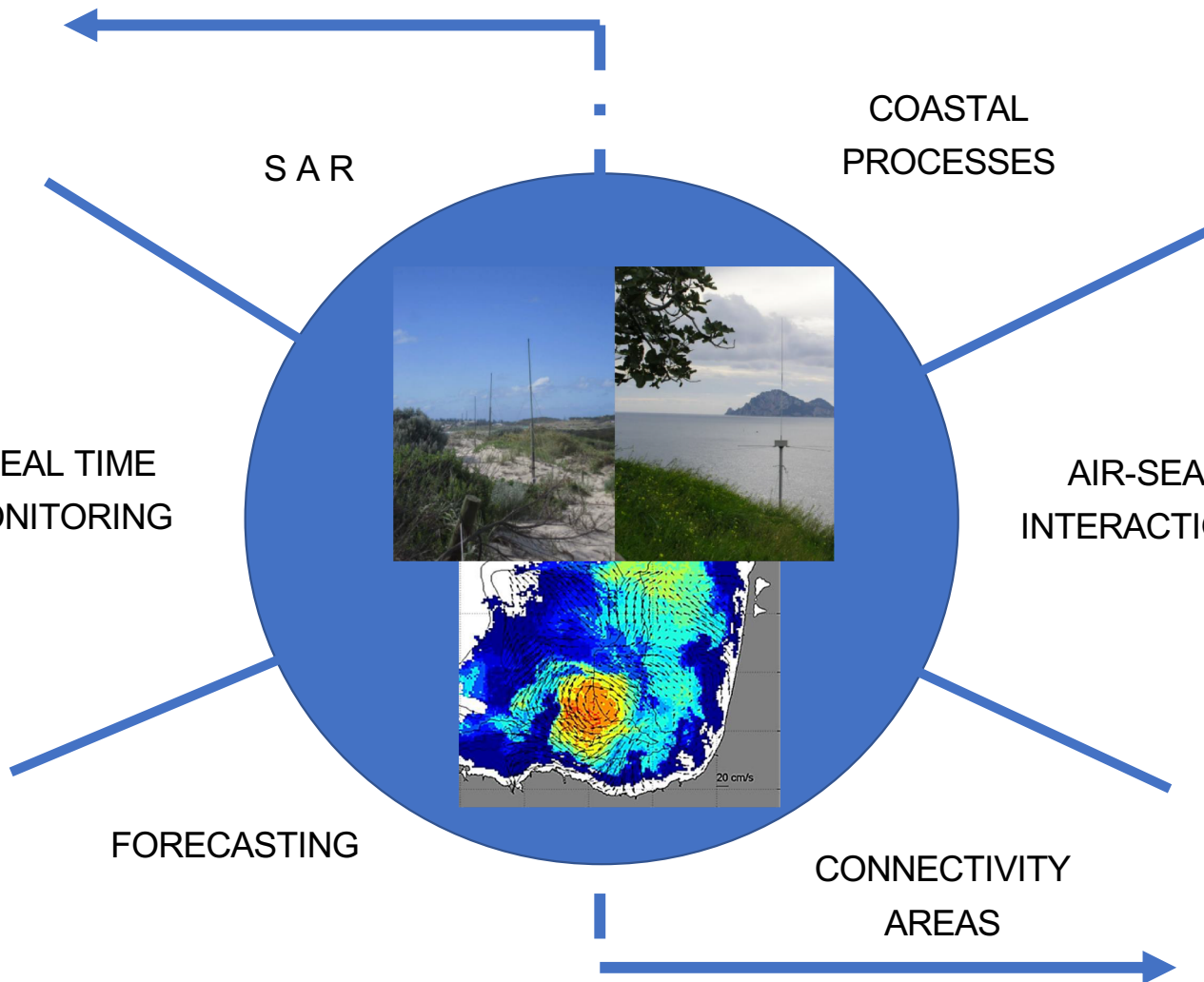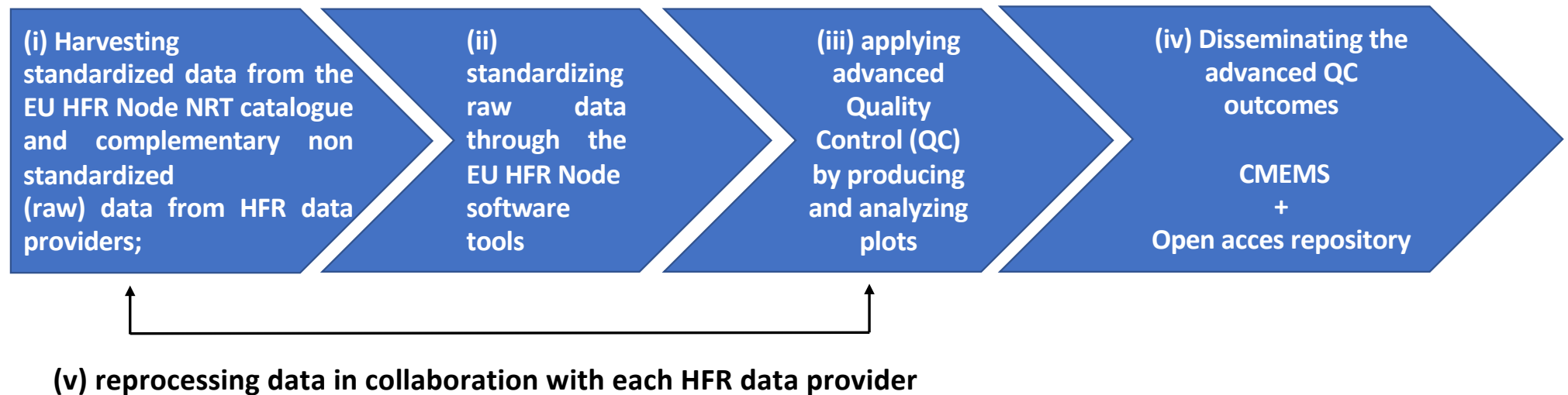
REAL TIME
MONITORING

AIR-SEA
INTERACTION

FORECASTING

CONNECTIVITY
AREAS

HISTORICAL
DATASETS

EuroGOOS
European Global Ocean
Observing System

9th EuroGOOS International Conference, May 2021

![HFRadar EuroGOOS Task Team]

HFR Historical (REP) data management

(i) Harvesting standardized data from the EU HFR Node NRT catalogue and complementary non standardized (raw) data from HFR data providers;	**(ii) standardizing raw data through the EU HFR Node software tools**	**(iii) applying advanced Quality Control (QC) by producing and analyzing plots**	**(iv) Disseminating the advanced QC outcomes** **CMEMS** **+** **Open acces repository**

(v) reprocessing data in collaboration with each HFR data provider

The **European HFR Node acts as the focal point** for the European HFR data providers and implements the HFR data stream from the data providers to the CMEMS-INSTAC Global Production Unit (PU).

HFRadar
EuroGOOS Task Team
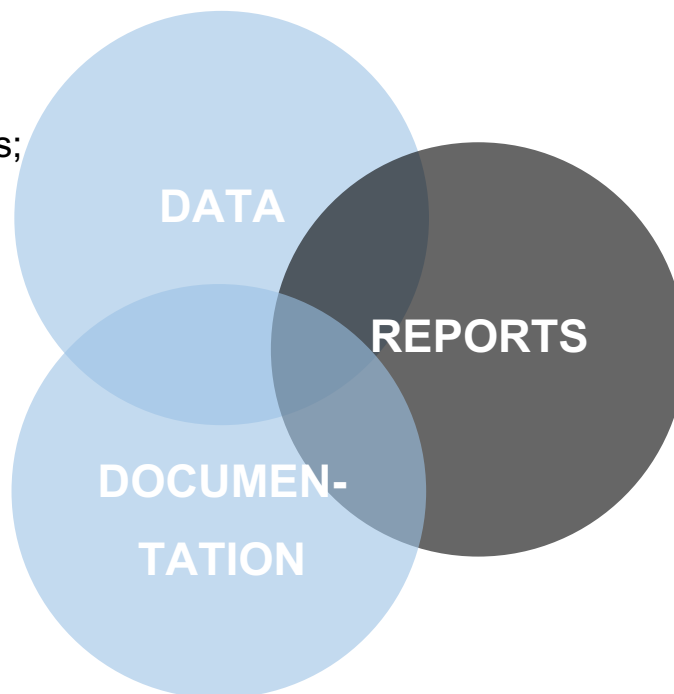
WHAT DO WE PROVIDE?

DATA

Temporal aggregated data files;

One file/system

DOCUMENTATION

- PUM
- QUID
- …

DATA

DOCUMEN-
TATION

REPORTS

REPORTS

Information about data, dates, plots, data analysis…
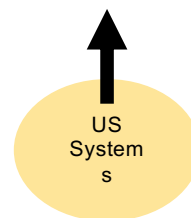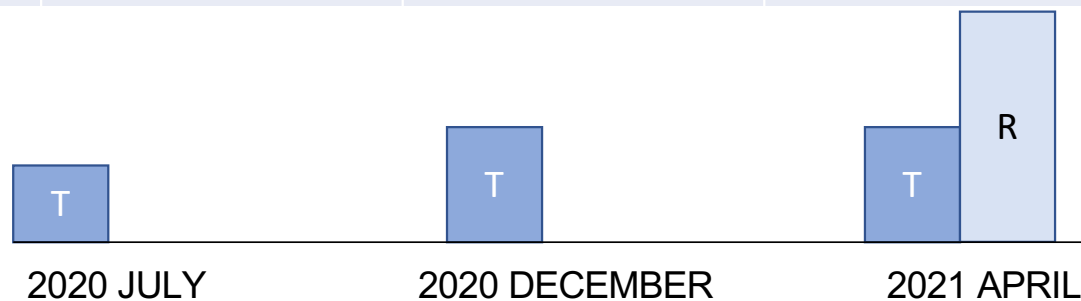(http://dspace.azti.es)

EuroSea

- Reports
- Improvements of historical series

DATA:

Data delivery: Systems added during releases
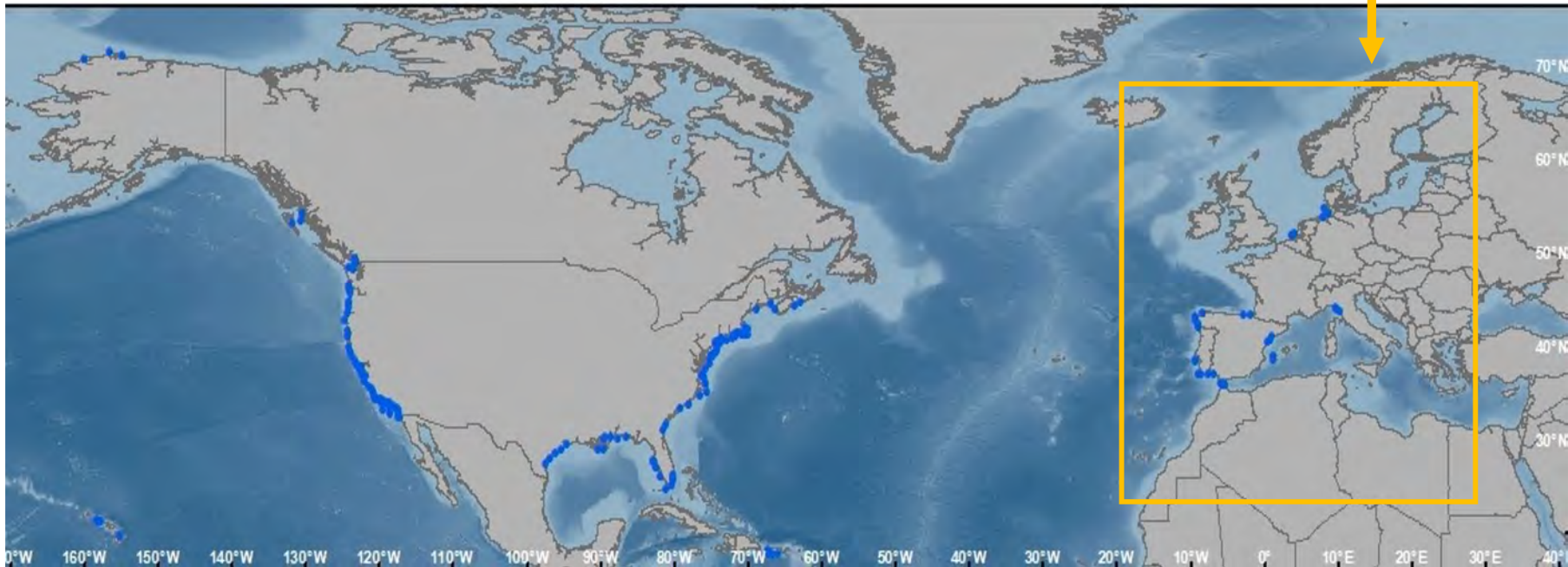
	JULY 2020	DECEMBER 2020	APRIL 2021
TOTALS	10	16	16
RADIALS			30

2020 JULY   2020 DECEMBER   2021 APRIL

US Systems

TOTALS: 16 networks   RADIALS: 30 Stations

European + US systems already included   European HFRs

REPORTS CONTENTS
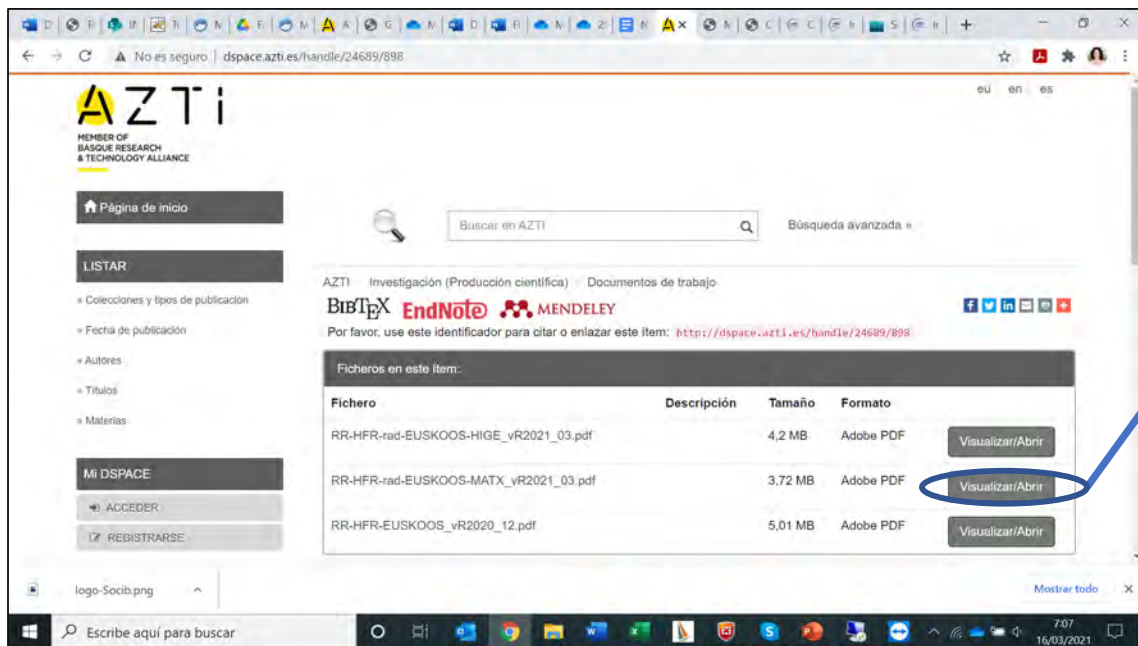
- http://dspace.azti.es

Reports

REPORTS CONTENTS

I

II

III

SYSTEM
+
PROVIDER
INFORMATION

System : [name of the system]
Data set: [Totals/Radials] Total
Period: [beginning and end dates]

INFO ON QA/QC Settings and Calibration

DATA ANALYSIS
RESULTS

Results of Hist data inspection
General comments
Periods to be reflagged
Reasons for reflagging

Spatial Coverage vs. Temporal coverage:
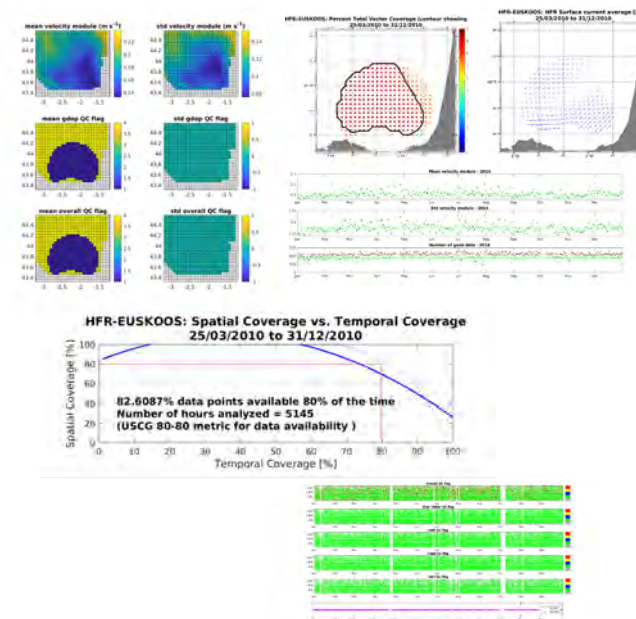objective of USCG 80-80% data availability

FIGURES

Fig A – Temporal series of the spatial average of the current velocity module (top panel), its standard deviation (middle panel) and the grid points of the total coverage (bottom panel)

Fig B - Temporal series of the QC flags for all the grid nodes with data

Fig C - Maps of the mean velocity module and the mean value of QC flags and their standard deviations

Fig D - Spatial (x-axis) vs. temporal (y-axis) coverage 80/80 annual metric.

Fig E – Map of the % of availability of data in each grid point and contour showing the area of temporal availability >80%

Fig F- Mean surface current maps for the indicated systems and periods.

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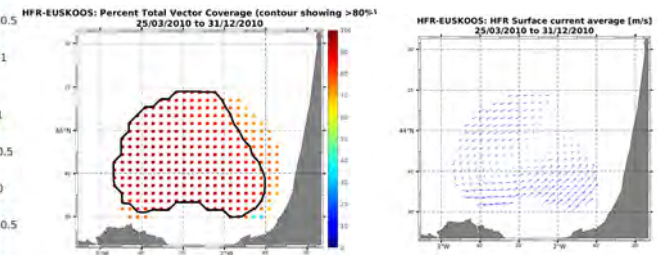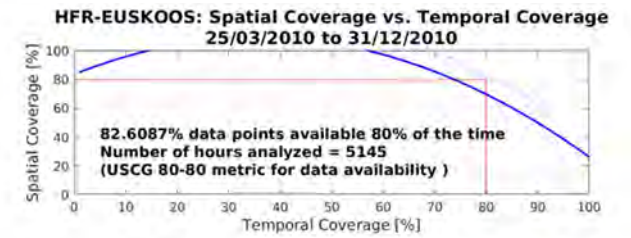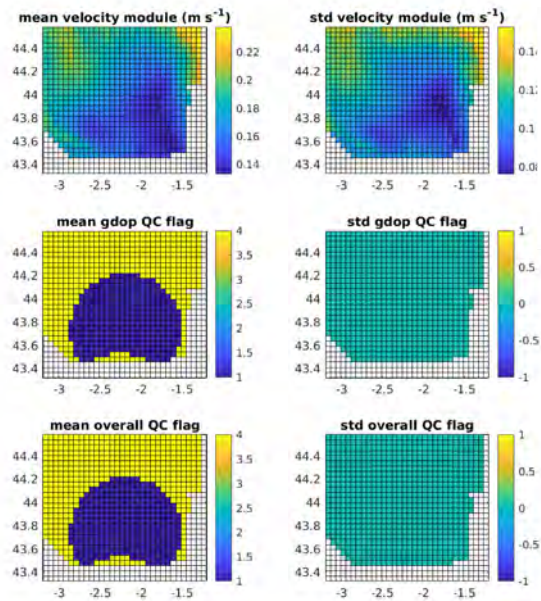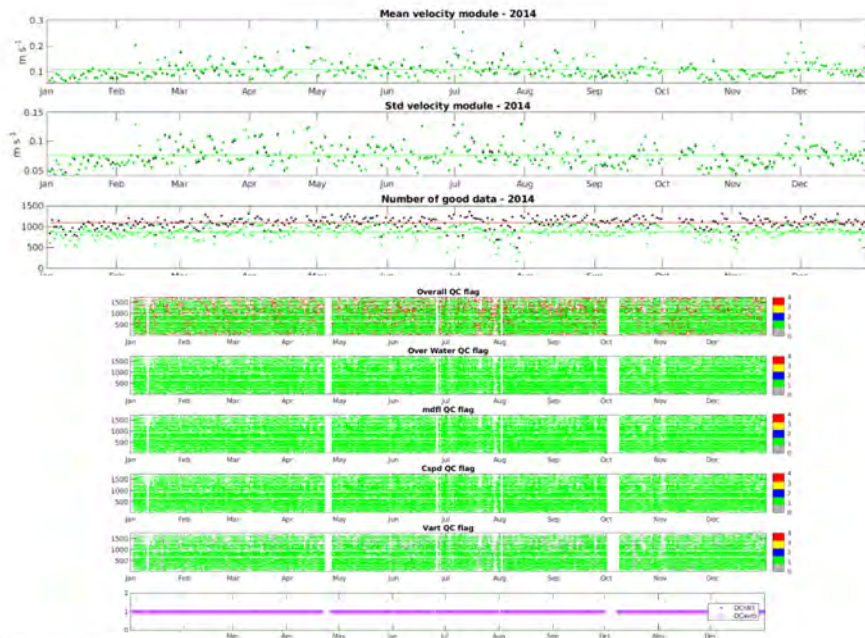
FUTURE WORK

Future work will consolidate these efforts by:

- optimizing the tools for advanced QC and data processing, (automatization)

- expanding the available data series

- adding new systems.

Thanks for your attention!