

Strategie for the CMEMS Ocean State Report ISSUE #3



Marine Monitoring

Karina von Schuckmann
Mercator Océan



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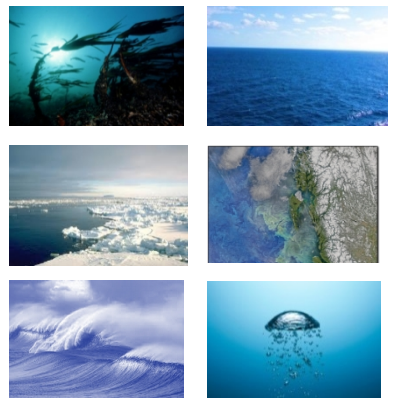


THE OCEAN STATE REPORT

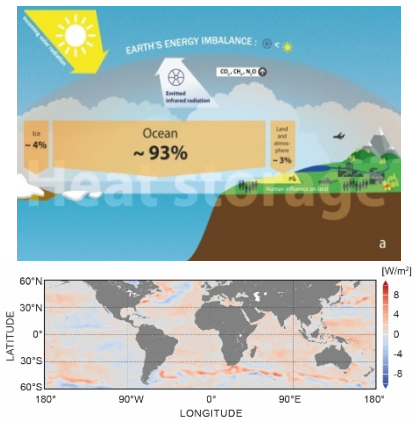
Marine Monitoring

OSR #1 & OSR #2: Content and expected audience

Essential Variables



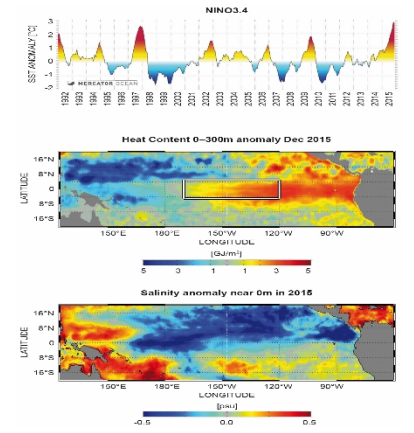
Ocean climate



European Seas



Remarkable events



Scientific community

Policy and decision makers, Blue Economy

14 LIFE BELOW WATER

European and international agencies and organisations, Regional Sea Conventions

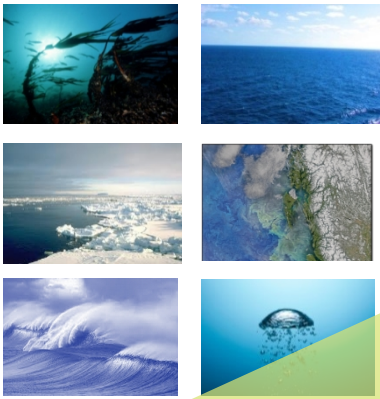
General public awareness



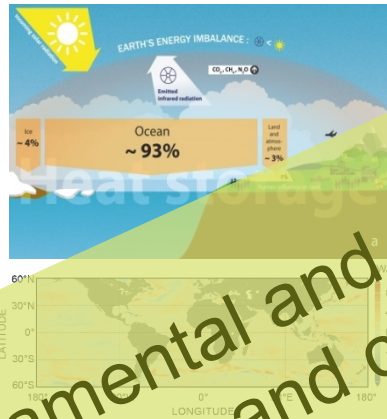


OSR #1 & OSR #2: Content and expected audience

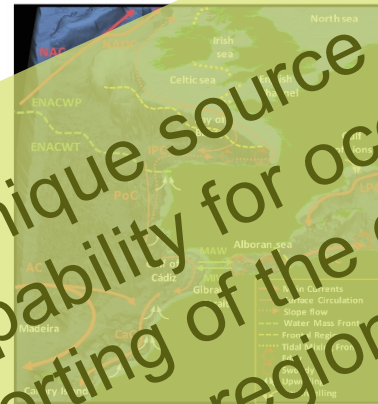
Essential Variables



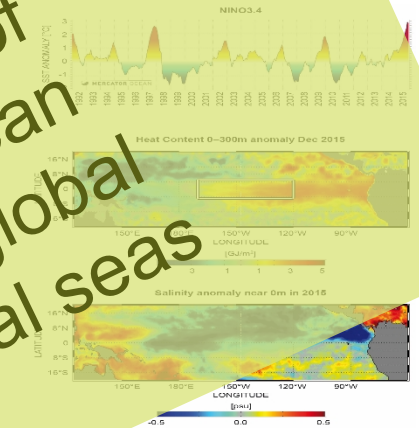
Ocean climate



European Seas



Remarkable events



Fundamental and unique source of information and capability for ocean monitoring and reporting of the global ocean and the European regional seas

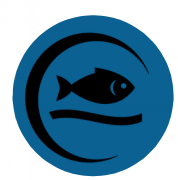
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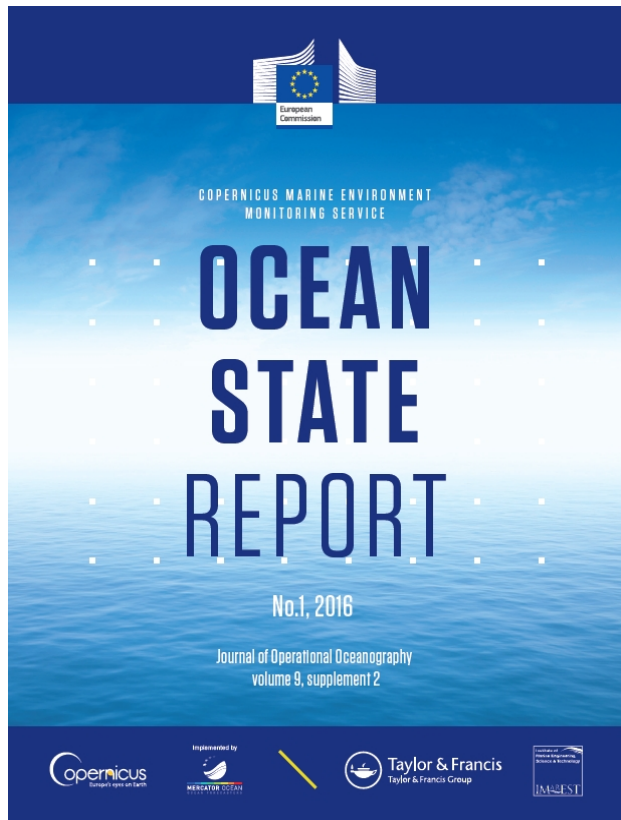




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Ocean State Report # 1

- ❖ Written by 80 scientific experts
- ❖ Collaboration of more than 25 European institutions
- ❖ Fundamental step forward into the development of regular Copernicus Marine Service annual reporting

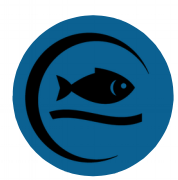


- ❖ Published in the Journal of Operational Oceanography
- ❖ Independent peer review
- ❖ Open access

ACHIEVEMENTS:

- ❖ Currently more than 6200 views since publication
- ❖ Essential element of side event at UN Ocean conference (JUN 2017)
- ❖ Presented at COP23 (EC Pavillon)
- ❖ Mentioned as Copernicus achievement
- ❖ Honored by DENNY Med





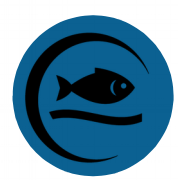
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Ocean State Report # 2



ISSUE #2: THE COPERNICUS MARINE ENVIRONMENT MONITORING SERVICE OCEAN STATE REPORT 2017

❖ Still under review...



MAIN 2020 OBJECTIVE FOR CMEMS OCEAN MONITORING & REPORTING

Develop fundamental source of CMEMS value-added information and CMEMS ocean indicators on ocean physical and biogeochemical state, variability and change from the past to the present for the global ocean and the European regional seas.

Based on CMEMS & C3S MYP, this can be achieved through:

- High-level scientific evaluation through mobilisation of scientific network
- Evaluation and error quantification
- Identify dedicated information need through exchanges with agencies and European & international bodies (e.g. EC, EEA/MSFD, ICES, C3S, WMO, SDG,...)
- Several levels of communication (web, summary, peer reviewed, conferences)

CMEMS OCEAN MONITORING AND REPORTING

OCEAN STATE

VARIABILITY
AND RT

CLIMATE
CHANGE

GLOBAL: Link to SDG, C3S, BAMS, GCP, WMO, Ocean & Climate platform, ...

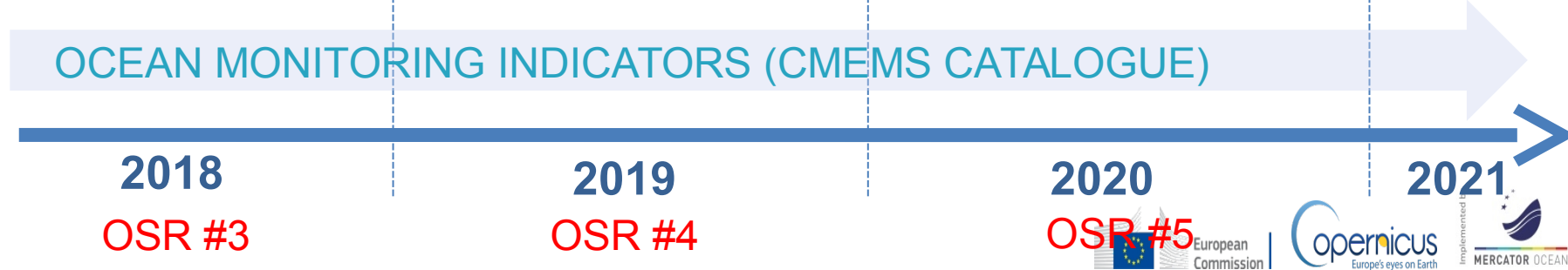
REGIONAL: Link to EEA/MSFD, ICES, EC, EuroGOOS, ...



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Roadmap 2020 for CMEMS Ocean monitoring & reporting

- | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> • New sections (e.g. waves, coral bleaching) • EV: move to more coherence (global & regional) & simplify • Increase consistency of plots • Establish link to European & international bodies | <ul style="list-style-type: none"> • New sections (e.g. ph) • Increase BGC • Increase regional focus • Improve uncertainties • Move to consistent plots • Establish link to European & international bodies | <ul style="list-style-type: none"> • Add new sections • Review consistency with OMI webpage • Manifest link with CB/C3S • Propose contribution to BAMS & other international bodies |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



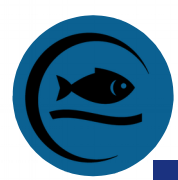
2018
OSR #3

2019
OSR #4

2020
OSR #5

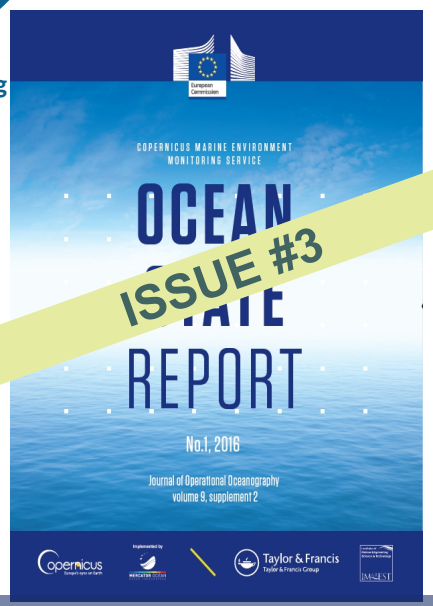
2021





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Ocean State Report # 3



ISSUE #3: THE COPERNICUS MARINE ENVIRONMENT MONITORING SERVICE OCEAN STATE REPORT 2018

- ❖ Introduction: Addition of solicited thematic box: ocean acidification (tbd)

CHAPTER 1: OCEAN MONITORING INDICATORS

Omis introduced in the two previous issues of the OSR:

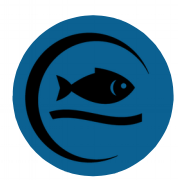
- the figures for monitoring
- statement of main outcome
- “light review” process

CHAPTER 2: NEW OCEAN MONITORING INDICATORS AND SPECIFIC CASE STUDIES

- New monitoring indicators not introduced in OSR #1 or #2.
- Specific case studies
- Normal peer review

CHAPTER 3: REMARKABLE EVENTS DURING 2017

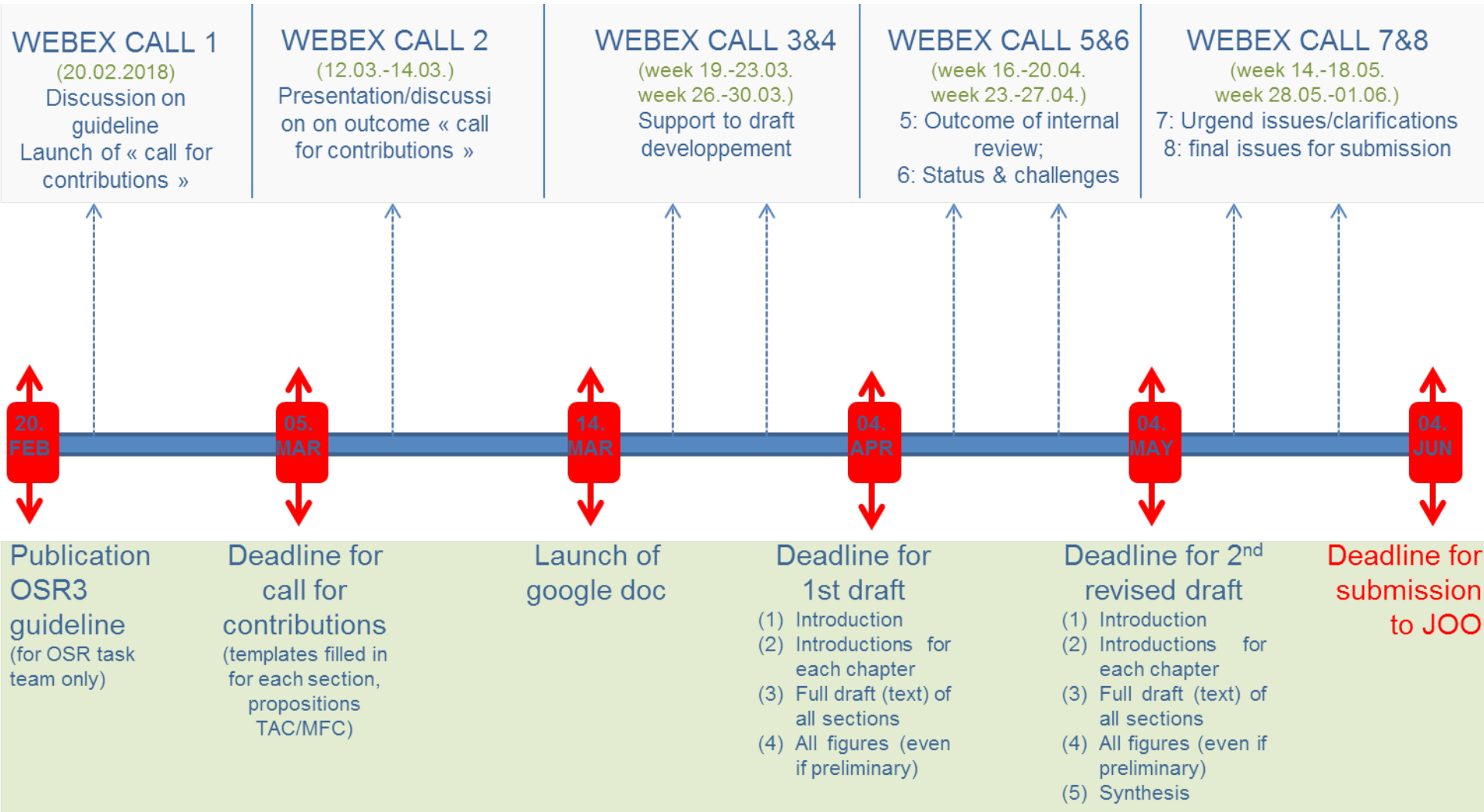
- As OSR #2.
- Normal peer review



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Ocean State Report #3: Roadmap

PREPARATION PHASE OF OSR #3 UP TO SUBMISSION TO JOO

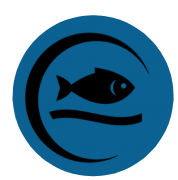




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Thank you !





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Ocean Monitoring Indicators

IMPLEMENTATION OF COPERNICUS MARINE SERVICE OCEAN MONITORING INDICATORS

VISUALISATION

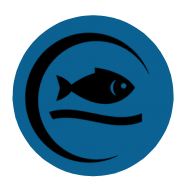


DOCUMENTATION



DATA DISTRIBUTION





Marine Monitoring

CMEMS Ocean Monitoring Indicators

Other sources
C3S, CCI

3D or 2D observations

3D global (re)analyses

CMEMS

3D or 2D observations

3D regional (re)analyses

CMEMS producers

Quality info doc (QUID)
User Manual (PUM)
Scientific context sheet

1D (time series) or 2D (map) OMI

CMEMS physical and biogeochemical gridded ocean synthesis



OMIs can combine various upstream datasets; time series length depending on scientific evaluation

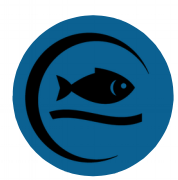


European Commission



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IMPLEMENTATION OF COPERNICUS MARINE SERVICE OCEAN MONITORING INDICATORS

VISUALISATION



DOCUMENTATION



DATA DISTRIBUTION



FIRST STEP OF IMPLEMENTATION: FEBRUARY/MARCH 2018

OMI OCEAN HEAT CONTENT

- Global mean (1993-2016)
- Map of regional trends (1993-2016)
- Map of 2016 anomalies (1993-2016)

OMI SEA LEVEL

- Global mean sea level (1993-NRT)

OMI SEA ICE

- Arctic SIE (1993-2016; 1979-NRT)
- Antarctic SIE (1993-2016)