Sectoral Information System

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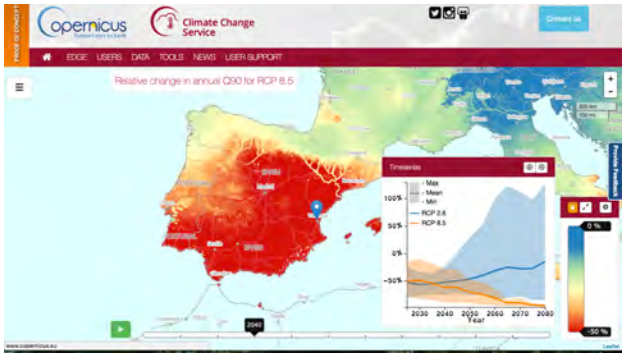
Sectoral Information System

Climate Change

Proof-of-concepts of climate services: Demonstration of the value chain with end-to-end demonstrators



As an operational Service, C3S ambitions to become an enabler of downstream climate services, by providing or brokering high quality and sector relevant climate data, good practices, tools and compelling use cases.

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Our target audience: purveyors

1. Water Manager has climate issue

2. Water Manager consults Purveyor

3. Purveyor understands issue and goes to C3S

4. Purveyor consults Data provider/ CDS

5. Data provider search and extracts data to Purveyor

6. Purveyor tailors, downscales, merges, repurposes datasets

7. Purveyor extracts, explains, visualises relevant information to water manager

8. Water manager makes decision and business improves !

9. Purveyor reports on needed climate indicators to data provider

10. Data Provider produces new pan-EU climate indicators

11. New climate indicators are readily available in S3C and CDS

12. Purveyor can extend business with more clients !!

Contract led by SMHI

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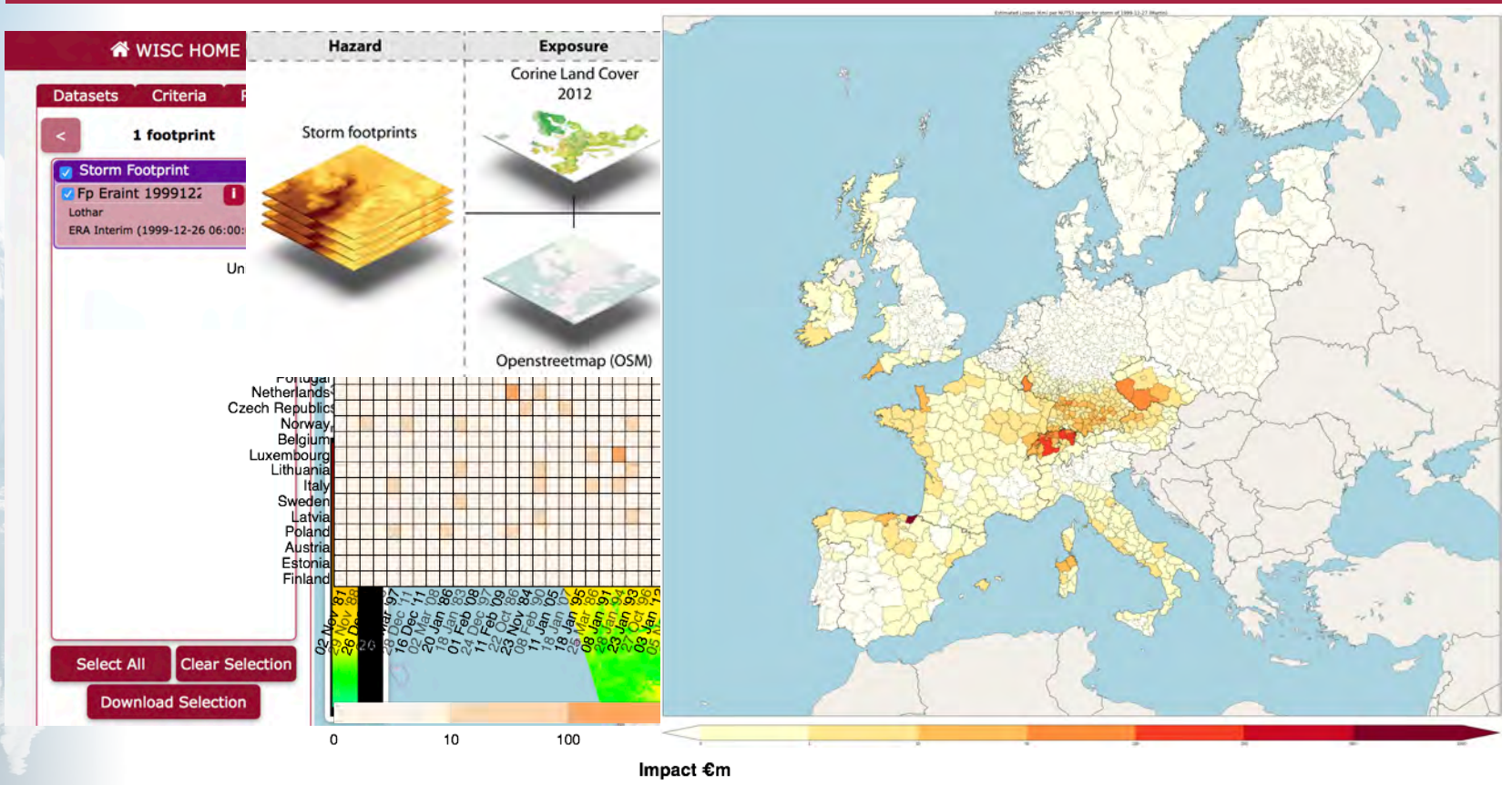
Climate Change

From physical parameters to economic impact



Contract led by CGI

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C2 User Requirement (UR) description	C3 UR class	C4 Raw requirement	C5 User sector	CP1 ECV
Free text. Be specific and quantify statements where possible.	Choose from: - Product (complete CP) - Variable (complete CP) - General (complete CG)	Original text. Extract from project source material.	Choose one or more sector from C3S Sectors: - Agriculture and forestry - Coastal - Disaster risk reduction - Energy - Health - Infrastructure - Insurance - Tourism - Transport - Water management	Use terms f
Seasonal forecasts of precipitation for the insurance sector should be available before the underwriting/ renewal season	Variable	seasonal rainfall forecast: Seasonal forecast be made available prior to renewal timeline (Jan 1st - April 1st): Seasonal forecasts do not align with insurance timeline. To be truly useful, a seasonal forecast would need to be made prior to the underwriting/renewal season.	Insurance	Precipitatio
Seasonal forecasts of sea surface temperature for the insurance sector should be available before the underwriting/renewal season	Variable	seasonal forecast of ocean surface temperature: Seasonal forecast be made available prior to renewal timeline (Jan 1st - April 1st): Seasonal forecasts do not align with insurance timeline. To be truly useful, a seasonal forecast would need to be made prior to the underwriting/renewal season.	Insurance	Sea surface
Seasonal forecasts of surface temperature for the insurance sector should be available before the underwriting/renewal season	Variable	seasonal forecast of surface temperature: Seasonal forecast be made available prior to renewal timeline (Jan 1st - April 1st): Seasonal forecasts do not align with insurance timeline. To be truly useful, a seasonal forecast would need to be made prior to the underwriting/renewal season.	Insurance	Surface air
Seasonal forecasts of tropical cyclone activity, specifically the number of storms, for the insurance sector should be available before the underwriting/ renewal season	Variable	seasonal forecast of tropical cyclone activity: Seasonal forecast be made available prior to renewal timeline (Jan 1st - April 1st): Seasonal forecasts do not align with insurance timeline. To be truly useful, a seasonal forecast would need to be made prior to the underwriting/renewal season.	Insurance	
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Seasonal forecasts of precipitation for the insurance sector should cover the full upcoming year	Variable	seasonal rainfall forecast: Seasonal forecast be made available prior to renewal timeline (Jan 1st - April 1st): Seasonal forecasts do not align with insurance timeline. To be truly useful, a seasonal forecast would need to cover the full upcoming year.	Insurance	Precipitatio
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Seasonal forecasts of precipitation should have more ensemble members to capture full level of uncertainty	Variable	seasonal rainfall forecast: More ensemble to represent uncertainty: There is an insufficient number of ensemble members in seasonal forecasts. Current ensembles do not capture the full level of uncertainty.	Insurance	Precipitatio
Seasonal forecasts of sea surface temperature should have more ensemble members to capture full level of uncertainty	Variable	seasonal forecast of ocean surface temperature: More ensemble to represent uncertainty: There is an insufficient number of ensemble members in seasonal forecasts. Current ensembles do not capture the full level of uncertainty.	Insurance	Sea surface
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Seasonal forecasts of precipitation should be available at a higher spatial resolution	Variable	seasonal rainfall forecast: Increasing spatial resolution	Insurance	Precipitatio
Seasonal forecasts of surface temperature should be available at a higher spatial resolution	Variable	seasonal forecast of surface temperature: Increasing spatial resolution	Insurance	Surface air
Seasonal forecasts of precipitation should include forecasts of extremes	Variable	seasonal rainfall forecast: make forecast of extremes	Insurance	Precipitatio

Already ~1400 entries!

Contract led by Uni. Reading

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Evaluation and Quality Control

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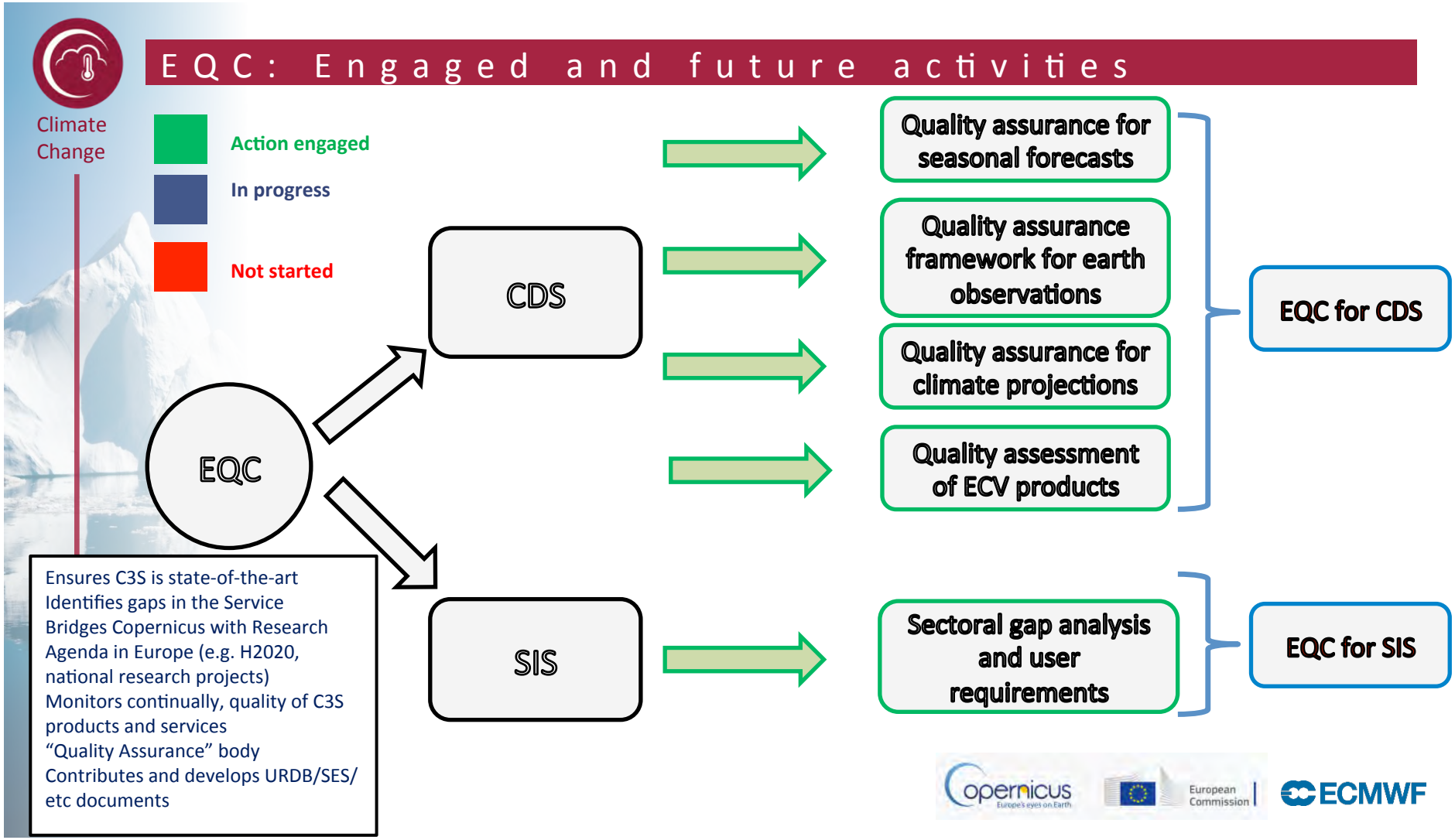
EQC: Engaged and future activities



Climate Change

Outlook for 2019

- 2018 is the year of operational transition for C3S.
- Activities in 2019:
  - Routine production of up to 22 ECVs
  - ERA5 completed and served in near-real-time
  - ERA5 extended back to 1950
  - Multi-model seasonal forecasts including JMA, NCEP and possibly Canada
  - Climate Data Store (including toolbox) fully functional, serving C3S as well as CAMS products
  - C3S interfaced with DIAS

  - Operational SIS including series of demonstrator use cases
  - EQC for CDS and EQC for SIS fully established

  - Prototype Attribution Service (following user consultation and workshop in 2017)
  - Possible prototype decadal Service (depending on user consultation in 2018)

  - Training on CDS products in place,
  - Cooperation with ESA CCI, GFCS, GCOS, etc. formalized

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5th International Conference on Reanalysis

WMO UNESCO INTERNATIONAL COUNCIL FOR SCIENCE WCRP World Climate Research Programme

Key messages from the discussions at ICR5

- **Reanalysis production**
  - As production centers move toward coupled Earth-system reanalyses, they should embrace the notion of families of products designed to support a variety of research and applications spanning multiple decades to centuries.
- **Observations for reanalysis**
  - Supporting the use of observations for reanalysis (rescue, reprocessing, recalibration …) is key to enhance the scope and range of reanalyses, by allowing datasets to be extended back in time with high-quality observations.
- **Methods for reanalysis**
  - There is a general gap in research funding to design data assimilation and coupling methods across the Earth System specifically designed for reanalysis.
- **Evaluation of reanalyses**
  - Evaluation activities should be promoted, taking stock of successful examples of ocean (and atmosphere) reanalysis intercomparison projects.
- **Applications of reanalyses**
  - The proper quantification and communication of the quality of reanalyses must be promoted and would broaden their usage in operational services and policy making.

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C3S 2nd General Assembly

home » events

Thank You

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Date: Monday, 24 September, 2018 to Friday, 28 September, 2018

Location: Federal Ministry of Transport and Digital Infrastructure, Berlin, Germany