CMIP Documentation

David Hassell[1,2]

and the ES-DOC team:

Eric Guilyardi[3], Bryan Lawrence[1,2], Charlotte Pascoe[1,4], Sadie Bartholomew[1,2], Mark Greenslade[3], Atef Bennassser[3], Martina Stockhause[5], Guillaume Levavasseur[3], Sébastien Denvil[3], Allyn Treshansky[6], Chris Blanton[7]

[1]National Centre for Atmospheric Science, [2]University of Reading, [3]Institut Pierre-Simon Laplace, [4]Science and Technology Facilities Council, [5]Deutsches Klimarechenzentrum, [6]University of Colorado, [7]Geophysical Fluid Dynamics Laboratory

WGCM-24, 2021-12-09

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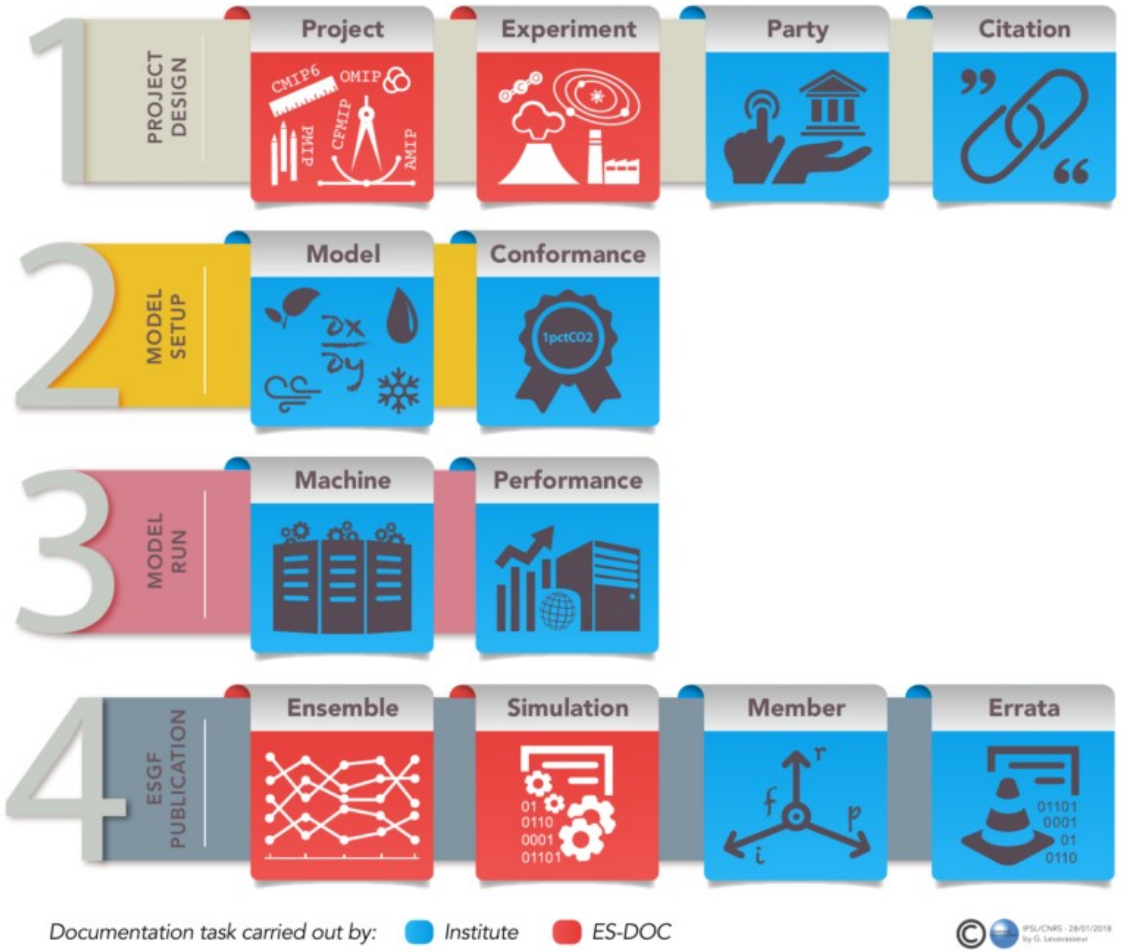
ES-DOC (Earth System Documentation)

- The ES-DOC project supports the creation, dissemination and analysis of documentation describing the entire modelling workflow



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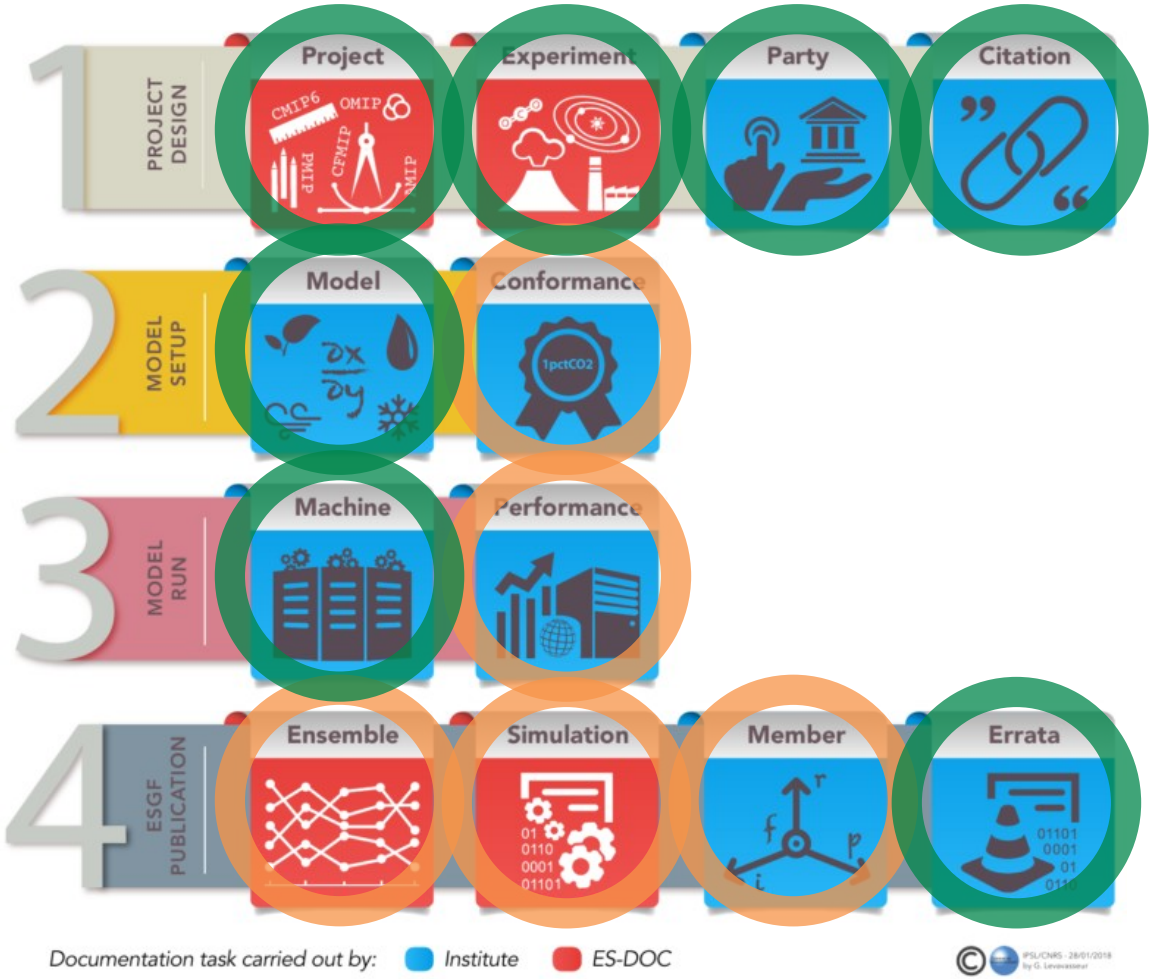
- The ES-DOC project supports the creation, dissemination and analysis of documentation describing the entire modelling workflow
- Infrastructure progress
  - Delivered (Q4 2018 – Q2 2021)
  - Under development (Q4 2021 – Q2 2022)
- Schedule is behind what was planned
  - Hindsight: an ambitious programme of data model and software development affected by the real world events



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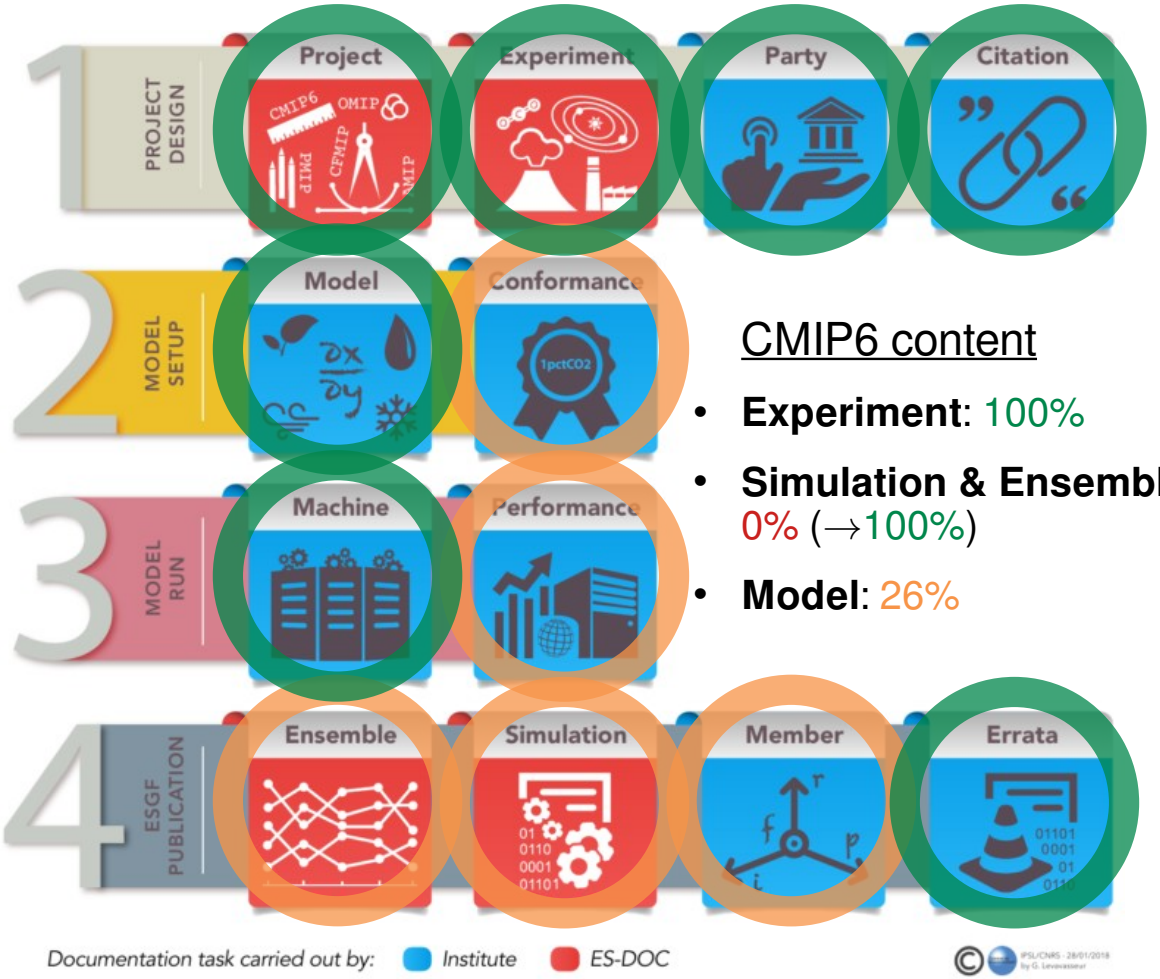

CMIP6 content

- **Experiment**: 100%
- **Simulation & Ensemble:** 0% (→100%)
- **Model**: 26%
- **Machine:** 21%
- **Performance:** 0%
- **Conformance:** 0%

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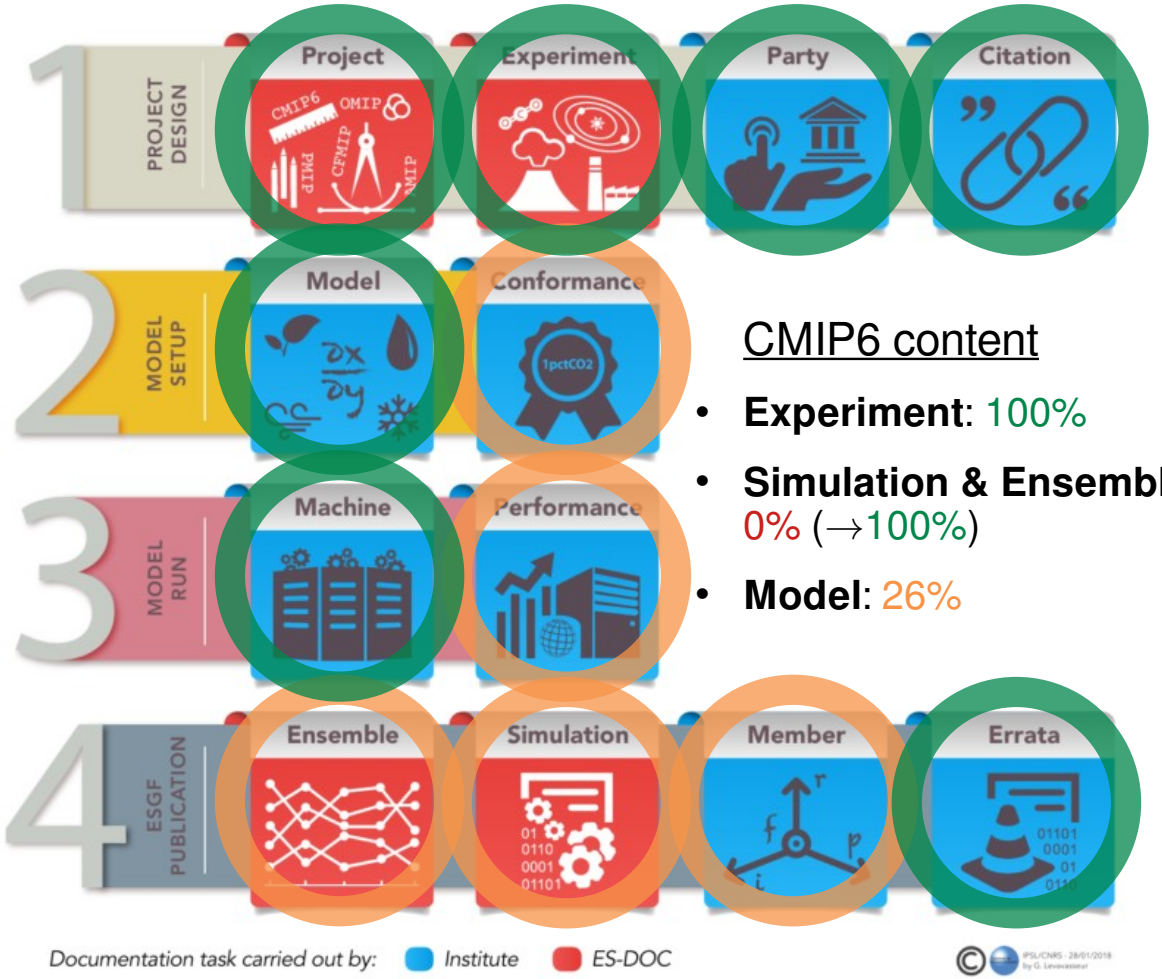
- ~1000 unique visitors per month to the ES-DOC web services (access documentation and update errata)



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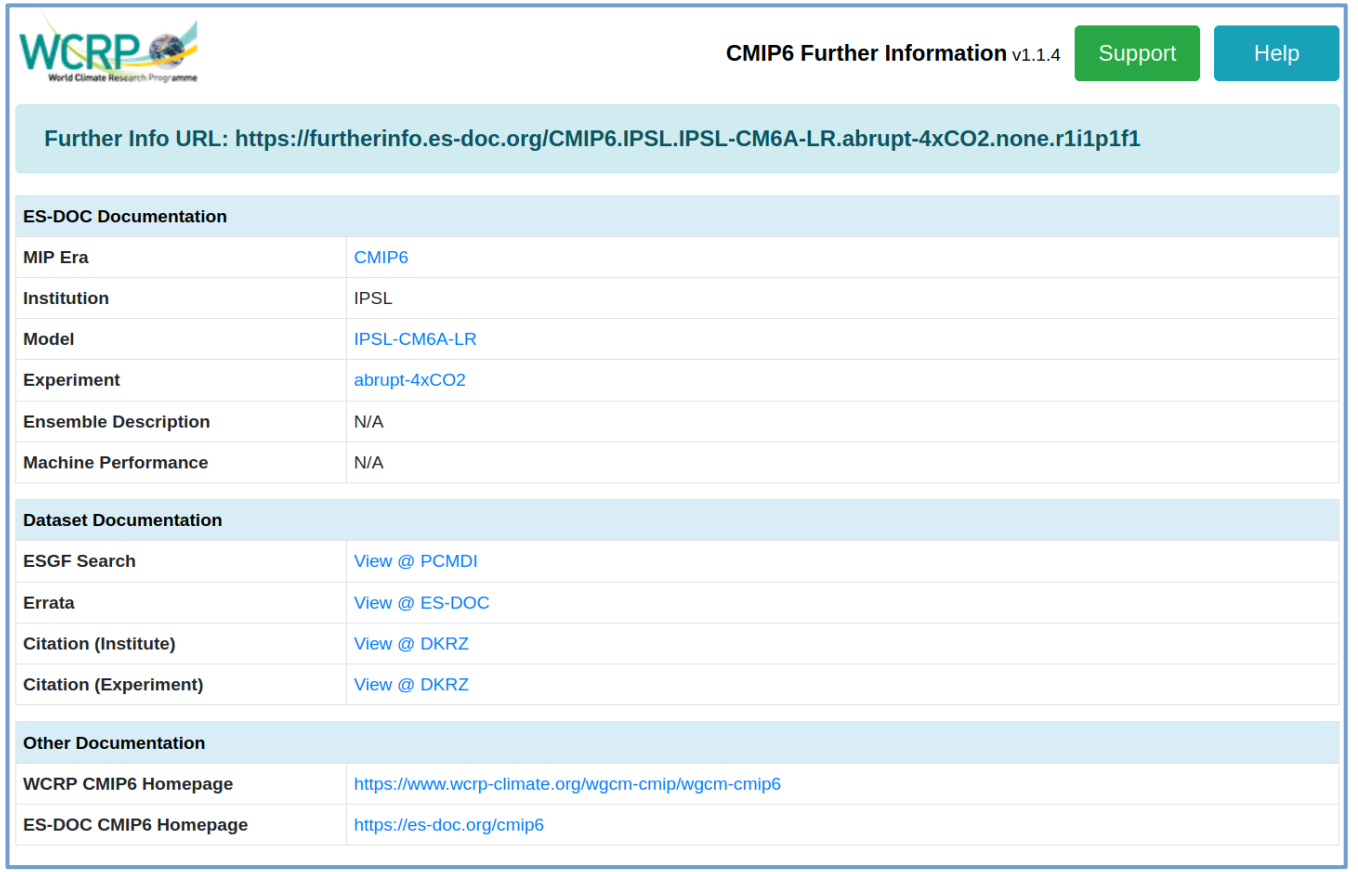
The further_info_url: Collated documentation

The ES-DOC information can be accessed via the “further information URL” that is found inside every CMIP6 netCDF data file:

```
// global attributes
  :further_info_url = "https://furtherinfo.es-doc.org/CMIP6.IPSL.IPSL-CM6A-LR.abrupt-4xCO2.none.r1i1p1f1" ;
```

and from ESGF download sites:

1. **CMIP6.CMIP.IPSL.IPSL-CM6A-LR.abrupt-4xCO2.r11i1p1f1.Omon.tos.gn**
   Data Node: vesg.ipsl.upmc.fr
   Version: 20180914
   Total Number of Files (for all variables): 1
   Full Dataset Services: [Show Metadata] [List Files] [THREDDS Catalog]
   [Further Info]



ES-DOC Documentation	
MIP Era	CMIP6
Institution	IPSL
Model	IPSL-CM6A-LR
Experiment	abrupt-4xCO2
Ensemble Description	N/A
Machine Performance	N/A
Dataset Documentation	
ESGF Search	View @ PCMDI
Errata	View @ ES-DOC
Citation (Institute)	View @ DKRZ
Citation (Experiment)	View @ DKRZ
Other Documentation	
WCRP CMIP6 Homepage	https://www.wcrp-climate.org/wgcm-cmip/wgcm-cmip6
ES-DOC CMIP6 Homepage	https://es-doc.org/cmip6

Beyond CMIP6

- Ways and means for **maintaining the existing ES-DOC infrastructure** (document creation and publication, web services, software, standards) are being investigated by the IS-ENES3 sustainability activity.

- **Re-deploying ES-DOC for future projects will easier**
  - Much less development work would be required,
  - Familiarity for creators and users (who are sometimes the same people),
  - Some ES-DOC effort, and therefore funding, still required.

- The **further_info_URL** was an important innovation that should repeated.

- The **document creation burden** on the modelling groups will still be a concern
  - A high coverage of documentation across agreed parts of the project must be a realistic goal,
  - User expectations and better services (e.g. comparison, differencing) will be key.

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