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CMIP infrastructure; successes and where next

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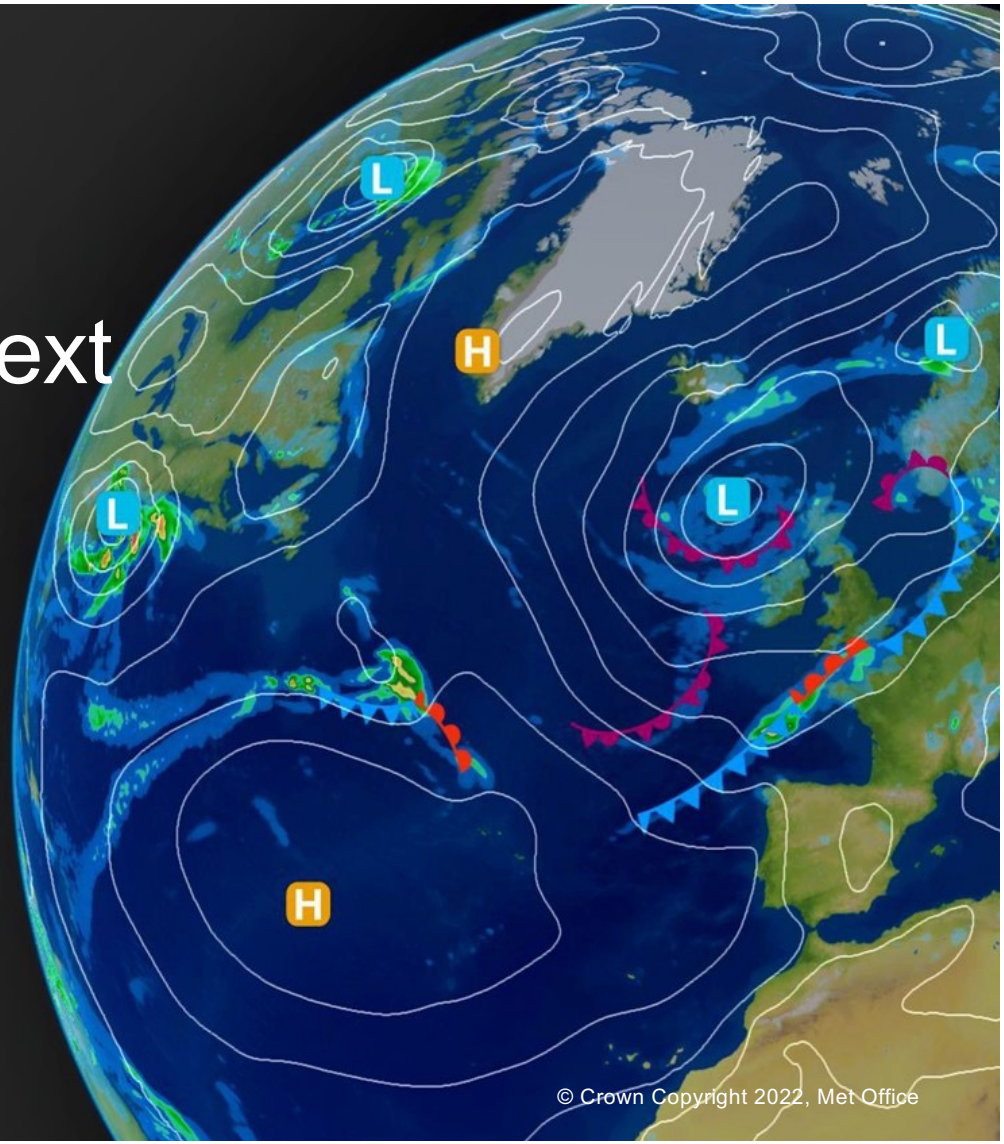

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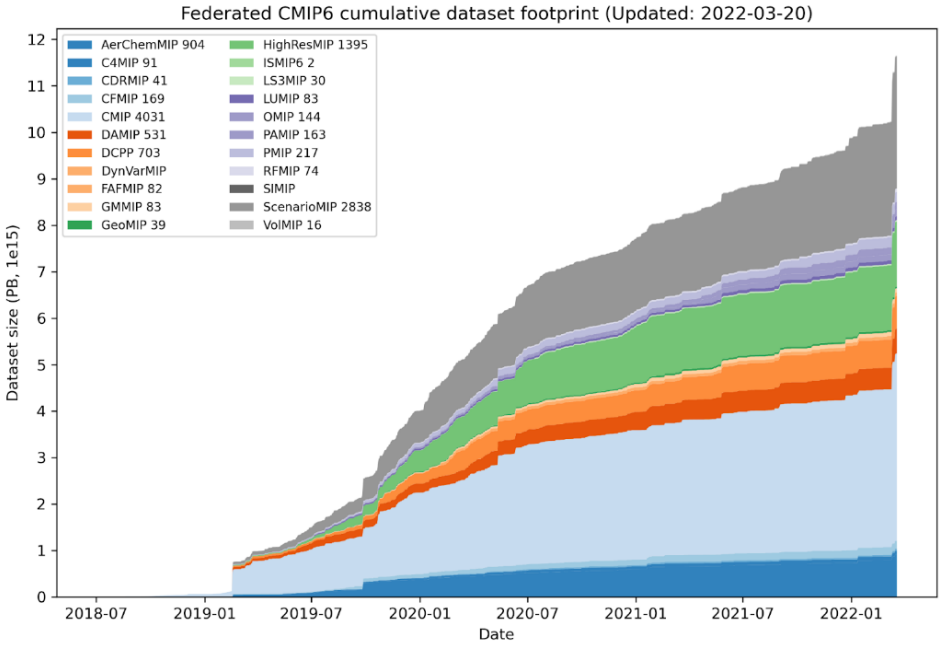
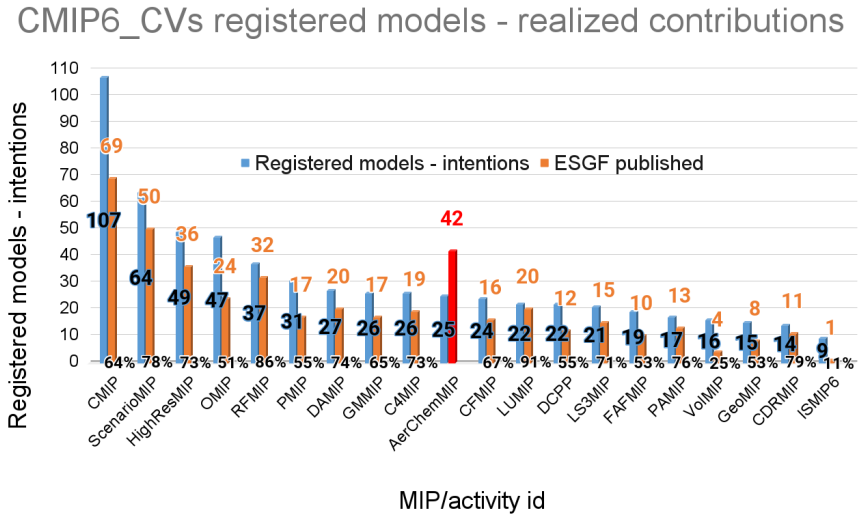
CMIP6 successes: data





Exercise	Unique (PB)	Replicas (PB)	Total (PB)
CMIP6	12.4	10.3	22.7
CMIP5	1.6	3.7	5.3
CORDEX	1.4	-	1.4

ESGF data volumes according to dashboard
http://esgf-ui.cmcc.it/esgf-dashboard-ui/federated-view.html

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CMIP6 successes: Structure

- Common data standards
  - CMOR3
  - Data Request & MIP tables defining variables
  - Many tools, such as ESMValTool and the PCMDI Metrics Package are leveraging CMIP6 conventions
  - Other projects imitating CMIP6
    - CORDEX
    - Enables services to be built on top of the core activity

- Extensibility
  - ZECMIP incorporated into CDRMIP/C4MIP
  - CovidMIP added to DAMIP
  - Plan to use this property for CMIP6Plus interim project while we consider future structures
    - Tropical Basin Interaction MIP
  - We continue to register new models

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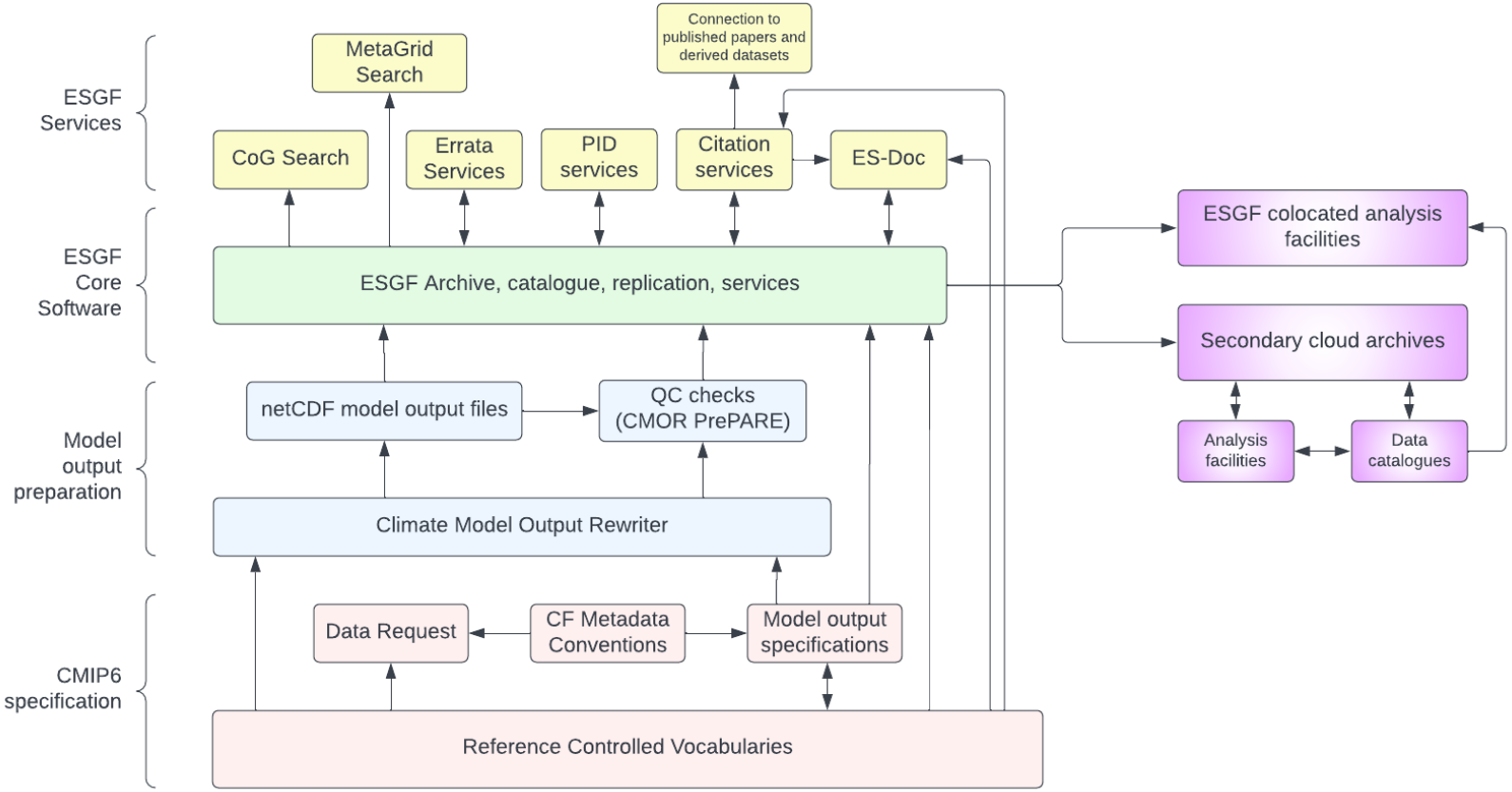
CMIP6 Infrastructure



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Where next?

- More projects using common or aligned standards and infrastructure
  - CMIP6Plus, CORDEX-CMIP6, independent projects, UK/US model development, …
  - CMIP core + CMIP compatible?
- CMIP infrastructure/standards need to continue to evolve to facilitate expansion, next-generation science and leverage emerging technologies
- Increase data access and usage
  - Collocate compute facilities with data, e.g. JASMIN/UK, GLADE/US, DKRZ/Germany, LLNL/US, DIAS/Japan, CAFÉ/China and private/public cloud will have a role
  - Access needed for regions without their own facilities
- New and emerging technologies; MetaGrid, cloud services, Kerchunk