

Climate data processing for climate resilience

Tajikistan and Kyrgyzstan

Data access, processing and methodological concepts

Webinar
17. - 27. 11.2020

DAY 04
Data Families



FAIR Guiding principles

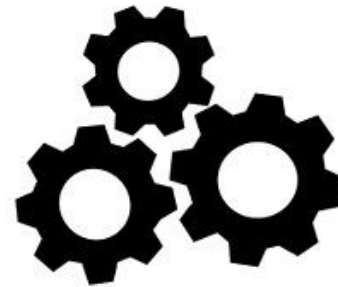
F_{indable}



A_{ccessible}



I_{nteroperable}



R_{eusable}

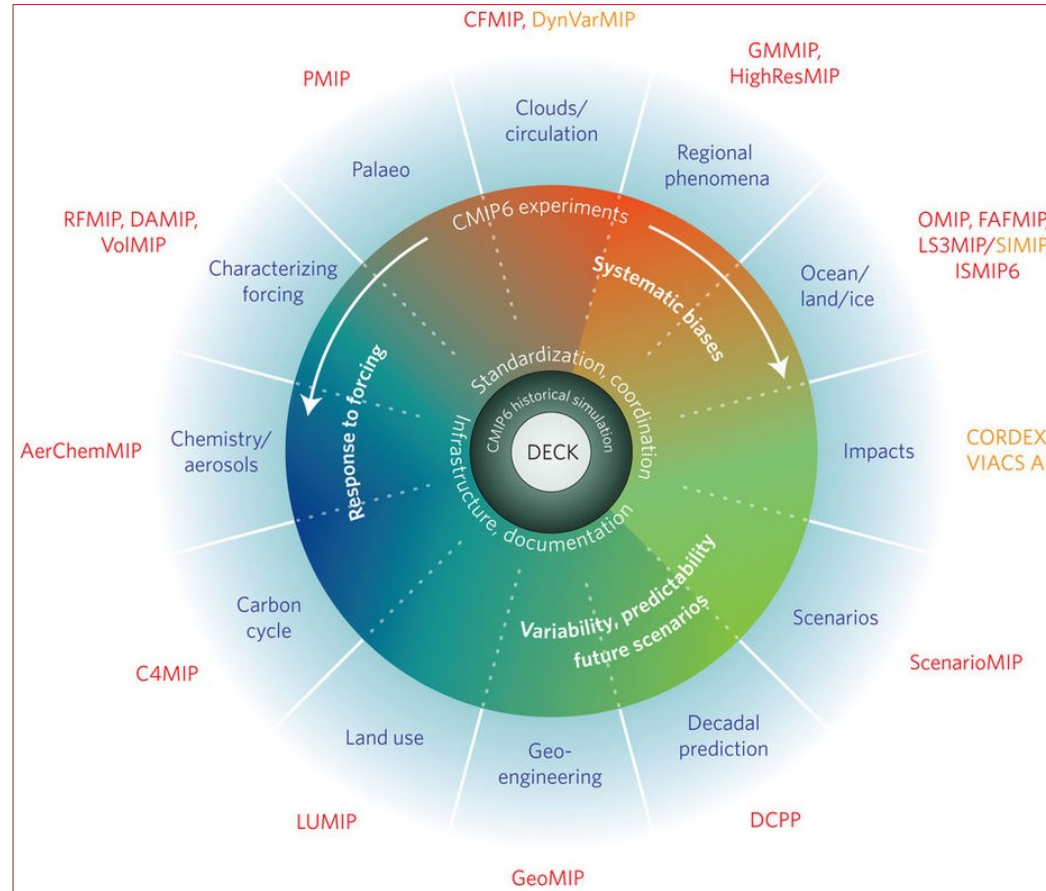


Origin source:

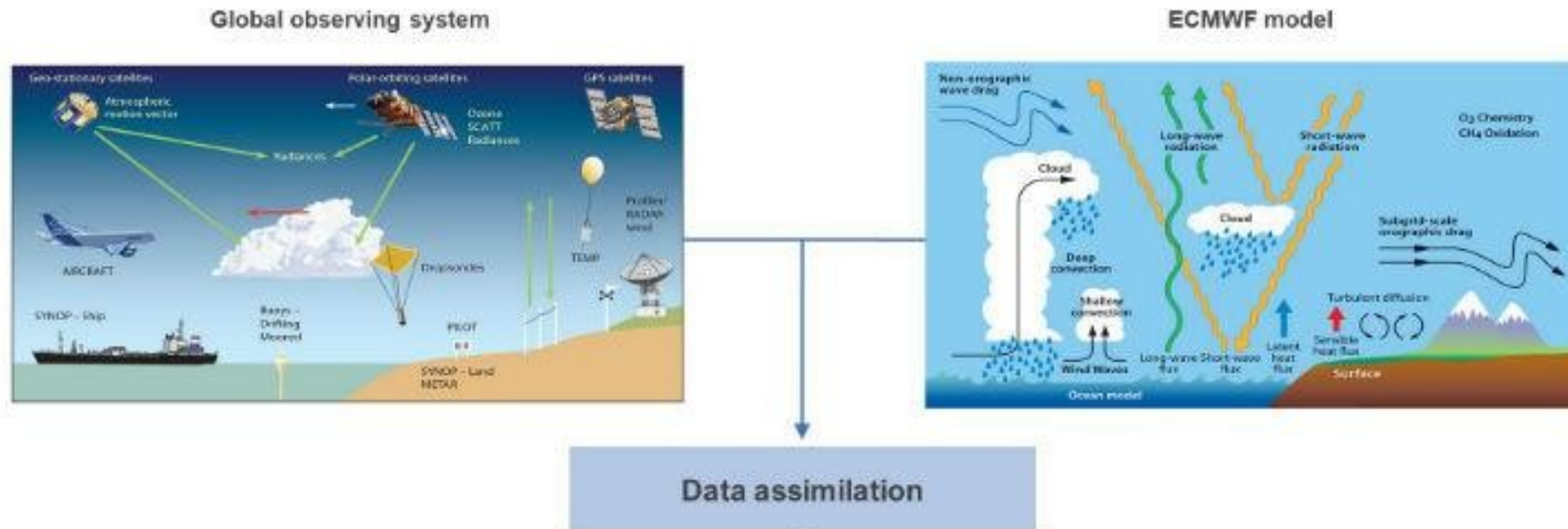
<https://www.nature.com/articles/sdata201618>



Climate Model Data



Reanalyses



Data sources:

<https://www.ecmwf.int/en/forecasts/datasets/browse-reanalysis-datasets>



Example of GCM-RCM combination

Reanalysis/ GCMs	RCA4.V3	REgCM4	REMO 2009	WRF3.4	PRECIS	ETA	HadRM3P.V1	RegCM4	RCP
ERA-Int	0.44°	0.44°	0.44°	0.44°	0.22°		0.44°	0.44°	
ICHEC-EC- Earth	0.44°							0.44°	2.6/4.5/8.5
MPI-ESM-LR	0.44°	0.44°	0.44°					0.44°	2.6/4.5/ 8.5
HadGEM-ES	0.44°	0.44°			0.22°	20 km			2.6/4.5/ 8.5
CanESM2	0.44°			0.44°					4.5/ 8.5
GFDL- ESM2M	0.44°	0.44°							4.5/ 8.5
IPSL-CM5A- MR	0.44°								4.5/ 8.5
MIROC5	0.44°								2.6/4.5/ 8.5
CSIRO Mk3 6.0	0.44°								4.5/8.5
NorESM1-M	0.44°								2.6/4.5/ 8.5
Access	ESGF nodes		ESGF nodes	http://meteo. unican.es/ work/3bff54a2		https:// projeta.cptec. inpe.br/#/ dashboard	ESGF nodes		
Institution	SMHI/ Sweden	ICT-/USP/ Italy-Brazil	GERICS/ Germany	Universidad de Cantabria / Spain	CR2/ DGF Chile	CPTEC / Brazil	Hadley Centre / UK	CR2/ DGF Chile	

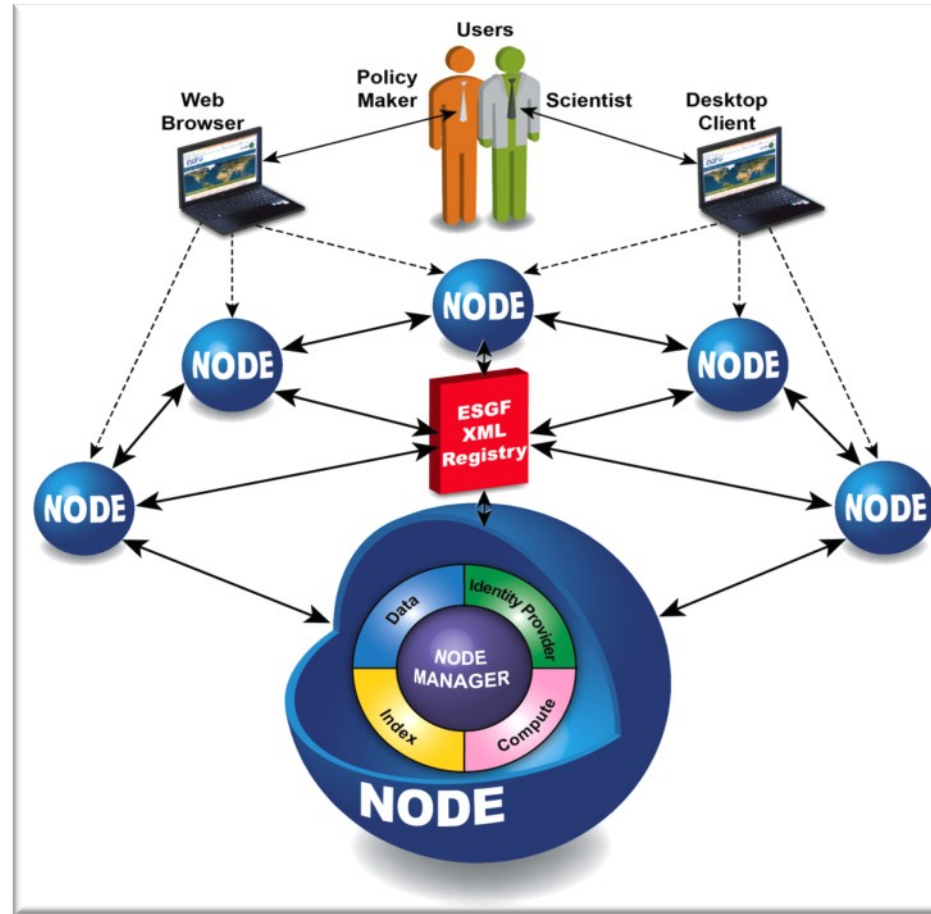
Tércio Ambrizzi 2018: The state of the art and fundamental aspects of regional climate modeling in South America: <https://doi.org/10.1111/nyas.13932>

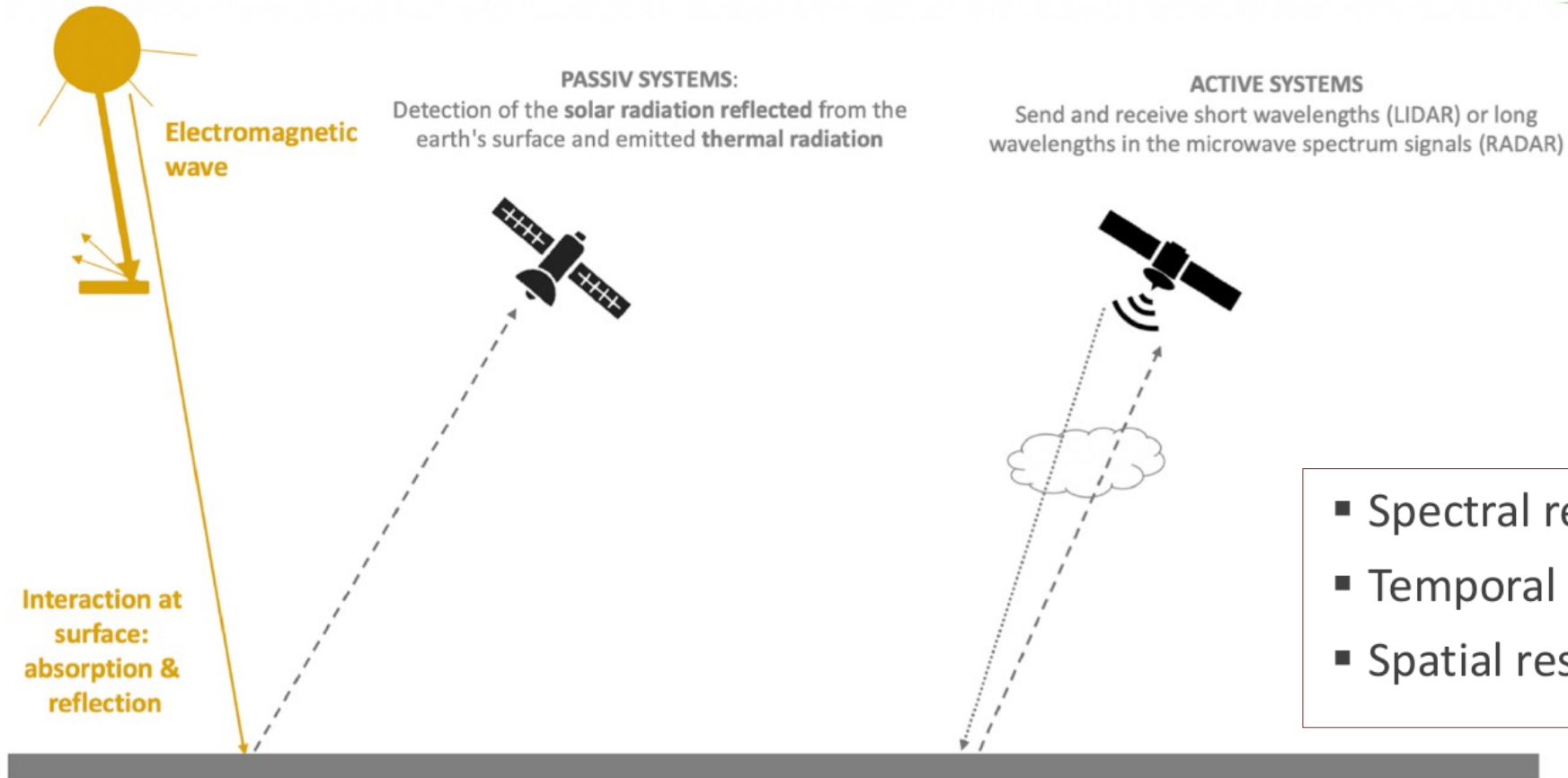


Earth System Grid Federation (ESGF)



ESGF - Nodes

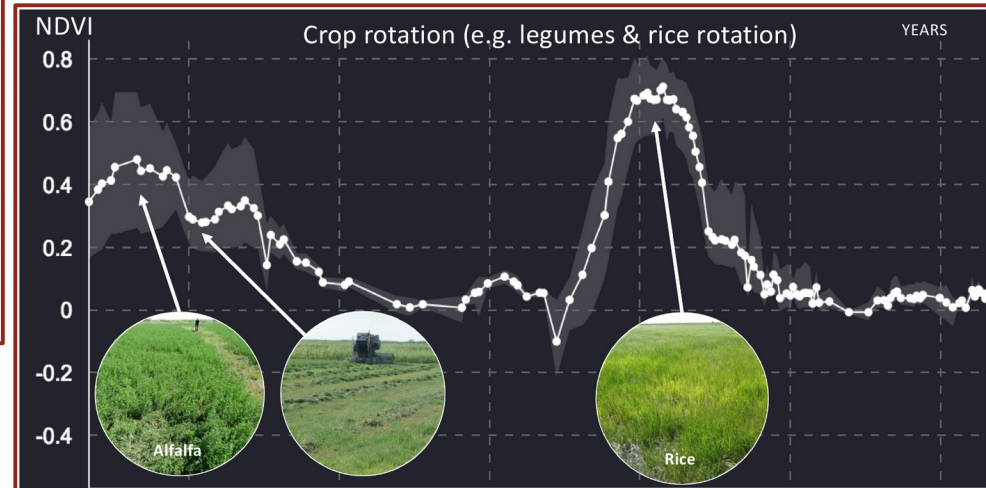
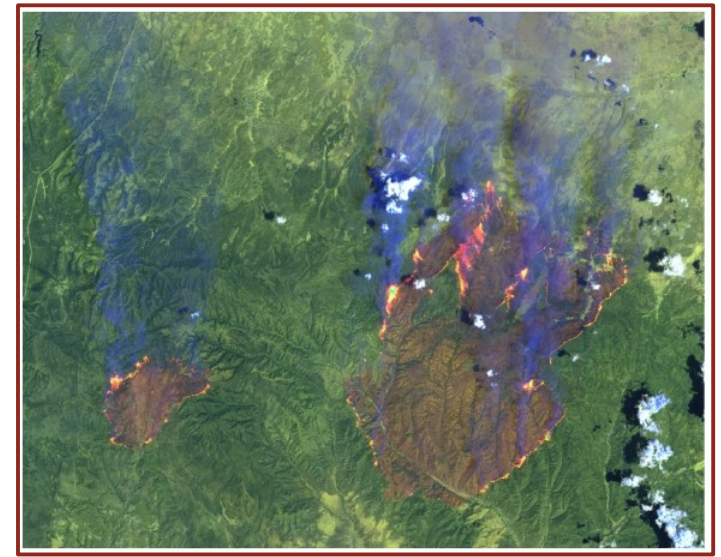
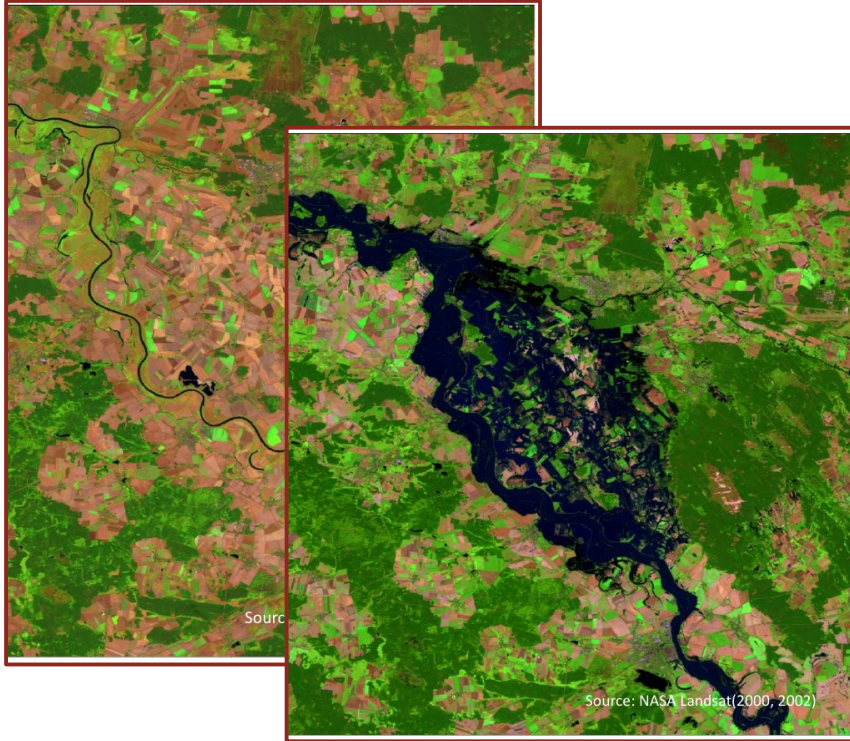




- Spectral resolution
- Temporal resolution
- Spatial resolution



Satellite Data application examples



Data access

<http://copernicus.eu/>

<https://services-portfolios.copernicus.eu/>

FULL, FREE AND OPEN
ACCESS TO DATA



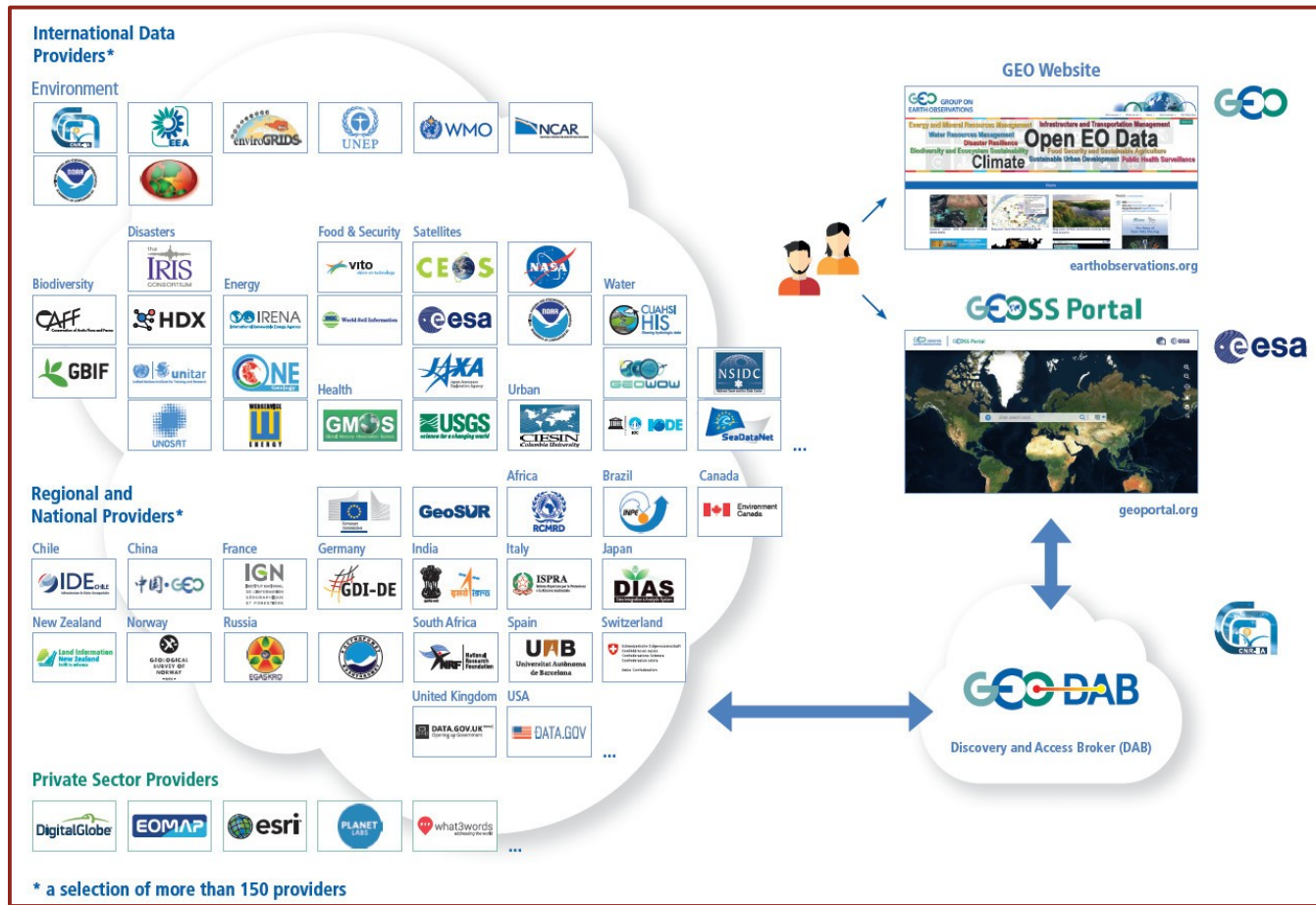
- ATMOSPHERE MONITORING
- MARINE ENVIRONMENT MONITORING
- LAND MONITORING
- CLIMATE CHANGE
- EMERGENCY MANAGEMENT
- SECURITY

Copernicus
Europe's eyes on Earth

Source: <https://www.youtube.com/channel/UCpuwnbuwGG20enAdE50g6TA>



GEOSS Portal



Climate model Data Access DEMO

<https://esgf-data.dkrz.de/projects/esgf-dkrz/>

