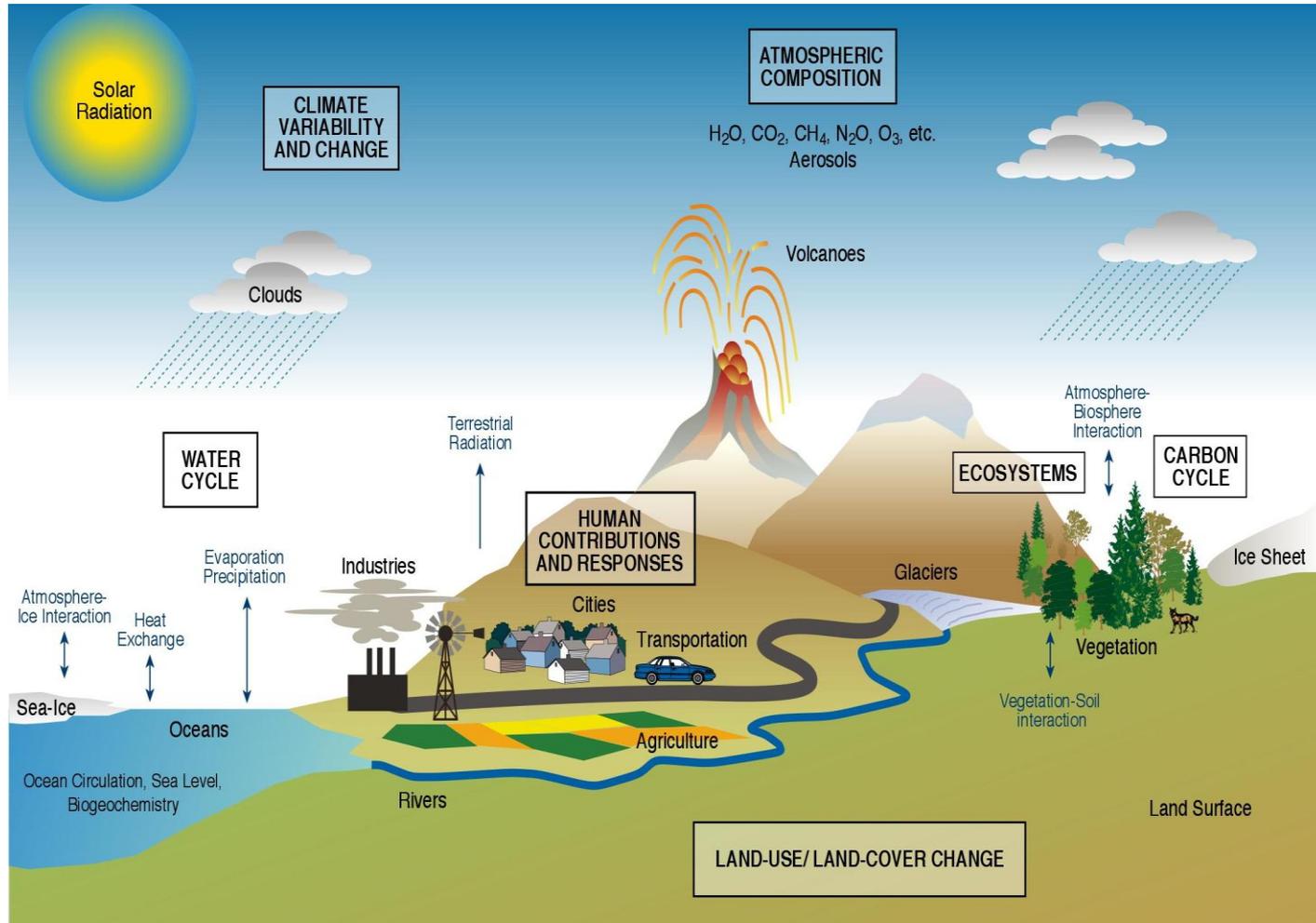
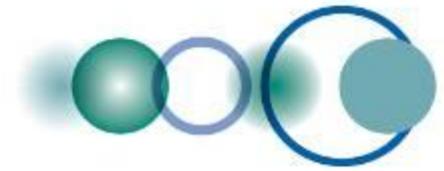


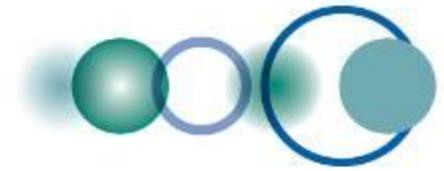
The Earth is a system of systems





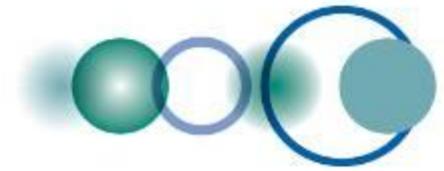
Better access to data

- New instruments, systems, databases
- Liberate data from silos and isolated databases
- Common formats for integrating data
- User-friendly products
- Sustain observation systems
- No one government can afford to do it all



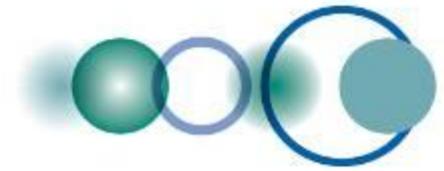
Global Earth Observation System of Systems (GEOSS)

“The vision for GEOSS is to realize a future wherein decisions and actions for the benefit of humankind are informed by coordinated, comprehensive and sustained Earth observations and information.”



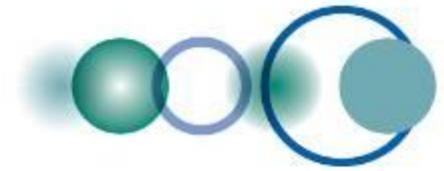
Group on Earth Observations

- Established 2005
- 2002 WSSD, EO Summits, G8
- 87 Members (governments and EC)
- 61 Participating Organizations
- Non-juridical, voluntary, flexible
- 10-Year Implementation Plan (2005 – 2015)
- 2012 – 2015 Work Plan with 26 Tasks
- Plenary, Committees, Secretariat, etc.
- Sustaining GEOSS post-2015



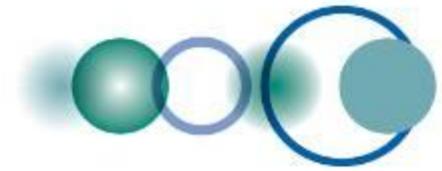
Global Earth Observation System of Systems (GEOSS)

- Connect contributed systems (in-situ and satellite)
- Owners of systems retain full control
- Coordinate strategies and investments
- Communities of Practice
- GEOSS Data Sharing Principles
- Improve access to data
- Standards and interoperability
- Meet user needs in nine Societal Benefit Areas



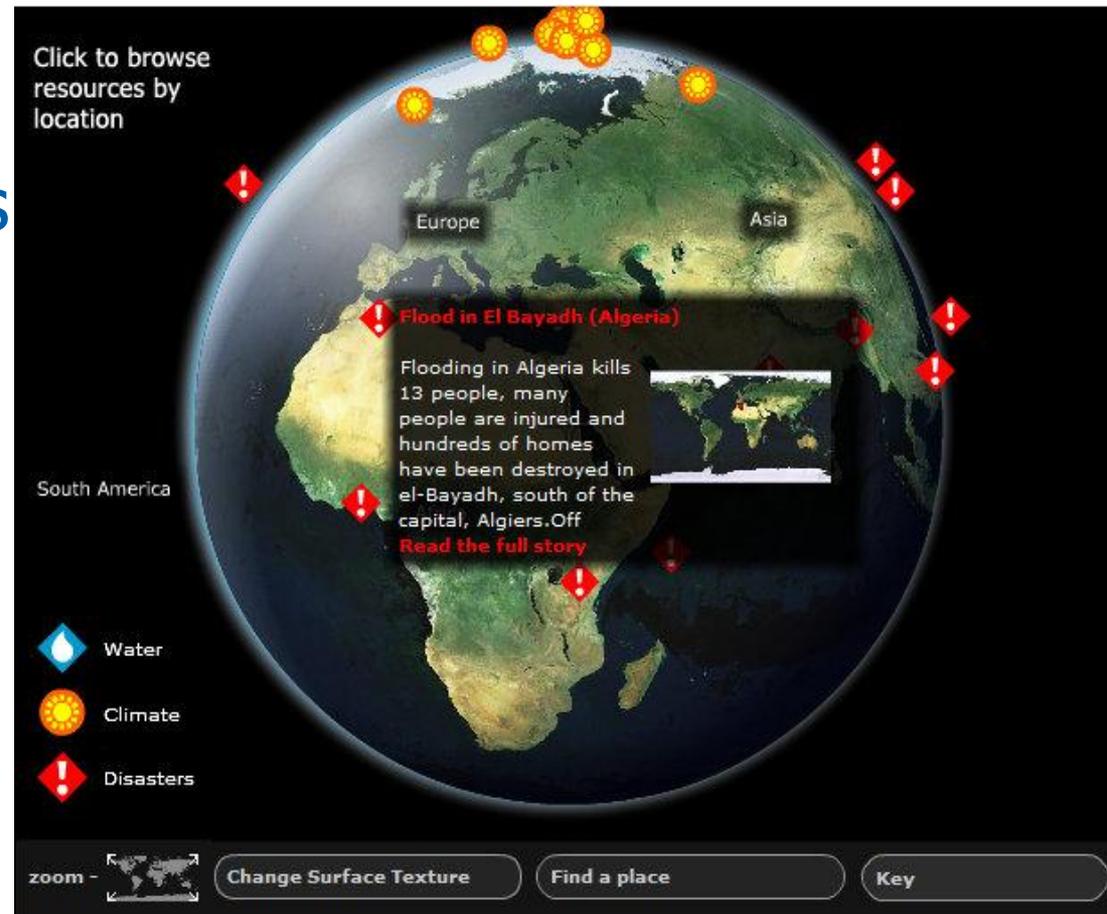
Data Sharing Principles

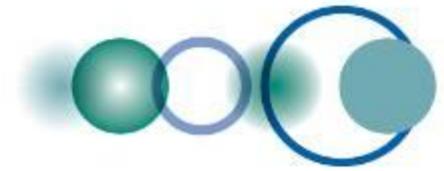
- Full and open exchange of data ... recognizing relevant international instruments and national policies and legislation
- Data and products at minimum time delay and minimum cost
- Free of charge or cost of reproduction for research and education



GEOS Common Infrastructure

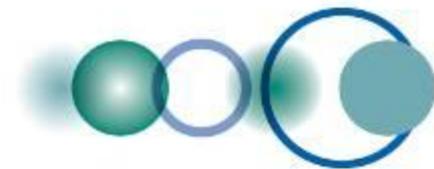
- GEO Portal
- Registries
- Clearinghouse
- 100s of components and services
- 1000s of datasets





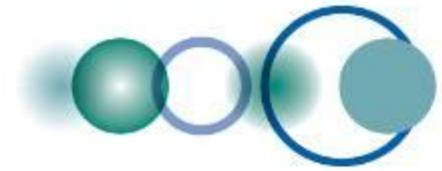
Standards and interoperability

- Added value – creating new datasets from disparate observation systems
- Open international standards
- Focus is on the interfaces between systems
- Standards and Interoperability Registry
- Standards and Interoperability Forum



THE GLOBAL EARTH OBSERVATION SYSTEM OF SYSTEMS

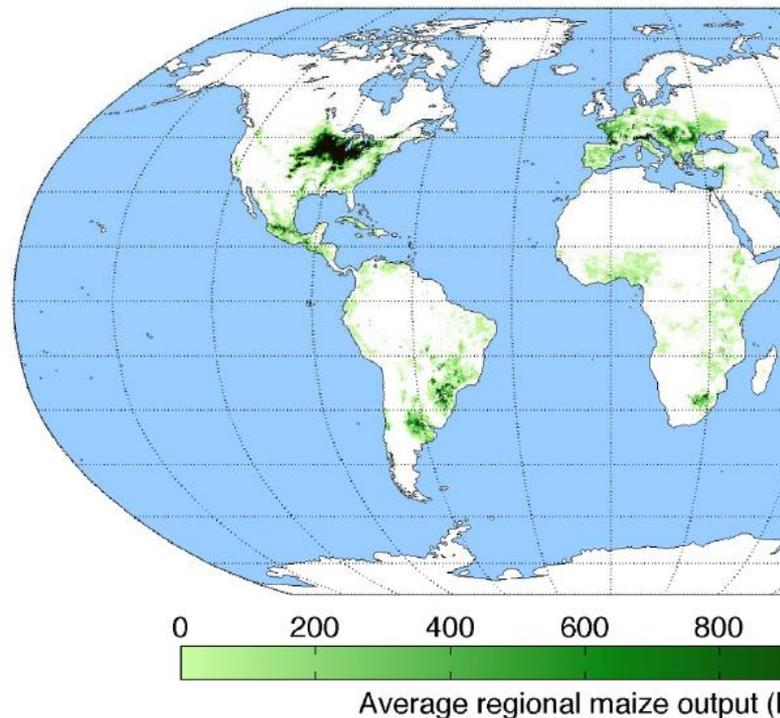




GEO Global Agricultural Monitoring

Task led by Canada, China, EC, India, Japan, USA, CEOS

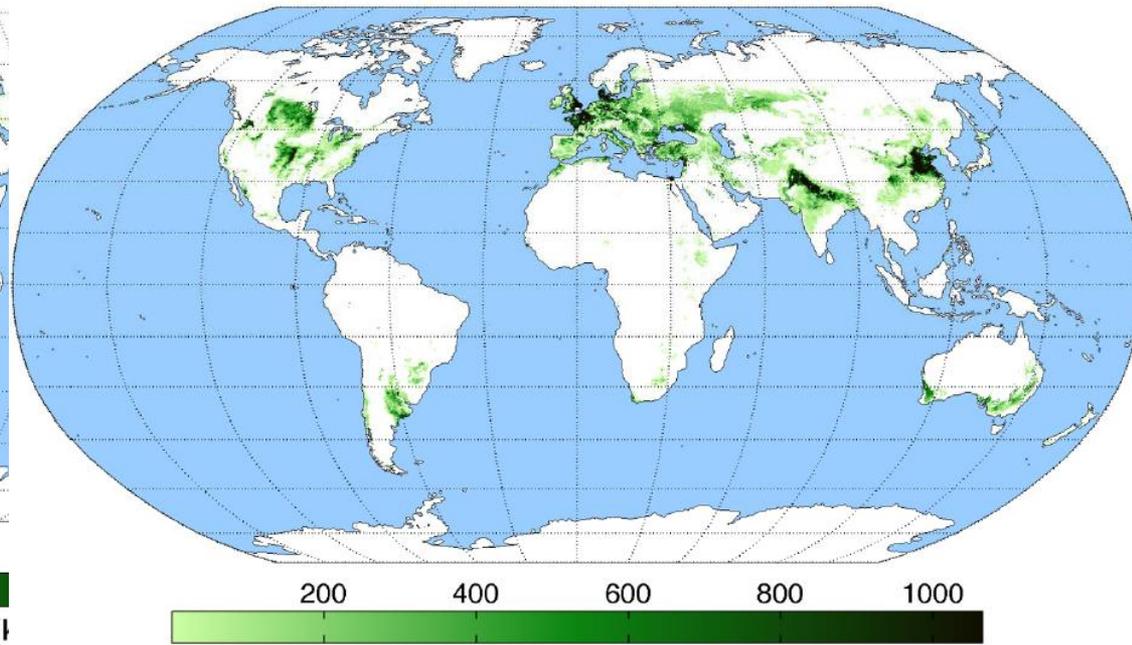
Global Corn Yields



Average regional maize output (t/ha)

Source: Monfreda, C., N. Ramankutty, and J.A. Foley. 2008. Farming the planet: 2. Geographic distribution of crop areas, yields, physiological types, and net primary production in the year 2000. *Global Biogeochemical Cycles* 22: GB1022
October 13, 2010
USDA/FAS/OGA

Global Wheat Yields

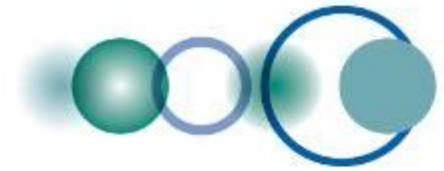


Average regional wheat output (kg/ha)

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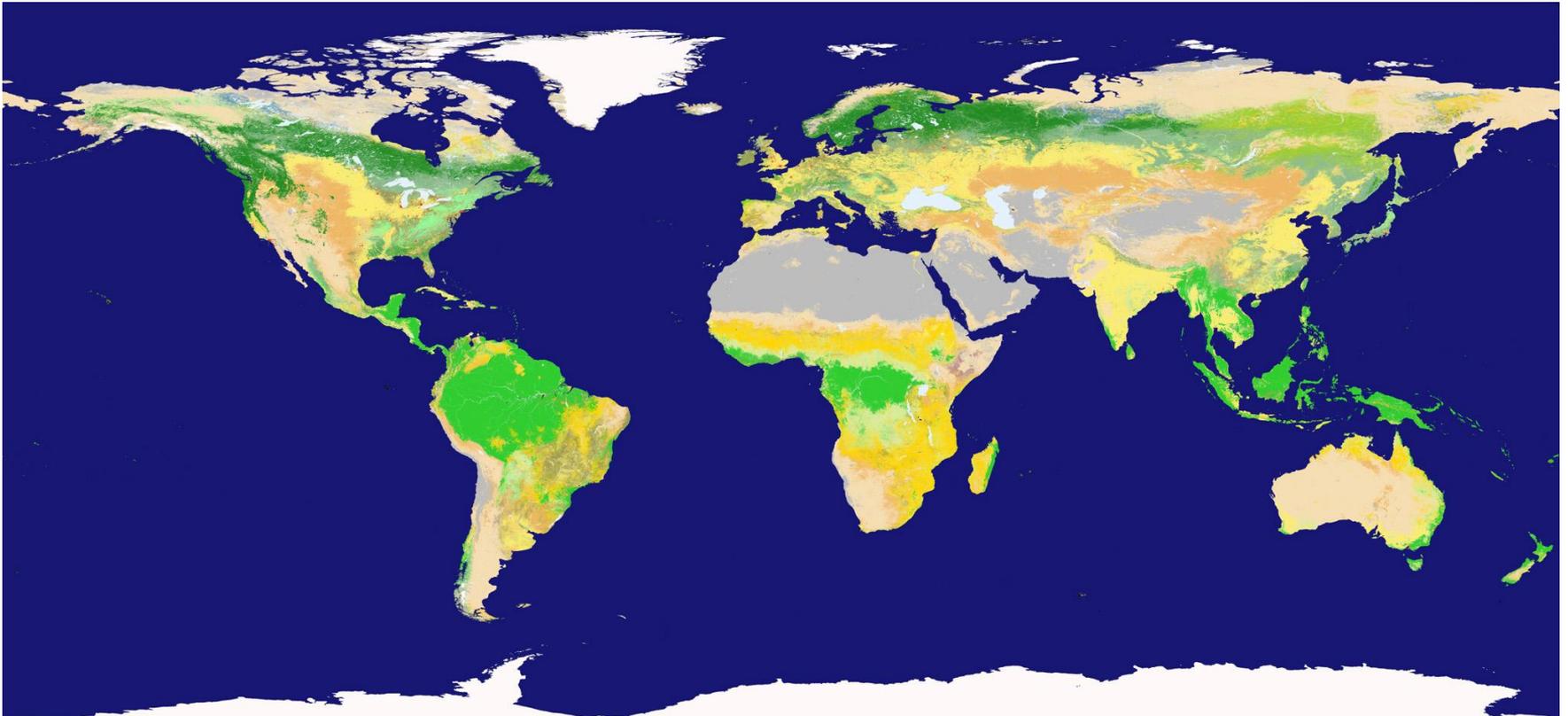
USDA/FAS/OGA

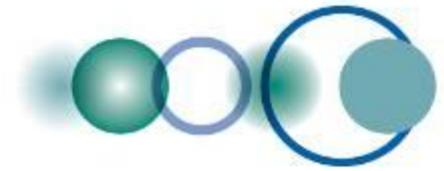


Global data sets

30m Global land cover

Task led by China, US, etc.



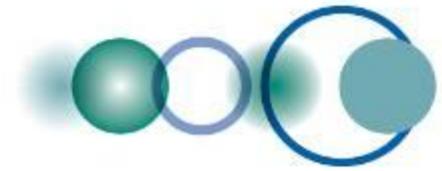


Global data sets

ASTER Global Digital Elevation Model (GDEM)

Task led by Japan, US



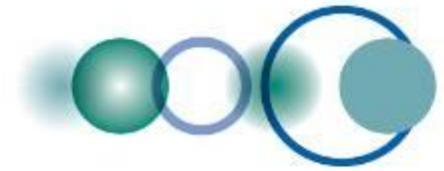


Global data sets

Global geological map data

Task led by OneGeology

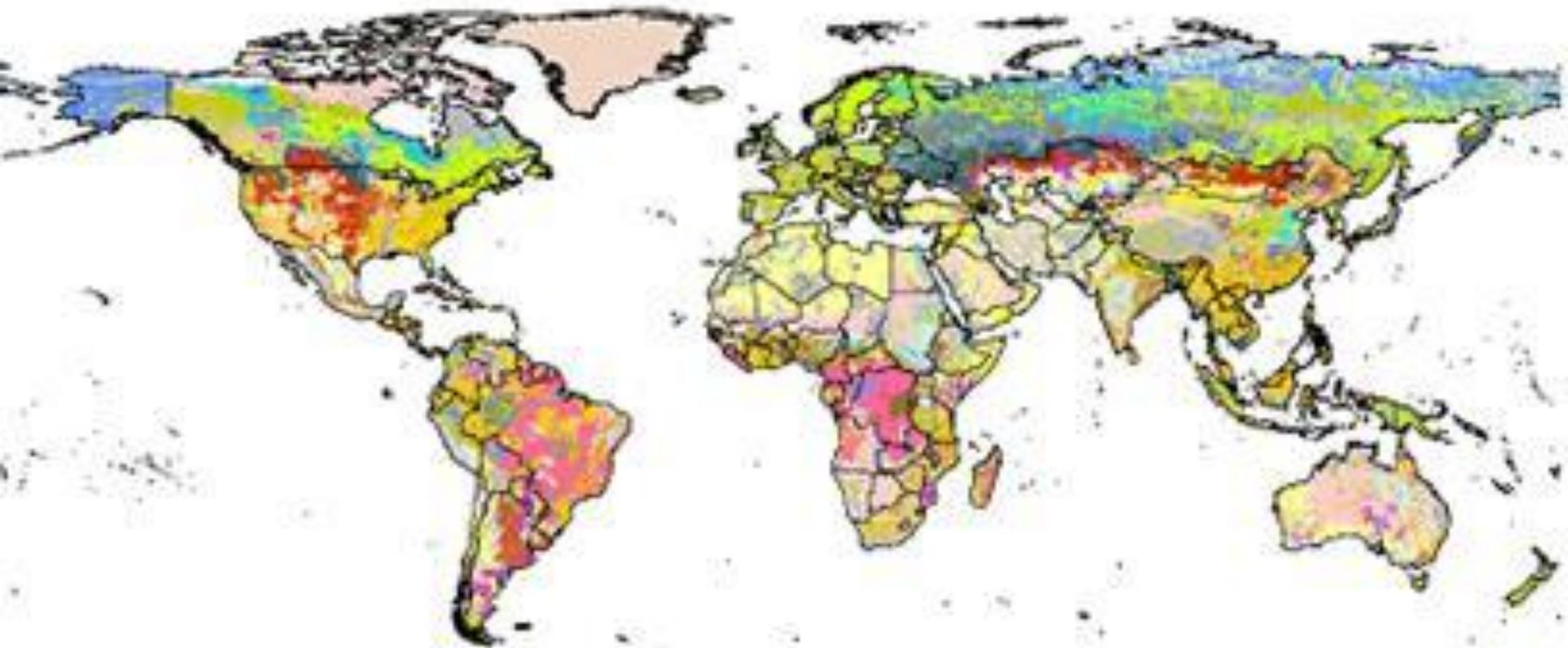
The screenshot displays the OneGeology Portal interface. At the top left is the OneGeology logo with the tagline "Making Geological Map Data for the Earth Accessible". A red box with the number "12" and an arrow points to the "OneGeology Portal" text. The top right contains a "Contact us" link and a "Catalogue of Registered Services" button. Below the header is a navigation bar with icons for search, home, and other functions, along with buttons for "Clear layers", "Save WMC context", "Save WMC context", "Load a WMC context", and "Help". The main content area features a global geological map with a semi-transparent 3D-style overlay of geological data over the Americas. At the bottom, there is a scale bar (0 to 4000 km), a scale of 1:88,966,476, and coordinates (lon: 64.82, lat: 88.28). A footer note states: "All data are owned by OneGeology participants and any limits on the use of these data are described by each provider in the Catalogue of Registered Services."

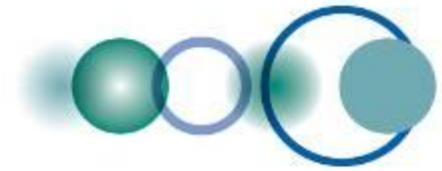


Global data sets

Global soil survey

Task led by Harmonized World Soil Database





GEO and GGIM – making the link

- Mutually supportive and synergistic
- Invite UN / GGIM Secretariat to join GEO
- Contact your GEO Principal
- Engage in the GEO Work Plan and Tasks, e.g.
 - Data Sharing Principles (ID-01)
 - Earth Data Sets (IN-02)
 - GEOSS Common Infrastructure (IN-03)
 - GEOSS Design and Interoperability (IN-05)
- Access and use GEOSS

Thank you

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www.earthobservations.org

