National Earth System Science Data Sharing Platform of China

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1. Data service network of Geodata.cn

National Earth System Science Data Sharing Platform of China (Geodata.cn) launched in 2003 is one of the platforms for National Science and Technology Infrastructure Program (NSTI).
2. Data Resources of Geodata.cn

Total data volume: 54.66TB

- National level datasets of key variables and parameters of Earth, such as ionosphere, temperature, precipitation, radiation, ecosystem, land cover, soil, wetland, desert, glacier, permafrost, geomagnetic, as well as social and economic development indexes
- Typical regional integrated database, such as Qinghai-Tibet Plateau, Loess Plateau, Yangtze River delta, Yellow River delta, South China Sea etc.
3. Data sharing flow of Geodata.cn

Data Holders

Data Registry

Metadata Registry

Metadata and Data Service Binding by MD ID

Metadata and Document Binding by MD ID

Data Document Registry

Data Service Registry

Data Review and Publish

Metadata-Data Service-Document Review

Metadata-Data Service-Document Publish

Data Clear-up

Data Use and Reproduce

Metadata Search

Data Service and Document Access

Data Use

Data Reproduce
3. Distributed Centers Interoperability of Geodata.cn

- **WDS Portal**
- **OAI-PMH**
- **Master Center**
  - Global Metadata Search Web service
  - Metadata synchronization Web service
  - Push: Metadata
- **Sub Center**
  - Data Service & Doc Remote Access Web service
  - Pull: Data Service & Doc
- **User Information Retrieve Web service**
  - User Registration and Authentication Center
  - Uniform User Registration Single-sign on/out Authentication
4. Essential Components and Interfaces of Geodata.cn

**Web Interfaces**
- Global Metadata Search Web service
- Metadata synchronization Web service
- Data Service & Doc Remote Access Web service
- User Information Retrieve Web service

**Data Sharing Policy**
- Data Sources Selection Rules
- Data Sharing Service Rules
- Data Citation Rules

**Data Sharing Technical Specification**
- Data Classification and Coding
- Core Metadata and Expand Specification
- Data Service Interface Specification
5. Relationship of Geodata.cn and RDA

**Geodata.cn** is dedicated to integrating and sharing geo-data to support Earth system science and global change related research and education activities in China.

**RDA** is building bridges to overcome the hurdles for easy data access, data sharing and interoperability by facilitating collaboration between experts from all over the world belonging to different disciplines and organisations.

<table>
<thead>
<tr>
<th>Working Groups</th>
<th>DFT, DTR, PIT, PP, MDR, Data Citation, MDR Interoperability, Data Categories &amp; Codes, Certification, Data Publication……</th>
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</thead>
<tbody>
<tr>
<td>Interest Groups</td>
<td>Semantics, PIDs, MD, Provenance, BD Analytics, Preservation, Data Fabric, Publishing, Clouds in Dev. Countries……</td>
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</tbody>
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**Outputs supporting and guiding Geodata.cn**  
**Use case for RDA**  
**Participate in RDA actions**  
**Provide a big change for Geodata.cn to cooperate with other agencies and programs around the world**
6. Some answers of this session required questions

- **Are any of the first WG results have relevance for your work? Which RDA groups are working towards solutions that are relevant for your work?**

Almost results of the first RDA WG are relevant to Geodata.cn work, such as DFT for data organization and semantic search, DTR for data automatically access, PID and PIT for data citation and publication. If the results can be more detailed further, they will play more roles for Geodata.cn.

- **Are there results that you urgently need that you would work towards with others in the RDA?**

Geodata.cn now is conducting geo-data ontology and data linked, data mining and analyze online, data citation and publication etc. research. We urgently hope to work together with RDA (DFIG, DFT, MSD, BD Analytics, Clouds in Dev. Countries) to quickly seek the best solutions.

- **Is cross-border (countries, disciplines, etc.) data exchange and re-use relevant and an issue in your environment?**

Yes. Geodata.cn have conducted data exchange with WDS, University of Maryland, some institutes of RAS and MAS, ICIMOD(International Centre for Integrated Mountain Development), GCMD(Global Change Master Directory). Cross-border data exchange and Global level datasets making are key issues of Geodata.cn.
Thanks for your attention

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