



# National Remote Sensing Center of China (NRSCC)

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# Contents

1. Functions and history

2. Organization structure

3. Duties

4. International cooperation

5. Global eco-environment monitoring

6. Data sharing promotion



# 1. Functions and history

- NRSCC was established in 1981, and its technical fields involve the earth observation and navigation technology domains, including remote sensing, geographic information system, satellite navigation and positioning, and deep space exploration.
- organize and implement national scientific and technological plans in the field of earth observation and navigation technology.
- Develop innovation capacity of China and fostering the strategic new industry in remote sensing, geographic information system and navigation and positioning.
- provide the technical support to major strategic decisions for the national economic construction, social sustainable development.
- the mode of “condensed kernel, wide network”.



## 2. Organization

- In MOST, the corresponding departments to NRSCC are the Department of High and New Technology Development and Industrialization, Department of International Technology Cooperation.
- NRSCC is constituted of **Division of Global Earth Observation**, **Division of Navigation and Space Detection**, including China-Europe GNSS Technology Training and Cooperation Center, Geomantic Software Evaluation Center and China Secretariat of GEO.
- NRSCC also organized the development strategy **expert panel**, the **advisory committee** and **expert committee**, consisting of the famous experts from national remote sensing technology development field, including 8 academicians of Chinese Academy of Sciences and Chinese Academy of Engineering.



# 49 branches of NRSCC

## involved in most remote sensing teams in China

- Technical support from the 49 branches of NRSCC, involved in most remote sensing teams in China
- Specific expert teams
  - ✓ Consultant team
  - ✓ Technical development and application team
  - ✓ Operation team

### Data and Comprehensive Services

Department of Research & Development  
Department of Information Service  
Department of Geographical Information System  
Department of Meteorological Satellite Remote Sensing  
Department of Remote Sensing Satellite Receiving  
Department of First Aerial Remote Sensing  
Department of Data Management and Industry Development  
Department of Ocean Remote Sensing  
Department of Environmental Remote Sensing  
Department of Earth System Science Data Service  
Department of Disaster Management  
Department of Satellite Surveying and Mapping  
Department of Geographic Information Engineering

### Application Research

Department of Land and Resources  
Department of Agricultural Application  
Department of Forest Resource and Ecological Environment  
Department of Remote Sensing Monitoring of Natural Disaster  
Department of Space Science Remote Sensing  
Department of Global Change and Sustainable  
Department of Remote Sensing for Natural and Cultural Heritage  
Department of Crust Dynamics and Deep Space Exploration  
Department of Urban Environmental Remote Sensing  
Department of Precision Agriculture Application  
Department of Hyperspectral Remote Sensing Technology and Application  
Department of Research for Wetland Remote Sensing  
Department of Nonferrous Metal Mineral Resources Remote Sensing  
Department of Land Remote Sensing

### System and Equipment

Department of System Integration  
Department of Remote Sensing System Equipment  
Department of Radar Armaments  
Department of Satellite Navigation System Equipment  
Department of Microwave Remote Sensing Technology  
Department of GNSS Service Performance Enhancement  
Department of Satellite Data Receiving  
Department of GNSS Signal Processing  
Department of Inertial Navigation System and Apparatuses

### Technical Training

Technical Training  
Department of Hong Kong Research, Development and Training  
Wuhan Technical Training Department  
Department of Proficiency Training

### Local Division

Department of Local Remote Sensing Contact Service  
Beijing Division  
Hunan Division  
Fujian Division  
Chongqing Division  
Jiangsu Division



# 3. Duties

- ❑ provide **recommendations and solutions** to the development strategy, planning and overall policy decision of remote sensing technology and its industrialization for MOST by studying the status, trends and challenges;
- ❑ operate the **remote sensing services** to the General Office of State Council (GOSC) on information about disasters, agriculture, ecology and environment etc.;
- ❑ **implement projects** on remote sensing and space information technology under various national R&D programs of China, such as National High Technology Research and Development Program (863 Program), and to promote industrialization of relevant results;
- ❑ organize and coordinate the implementation of China-Europe Cooperation Project on **Galileo**;
- ❑ to participate in the formulation, assessment and accreditation of related national standards, norms and regulations in EO technology;



# 3. Duties

- ❑ promote and organize multilateral and bilateral **international cooperation projects**, and to organize related training and personnel exchange activities;
- ❑ act as the contacting point of the China-European **GNSS Technology Training and Cooperation Center**;
- ❑ host the China Secretariat of the Committee on Earth Observation Satellites (**CEOS**), China Secretariat of the Group on Earth Observations (**GEO**), and act as the national focal point of the United Nations Regional Space Applications Program for Sustainable Development in Asia and the Pacific (**RESAP**);
- ❑ liaise with remote sensing institutes in China, to provide technical training and consultancy services.



# National project management

**Management the national for R&D projects in the fields of earth observation and navigation :**

- ✓ **formulating annual plans**
- ✓ **annual inspection**
- ✓ **mid-term inspection**
- ✓ **checking before acceptance**
- ✓ **summary of the achievements**



# Environment and disaster monitoring and service to GOSC

- **Report remote sensing information directly to the General Office of the State Council (GOSC) for 17 years.**  
**on flood, earthquake, wild fire, agriculture, ecology and environment, water resources, draught, etc.**
- **NRSCC also organized remote sensing dynamic monitoring of 1998 huge flood disaster, 2008 and 2013 devastating earthquake in Sichuan Province.**

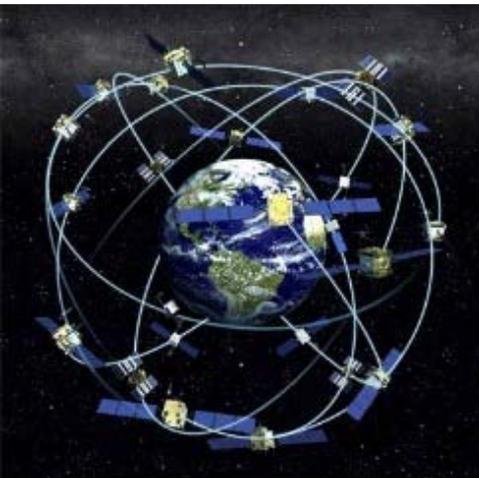


# Spatial Information System Software Assessment

- Since 1996, NRSCC has carried out assessment work for the national space information system software according to the accreditation request of China National Accreditation Service for Conformity Assessment.
- In recent years, NRSCC launched the testing procedure for software outcomes before getting the authorizations, and committed the management work to the assessment work council.



# 4. International cooperation



- ❑ Galileo Satellite Navigation System
- ❑ Group on Earth Observations
- ❑ Sino-Europe Dragon Programme
- ❑ Sino-Europe Space Dialogue
- ❑ Focal point of UNESCAP
- ❑ Square Kilometer Array (SKA) office
- ❑ Member of CEOS



# China-EU Galileo Project Cooperation

- to participate in the formulation, assessment and accreditation of related national standards, norms and regulations in earth observation and navigation technology;
- to promote and organize multilateral and bilateral international cooperation projects, and to organize related training and personnel exchange activities;
- to act as the contacting point of the China-European GNSS Technology Training and Cooperation Center;





# China-EU Dialogue on Space Technology Cooperation

## First meeting(August 14, 2012)



**The document was signed on the future cooperation fields between China and EU on space technology**



# Group on Earth Observations, GEO



- ◆ GEO is an intergovernmental organization on earth observation, with 89 member countries and EC, 67 participating organization and 8 observers.
- ◆ China is one of four co-chair countries from the beginning in 2005.
- ◆ China GEO inter-Ministerial coordination group lead by the Ministry of Science and Technology of China.
- ◆ NRSCC is the China-GEO secretariat.



# Dragon program



□ NRSCC is implementing the MOST-ESA Dragon program, it has achieved significant international impact in the field of earth observation.



➤ involving in more than 600 scientists and expert from China and 11 EC member countries.

➤ Advanced training course on remoter sensing technology every year, trained 558 young scientists.

➤ Nine years cooperation, now is the third phase.



United Nations Economic and Social Commission  
for Asia and the Pacific

NRSCC is the focal point of the intergovernmental Consultative Committee (ICC) of the United States Economic and Social Commission in Asia and the Pacific

Intergovernmental Consultative Committee (ICC)



**CEOS**  
Committee On Earth  
Observation Satellites  
International Directory Network (IDN)

Member organization of CEOS, support various activities of CEOS, host the 18<sup>th</sup> CEOS Plenary in 2004.



China SKA office, coordinating the China scientists and engineers to join the SKA project.



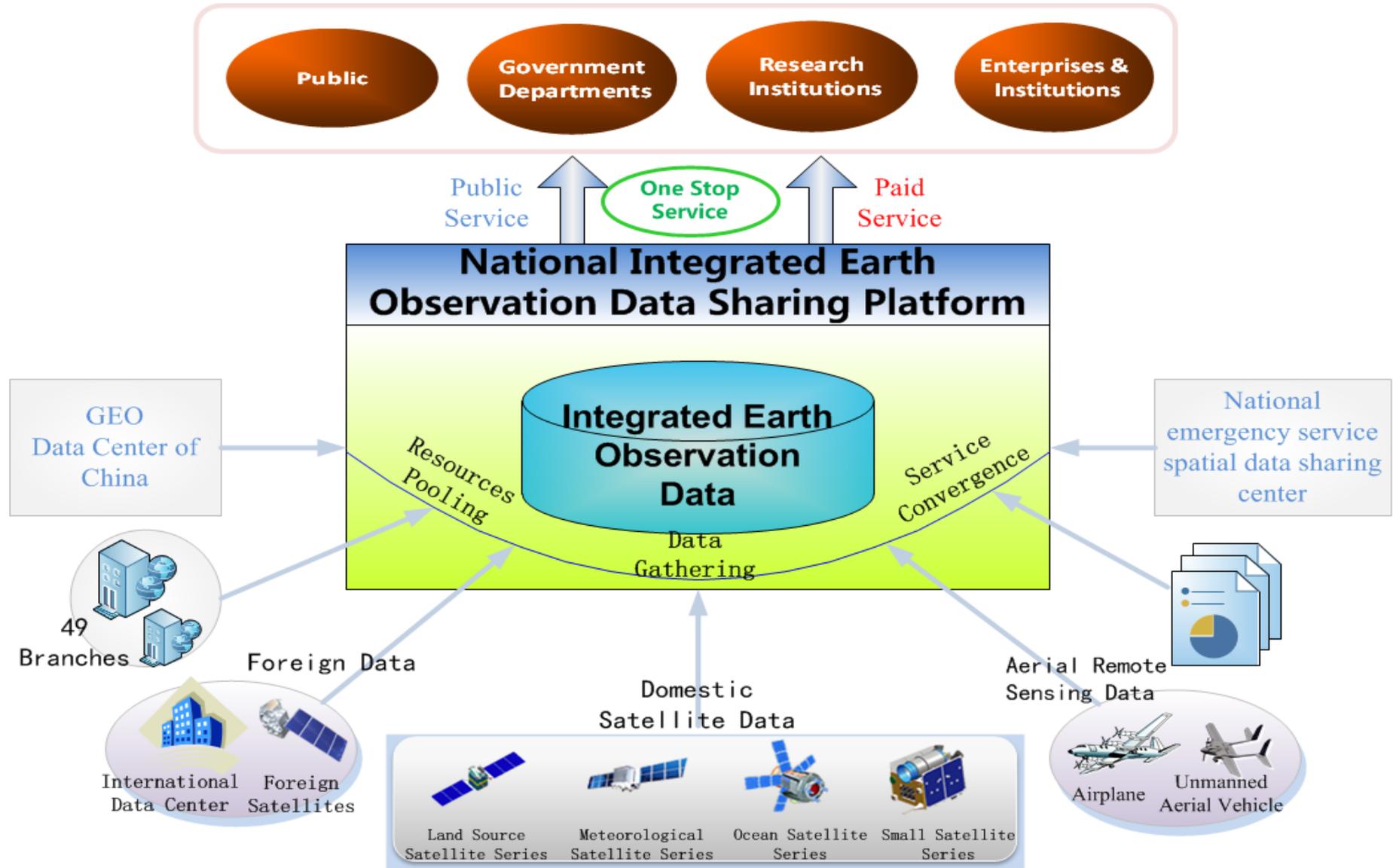
# 5. Reports Global Remote Sensing Monitoring on Ecosystem and Environment

In order to support international cooperations on global change studies under the framework of the Group of Earth Observations(**GEO**), the National Remote Sensing Center of China(**NRSCC**) launched the Program on Remote Sensing Monitoring of Global Ecosystem and Environment associated with the implementation of the National High-tech R&D Program (**863 Program**). The report and datasets will be released to public annually.

- In 2013, two reports were released, the topics of which included: Global dataset development and analysis of changes of vegetation leaf area index(LAI) dynamics from 1982 to 2011, Global Land Surface Water 2010 and Dynamic Changes of Sample Lakes 2001-2011.
- Datasets and reports are available on <http://www.csi.gov.cn>.
- More factors related to ecosystem and environment will be monitored and analyzed annually.



# 6. Earth observation data sharing promotion





Thank you for attention!

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