Role of GSI

**Survey**

Develop and maintain the country’s geodetic reference frame

- **Quasar** VLBI Stations
- Set the location on earth.
- **Stations**
- **Longitude**
- **Latitude**
- **Height**

**Portray**

Prepare, update and widely distribute national maps

- **Prepare national maps**
- **Update national maps**
- **Distribute national maps**

- GEONET* Central Analysis Center (in GSI)
- **CORS**
- **Triangulation Points**
- **Benchmarks**
- **Origin of Horizontal Control Network**
- **Origin of Vertical Control Network**

**Information from administrators**

Providing digital map of Expressway on its opening day.

- Download
- Paper
- Disc
- Web map

- **Set the height reference.**

*GNSS Earth Observation Network System
Role of GSI

Safeguard

Provide maps in a timely manner at each phase of disaster cycle

Information integration and sharing

Disaster information system for rapid grasping and sharing information by collecting a variety of disaster information and for overlaying on one digital map

- On-site information
- Information from Helicopter
- Information on damages
- Seismic intensity
- Information before disaster
- Fundamental Geospatial Data

Promptly provide maps and images of damaged areas

- Floods
  - Flood of Kinu River (Movie)
  - Aerial photos before and after the flood
  - Estimated flooded area

- Volcanos
  - Interferometric SAR (InSAR) image by ALOS-2 Satellite (Aug 10 to 24, 2015)
  - Original data are owned by JAXA
  - Ground movement detected by CORS
  - Baseline from Kagoshima No.2 to Sakurajima

Remote and in situ survey

Using latest technologies such as airborne/UAV survey, temporal Remote GNSS Monitoring System etc.

- Taking photos by airborne survey
- Setting temporal Remote GNSS Monitoring System
- Taking videos by UAV

We Portray our Land.

Survey

Safeguard
GSI’s Disaster Response

【Mission】Prompt development and provision of geospatial information as a designated government organization in accordance with the Basic Act on Disaster Control Measures.

During disasters

① CORS monitors crustal deformation in real time, continuously for 24 hours.

② Aerial photo grasps damage by emergency photographing.

③ InSAR ALOS observation grasps area-wide crustal deformation.

④ Disaster situation map visualizes disaster situation.

Normal times

Developing and updating Digital Japan Basic Map to provide up-to-date geospatial information

Developing thematic maps (elevation data, etc.)

Data acquisition

Incorporating into maps rapidly

Preparing Disaster Measure Maps to rapidly provide maps of affected areas when a disaster occurs

Disaster Maesure Map

Digital Elevation Map
Japanese standards for geographic information ensures consistency with the international standards.
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