FIG WORKING WEEK 2012
May 6–10 2012
Rome, Italy

How the National Mapping Organization of Japan responded to the Great East Japan Earthquake?

Toru Nagayama

Geospatial Information Authority of Japan (GSI)

TS03K - Special Session on Catastrophic Disaster of East Japan Earthquake and Tsunami

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About GSI

- The Japanese National Mapping Organization (NMO)

Japanese government

Cabinet — Ministry of Land, Infrastructure, Transport and Tourism (MLIT) — GeoSpatial Information Authority of Japan (GSI)

- Functions
  - (+) National geodesy & mapping, SDI policy & promotion
  - (-) Cadastral, land & real estate manag., hydrography
- 1868 Established, 1945 Civilized.
- No. of Staff: 719 (2011)
- Budget: 10.7 Bil. JPY(ca. 130 Mil. USD)

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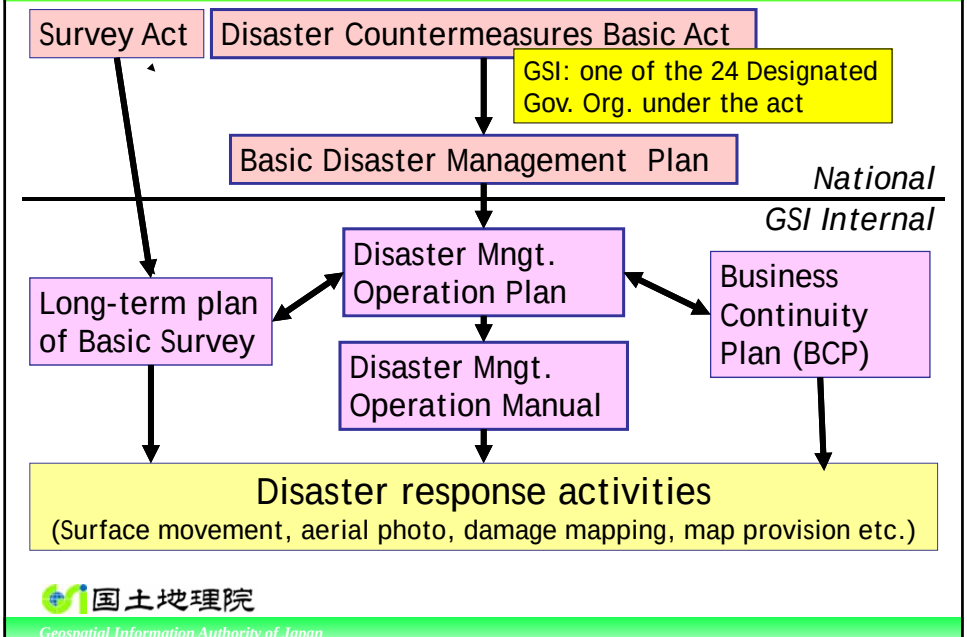
Why Disaster Response?



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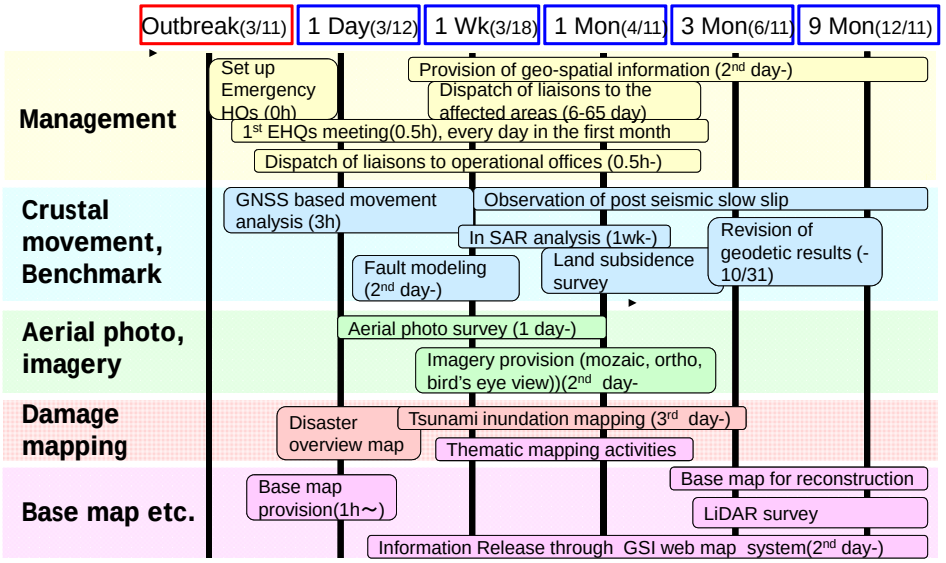
GSI Response Summary



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Just after the quake

Taken by GSI, March 2011

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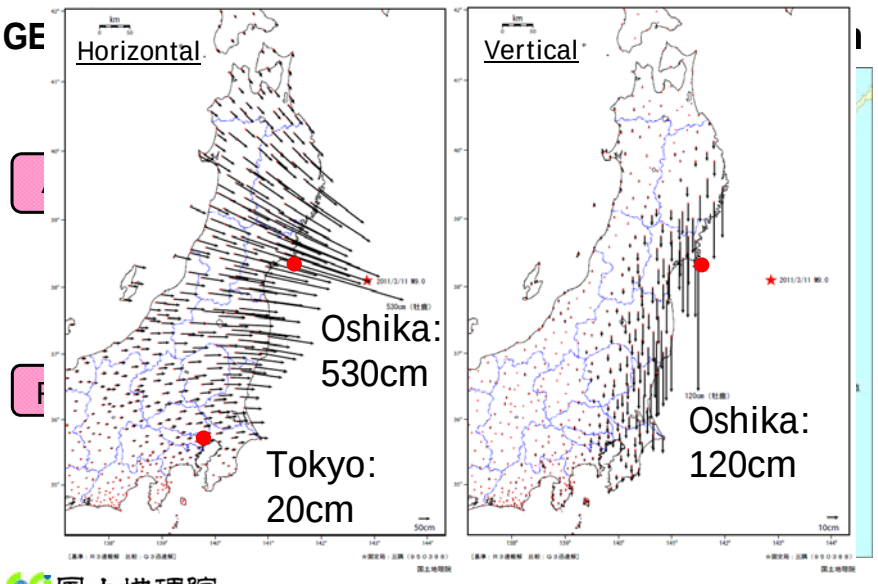
Crustal movement



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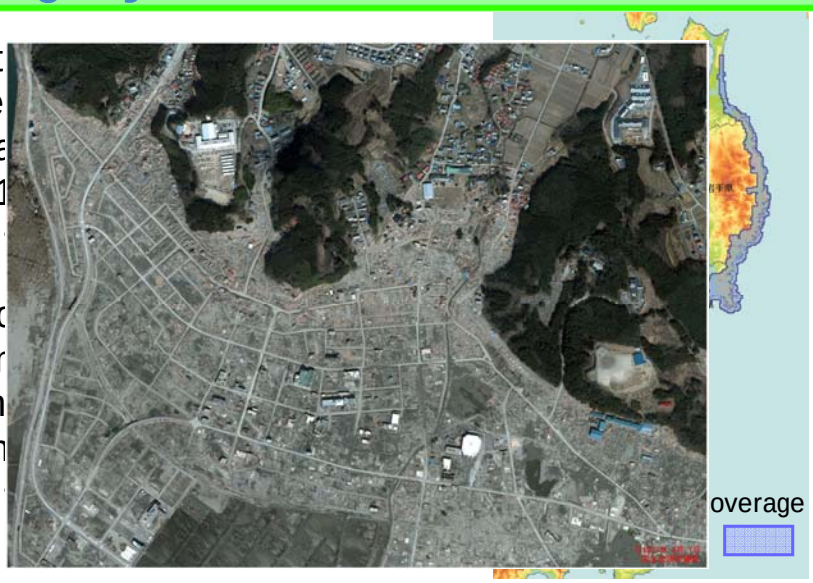

overage

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Inundated areas by tsunami

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Other thematic maps

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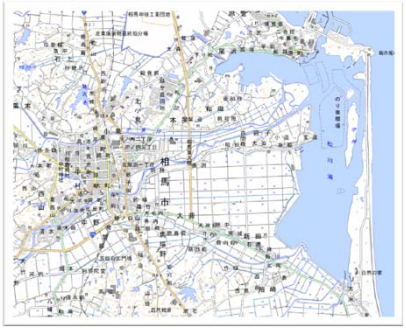
Base map



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Distribution channels

(1) Through humanitarian relief logistics by JSDF(Self Defense Force)

(2) Liaisons stationed in Sendai city

*Map & Data provision to rescue and recover organizations

(3) Geospatial Info. Support Team

*One stop center at GSI HQs,

*1,537 requests (by 2012/3/31) (2) + (3)

(4) Website at http://www.gsi.go.jp

*For the general public

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Use of geospatial Information

Kesennuma City Miyagi Prefecture

- Used Tsunami map and Hi-res air photo
- Efficient issuance of building damage certification to citizens


Photo: Kesennuma City

Forestry and Forest Products Research Institute, Tohoku Branch

- Used aerial photos examining damaged costal pine forests
- Measurement with stereograph: tree height, ground height etc.


Photo: FFPRI

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Conclusions

- The largest disaster in 80 yrs. in Japan
- GSI provided geospatial information
- Achievements: Liaisons, GI support team & EQ free building
- Challenges: Infra. stability, better operation & outreach strategy
- Prepare for the next disaster

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