Sixth Plenary Meeting of UN-GGIM-AP

Special Session on
Geospatial Information for Disaster Response

-Case Study on 2016 Kumamoto Earthquake-

Part 5
Overall Management of Disaster Response Activities

12:00am-0:45pm, 18th October 2017

Kumamoto earthquake: damage summary

- **Casualty**

Death	228
Heavily Injured	1,149
Injured	1,604

- **Houses**

Completely Damaged	8,697
Half Damaged	34,037
Partially Damaged	155,902

As of 13 April 2017

Ref. Image Ref. :Director General for Disaster Management, Cabinet Office

Reconstruction on the way

Temporal houses for several years use. 45,000 people live in such house (Sept. 2017)

Planned Rebuilding of Aso-Ohashi Bridge, once collapsed by the landslide

Recover of collapsed concrete wall in the Tawarayama Tunnel, gateway to Aso area

Image Ref. Kyushu Regional Development Bureau / MLIT, Director General for Disaster Management, Cabinet Office

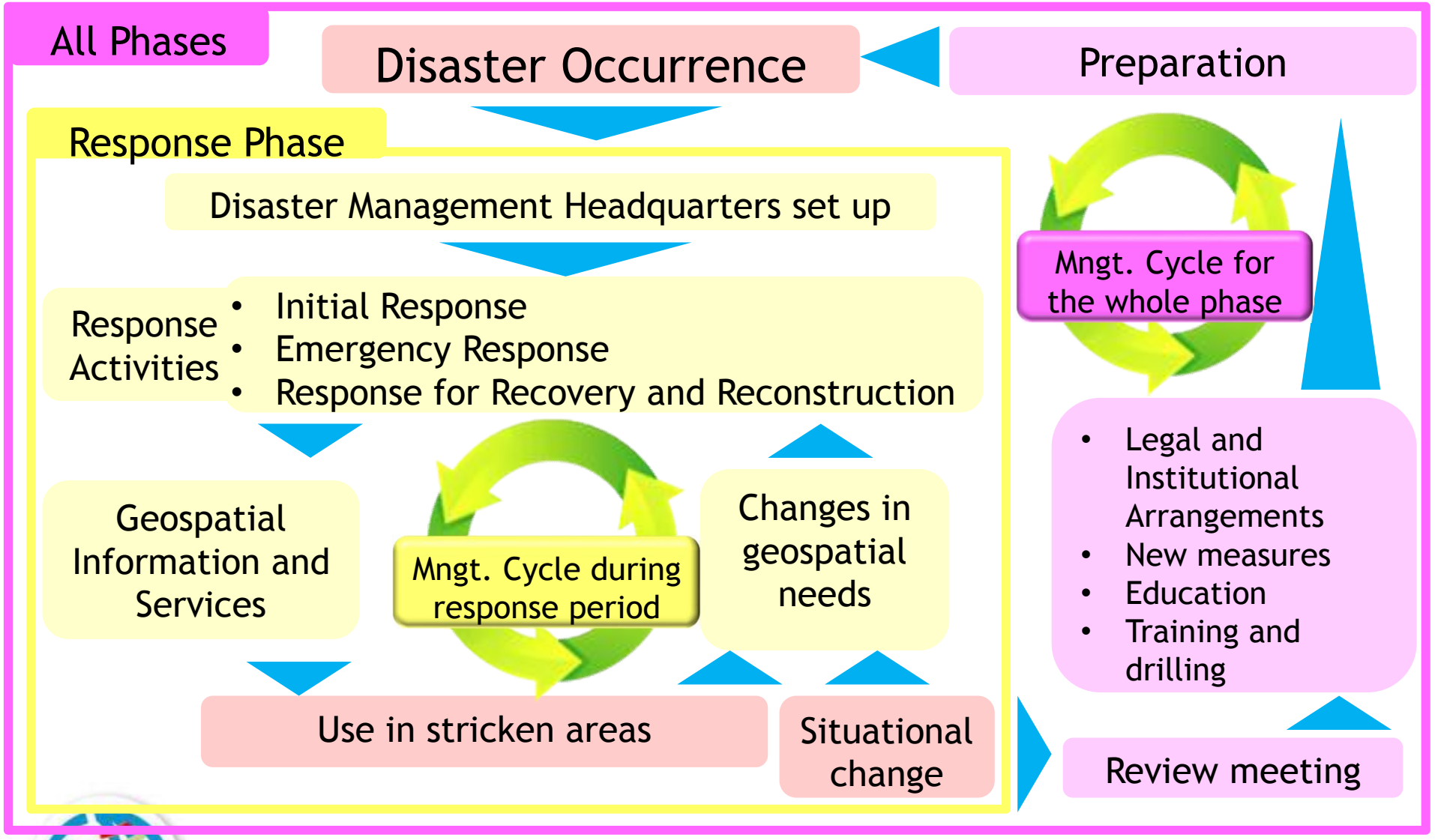
GSI Disaster Management Headquarters

- Governing body of GSI disaster response
- Chaired by GSI-Director-General
- Member: Departmental Directors-General and functional team leaders.
- Secretariat: Disaster Management Office, Planning Department
- Functions:
  - Information sharing
  - Discuss strategy
  - Decide on necessary actions
  - Monitor the progress

GSI-DMHQ for the Kumamoto Earthquake

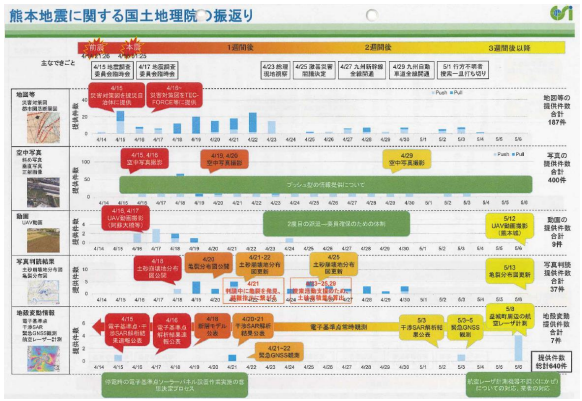
- A total of 42 meetings were convened
  - 14 April to 26 July 2016
- Initial period: understanding the situations
  - Twice or three times a day (14-16 April)
- Second period: emergency responses
  - Once a day (17 April to 11 May)
- Third period: activities for recovery & reconst.
  - Twice a week (13 May to 27 June)
  - Once a week (1 to 26 July)

NGIA disaster management cycle: a model



Review meeting for Kumamoto response

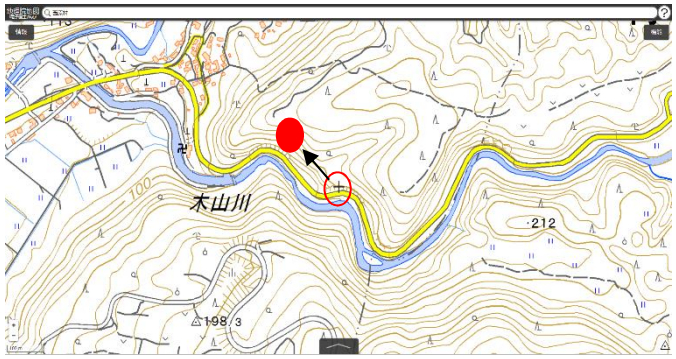
- Date: 8 July 2016
- 170 review points proposed
- Aggregated for the Meeting
- Review points examples
  - Liaison turnover days at ODMHQ
  - Information sharing with stakeholders
  - Human mobilization
  - UAV team operation
  - Data input method for landslide distribution mapping



An example: revising data input methods for landslide distribution mapping

Before

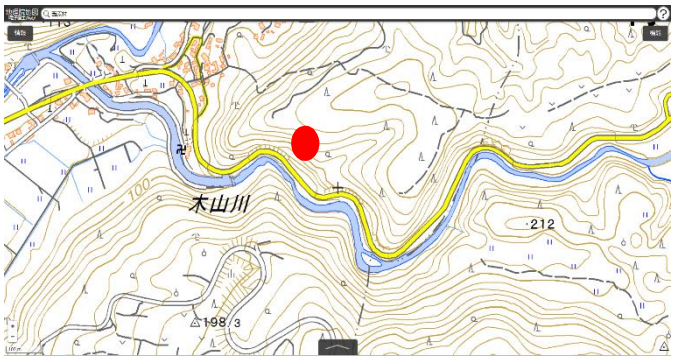
Air-photo interpretation using single photo (non-ortho)



Estimated location by visual judgement on webmap interface was less accurate, needed re-editing.

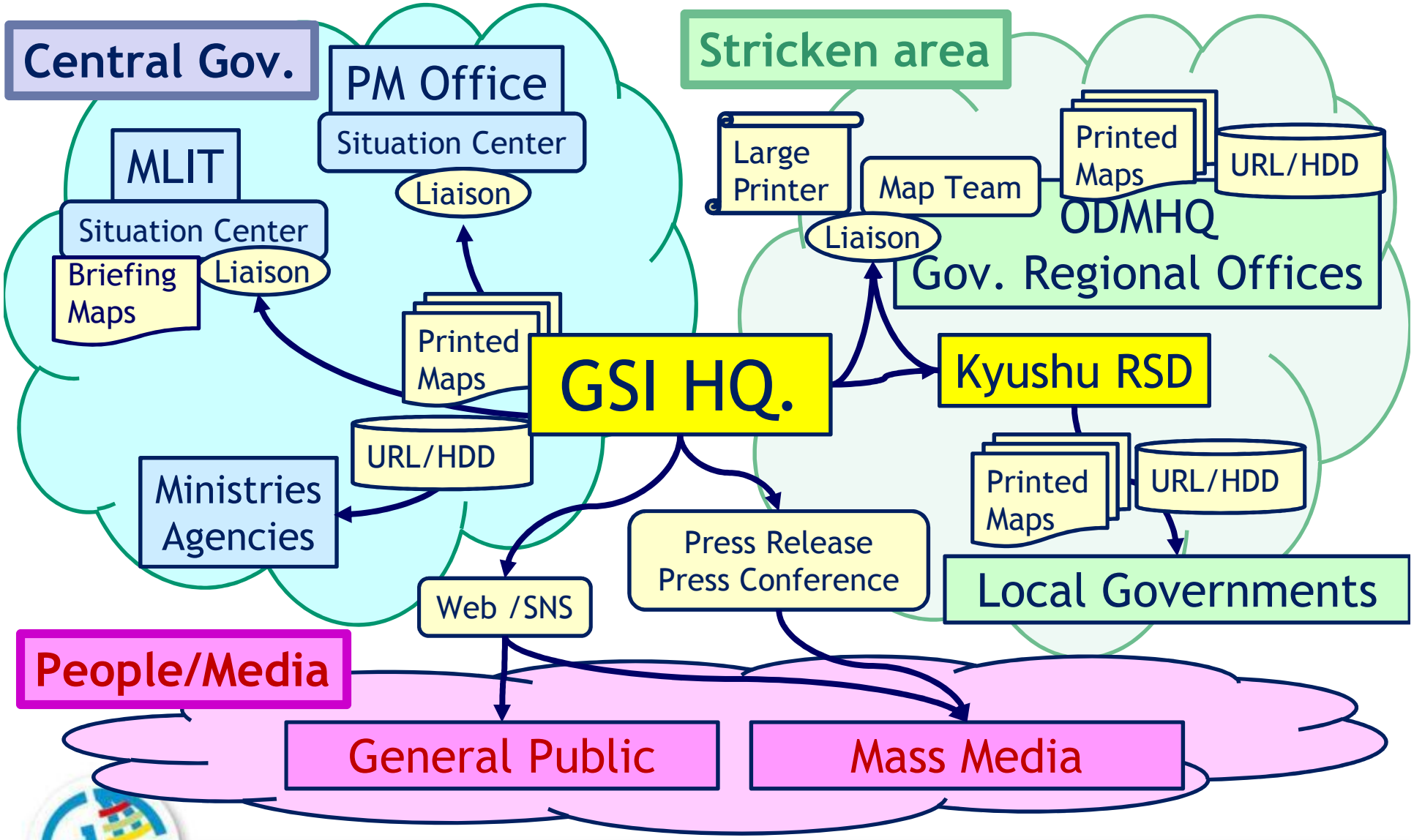
After

Air-photo interpretation using orthophotos laid over webmap interface



Landslide location became accurate

Outreach toward stakeholders

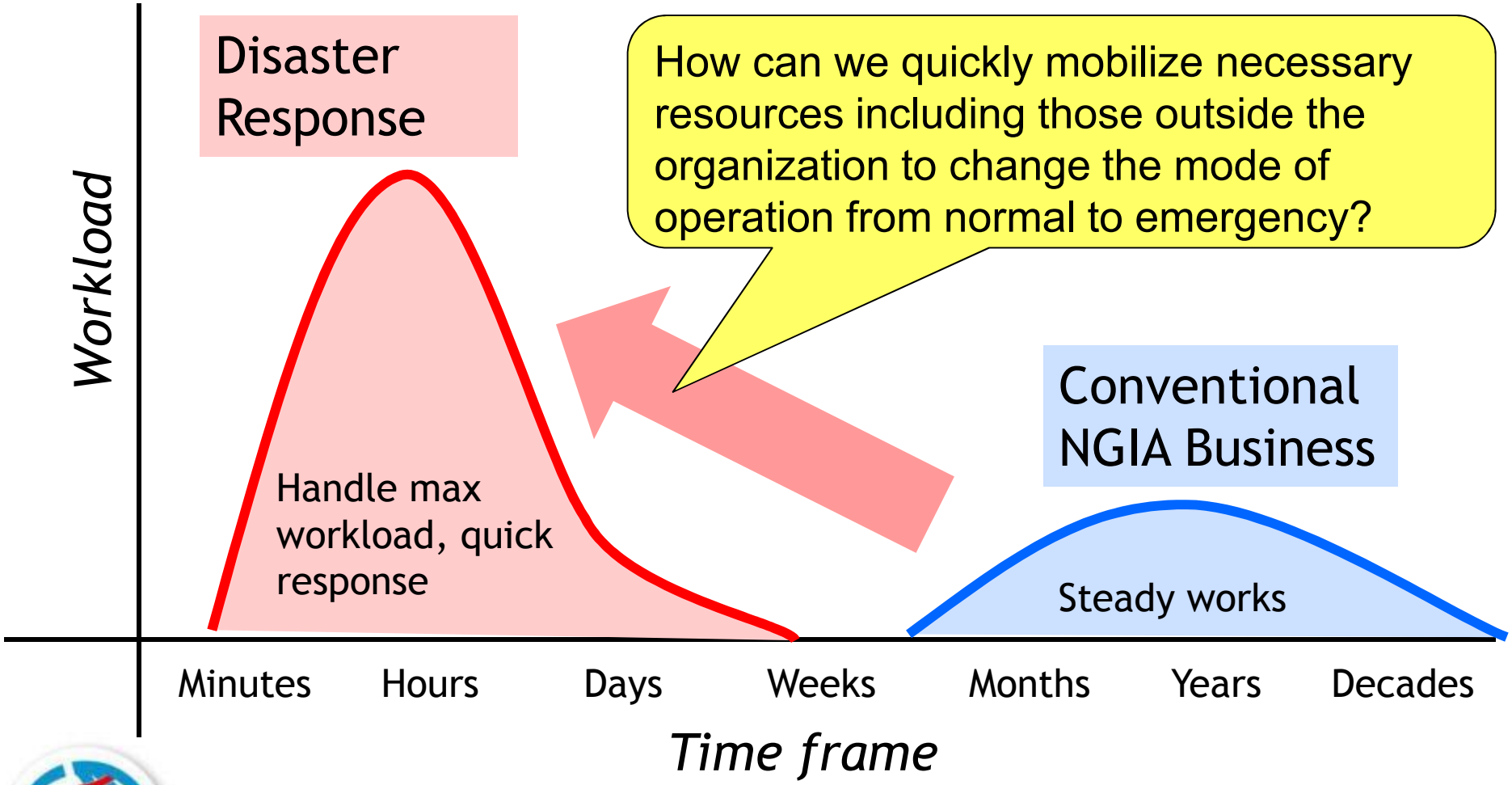


Disaster: NGIAs contribution expected

- Large scale disaster is a concern of the whole nation, not only of the local victims.
- High expectation for timely provision of geospatial information to meet the needs of stakeholders
- NGIAs responsibilities are:
  - Provide latest situations
  - Present them to the society
  - Continuously improving their operations in pursuit of timeliness and accuracies

Sudden surge of demand

poses a challenge: changing time-Management paradigm



Topics for discussion #5

- How should disaster response management be conducted?
- How can the services of NGIAs be improved continuously?
- What are the challenges faced by NGIAs in disaster response management?