

Global Think Tank

National Disaster Management Institute



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Ministry of Security and Public Administration



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Disaster reduction by optical satellites

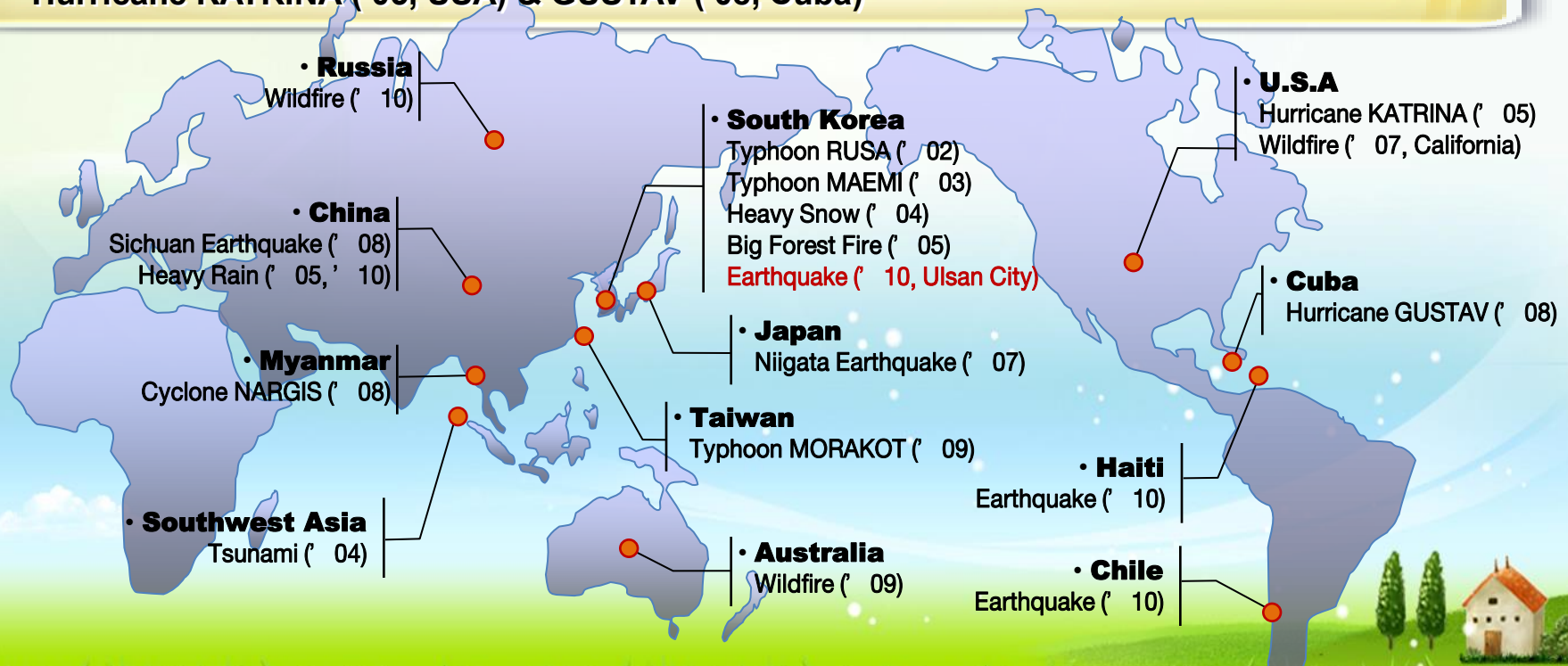
Changes of Disaster Aspects

Increasing the Potential Threat

- Rapid industrialization and urbanization & decreasing forested area
- Increasing migration to the area near to river and mountain
- Weak & lack of social infrastructure, Glacier Retreat in the Arctic and the Antarctic

Bigger and Diverse Disasters

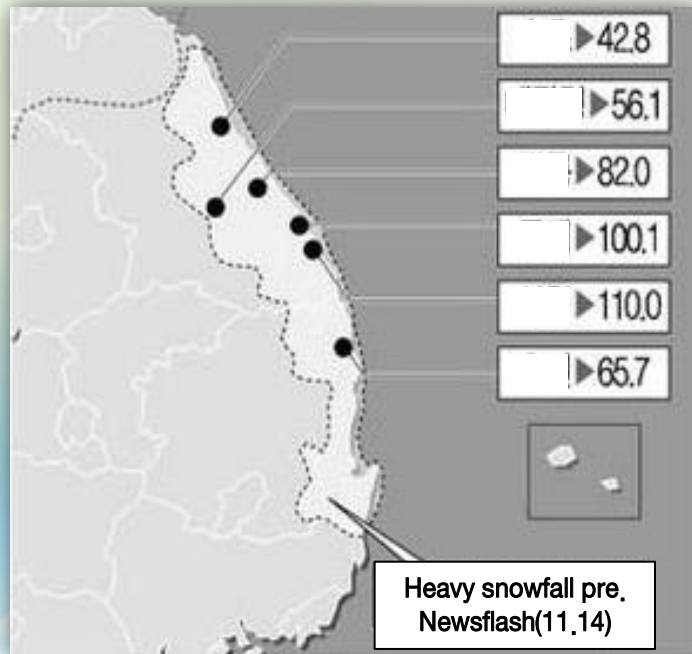
- Super Typhoon RUSA('02) & MAEMI('03) (South Korea)
- Tsunami ('04, Southwest Asia),
- Hurricane KATRINA ('05, USA) & GUSTAV ('08, Cuba)



Overview

- When : 2011.02.11 ~ 02.12
- Where : East Sea area in the Kangwondo
- Damage : About 17 million dollars at 10 cities
- traffic paralysis (due to heavy snow in 100 years)

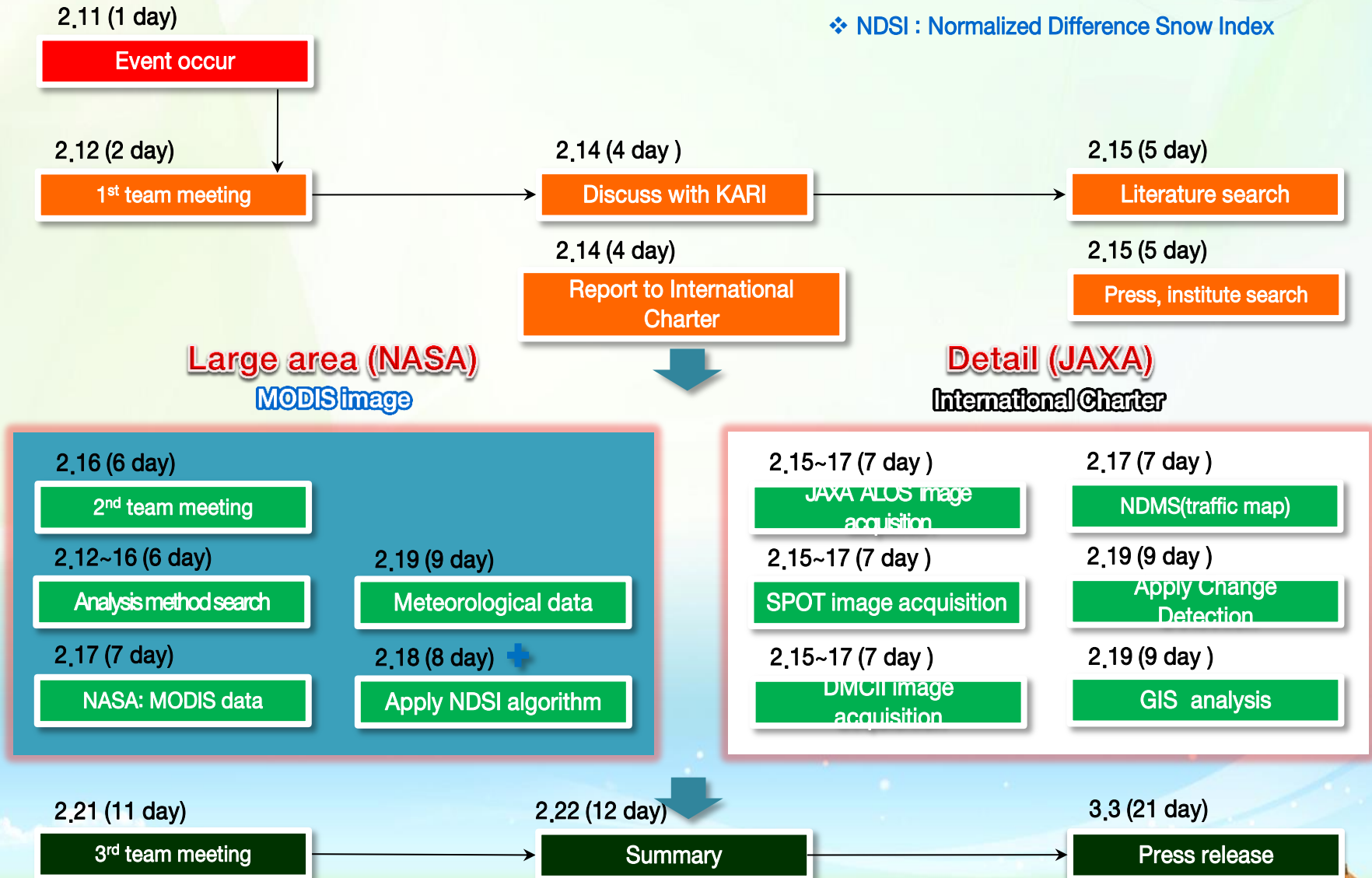
• Snowfall Area near the East Sea (cm)



Snowfall Estimation

Process

❖ NDSI : Normalized Difference Snow Index



Snowfall Estimation

Additional Info



Meteorological Data Portal
Service

<http://kma.go.kr>

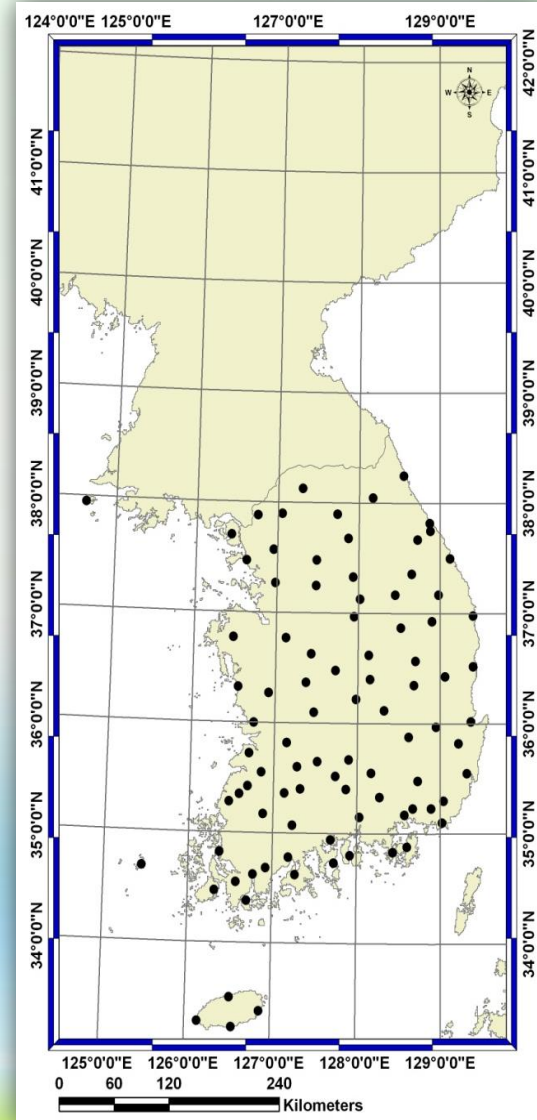


Meteorological material

Source	KMA service
Site	Manned observatory (site: 92)
Available	Various meteorological data
Required	Humidity + Snow + Temperature
Obj. period	Real time
Obj. time	2011.02.12 PM 3



Manned Observatory (site: 92)

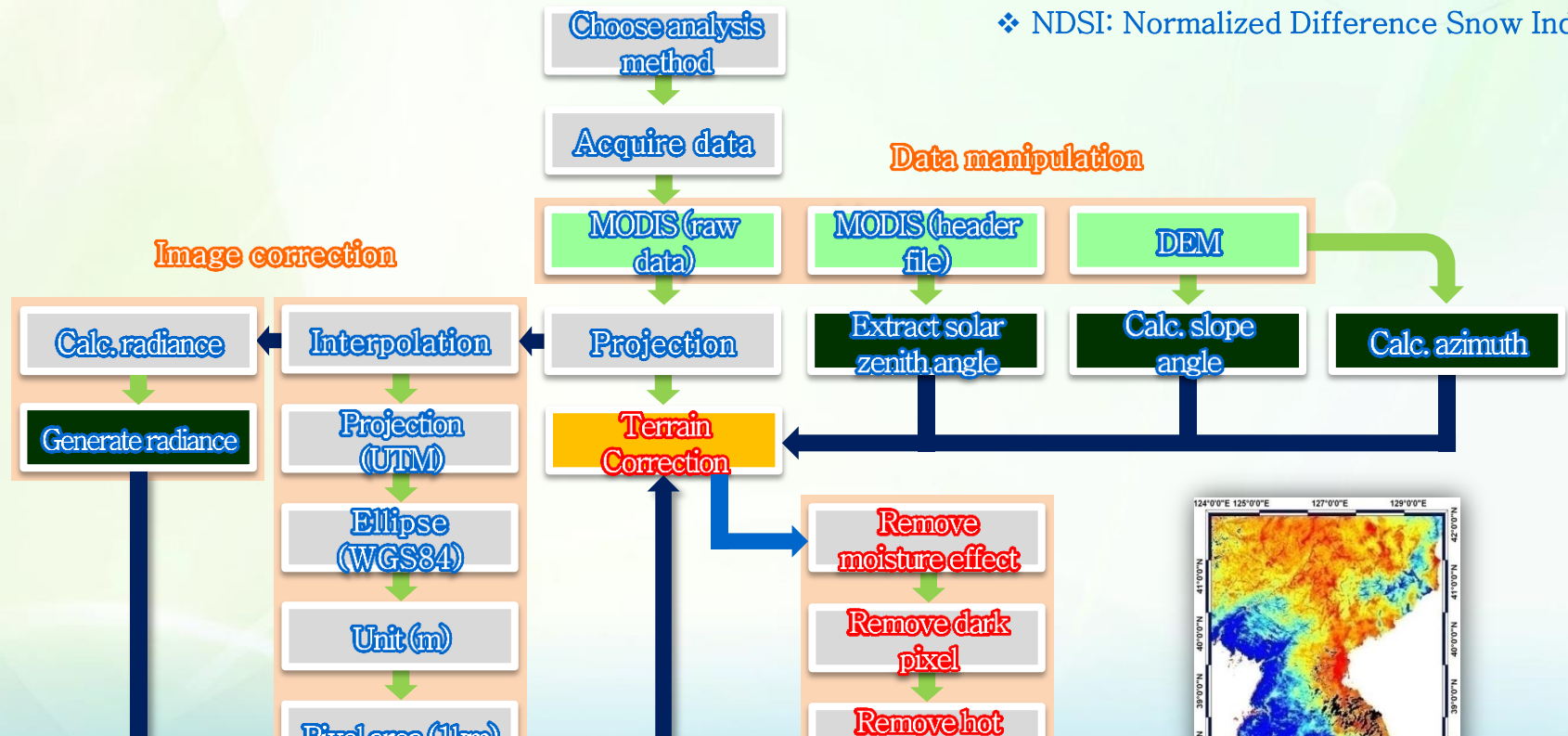


- ❖ Observatory is classified to manned and unmanned.
- ❖ The AWS(automatic weather system) has **no snow info.**
- ❖ The AWS reaches to 600.

Snowfall Estimation

NDSI Calc.

❖ NDSI: Normalized Difference Snow Index



预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_5607

