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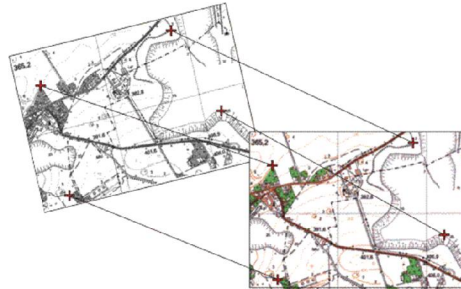


INTRODUCTION

The process of defining how raster is situated in map coordinates.

The process of defining the position of geographical objects relative to a standard reference grid. For example the allocation of geographical coordinates to street intersections.

(www.thelist.tas.gov.au/docs/glossary/glossary.html)



Source: "Georeferencing images and scanned maps" -George McLeod
gep.frec.vt.edu

INTRODUCTION

- Scanned map datasets don't normally contain spatial reference information.
- Information collected from the field has to be put on a platform where the spatial information is there



Source: "Georeferencing images and scanned maps" -George McLeod
gep.frec.vt.edu

CONTRIBUTION OF RS AND GIS IN DISASTER MANAGEMENT

Disaster Mitigation

- Catalogues with spatial component
- Hazard assessment
- Elements at risk mapping
- Vulnerability assessment
- Risk assessment
- Spatial Decision Support Systems

Disaster preparedness

- Disaster plans
- Anomalies in a time series
- Forecasting & Early warning
- Monitoring of an ongoing situation

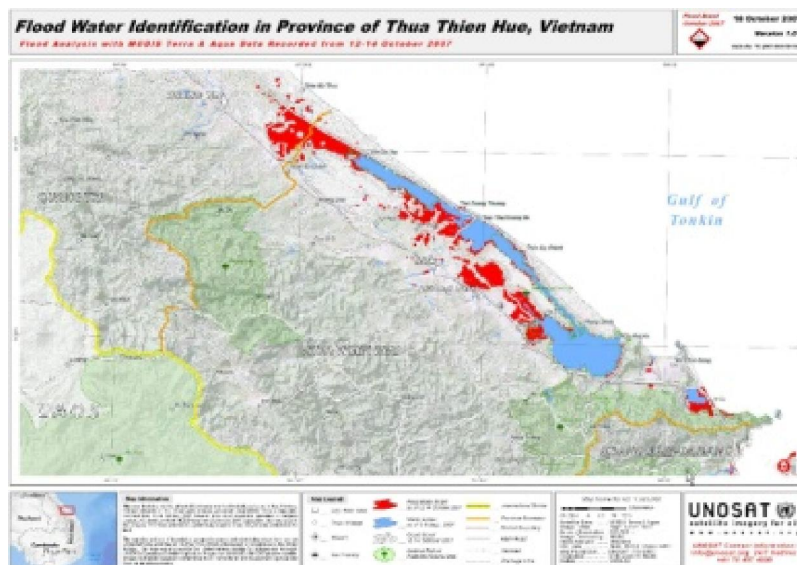
Disaster relief

- Mapping extent of disaster
- Damage assessment
- Relief coordination
- Evacuation

Disaster recovery

- Post-disaster census
- Identification of reconstruction sites
- Update hazard, vulnerability and risk data bases

MOTIVATION (IMPORTANCE OF SPATIAL INFORMATION)



DATA USED

| Scene ID | Satellite/Sensor | Date | Source |
|-----------------------|------------------|------------|------------------------|
| ALPSRP096650320 | ALOS/PALSAR | 2007-11-17 | JAXA |
| ALPSRP096650310 | ALOS/PALSAR | 2007-11-17 | JAXA |
| ALPSRP096650300 | ALOS/PALSAR | 2007-11-17 | JAXA |
| ASA_APP_1PNUPA | ENVISAT | 2008-09-14 | ESA |
| ASA_IMP_1PNUPA | ENVISAT | 2004-05-23 | ESA |
| PR-00CD1355BAC-PO00 | ENVISAT | 2008-09-25 | Vietnam Ground Station |
| PR-00CD1334A27-PO00 | ENVISAT | 2008-10-14 | Vietnam Ground Station |
| PR-008A9BCCDA-PO00-1 | ENVISAT | 2007-11-02 | Vietnam Ground Station |
| PR-00D8AABDE2C-PO00-1 | ENVISAT | 2007-11-04 | Vietnam Ground Station |
| Whole province | SPOT5 | 2005 | Vietnam Ground Station |

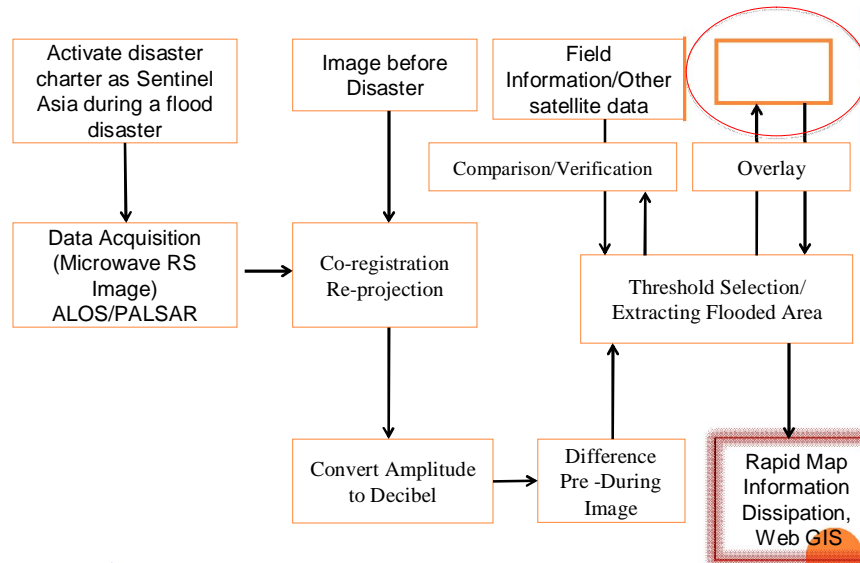
DATA USED: POSSIBLE LOCAL DATA

| Layer | Type | Date | Source |
|-------------------|-------------------|------|----------|
| Weak_seaport | Point Shapefile | 2011 | GPS data |
| Water_tank | Polygon Shapefile | 2011 | GPS data |
| Weak_dam | Point Shapefile | 2011 | GPS data |
| Safe_area | Polygon Shapefile | 2011 | GPS data |
| Permanent_port | Point Shapefile | 2011 | GPS data |
| Flooded_mark_2007 | Point Shapefile | 2007 | GPS data |



Equipments for fieldtrip to collect and update data and information

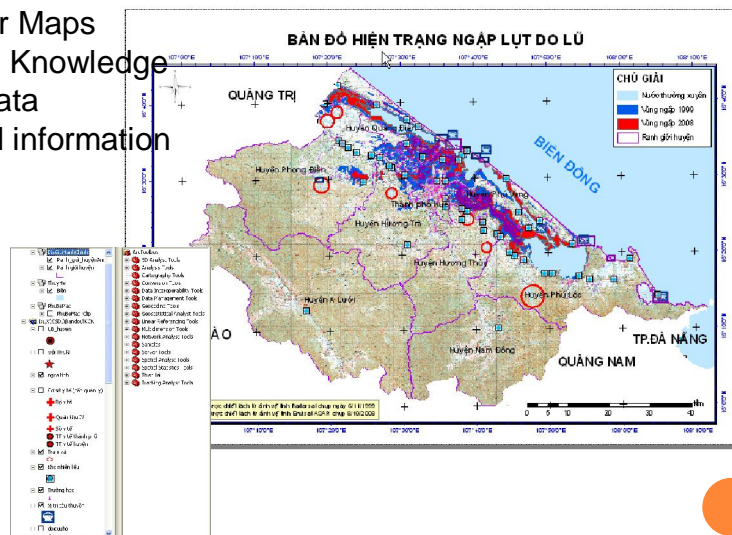
METHODOLOGY



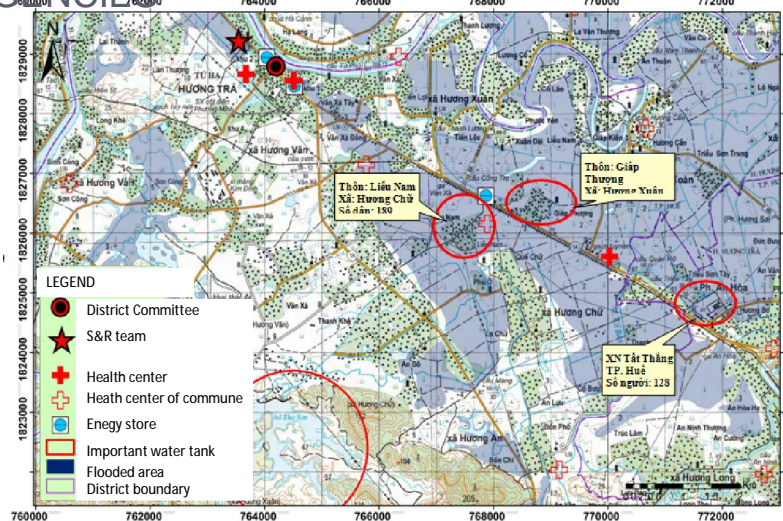
Comment:
Pre-disaster Database and Technology Transfer

OUTCOME: A GIS DATABASE

- Paper Maps
- Local Knowledge
- RS data
- Flood information



OUTCOME: PRODUCT TO SUPPORT LOCAL AGENCIES

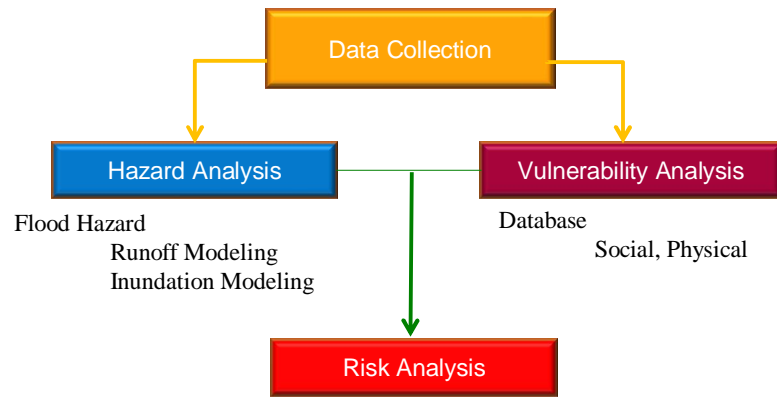


Flooding detail of small area (providing for S&R team)

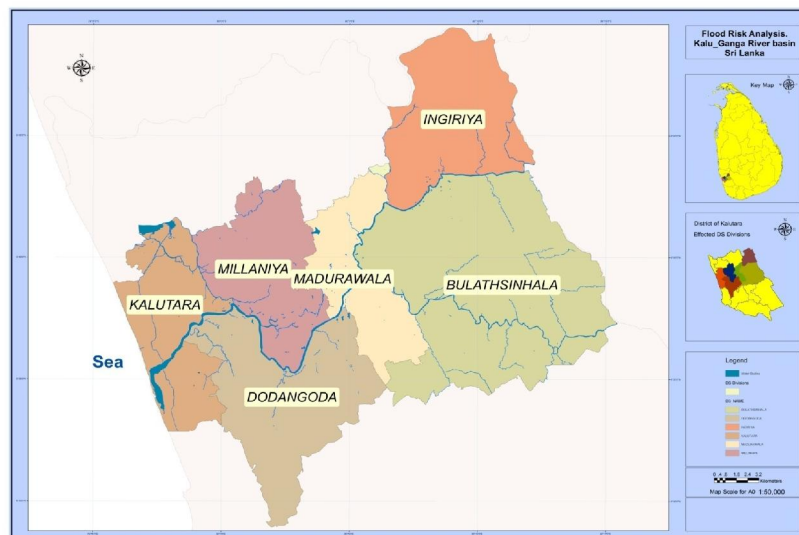
CONCLUSIONS AND RECOMMENDATIONS (BY PARTICIPANTS)

- ⌘ The methodology will help space agencies in supporting disaster management organizations in a search and rescue work.
- ⌘ The results show that in this province, *flood maps achieved by this process are highly accurate and fine in resolution.*
- ⌘ One of the success of search and rescue operations depends on receiving of satellite images immediately after a flood. Sentinel Asia can help us a lot by providing near real time satellite data.
- ⌘ Similar kind of a methodology can be adopted in other provinces affected by floods with a *continuous update of the existing GIS database and field observations of past floods.*

FLOOD RISK ANALYSIS (A CASE STUDY)



FLOOD RISK ANALYSIS



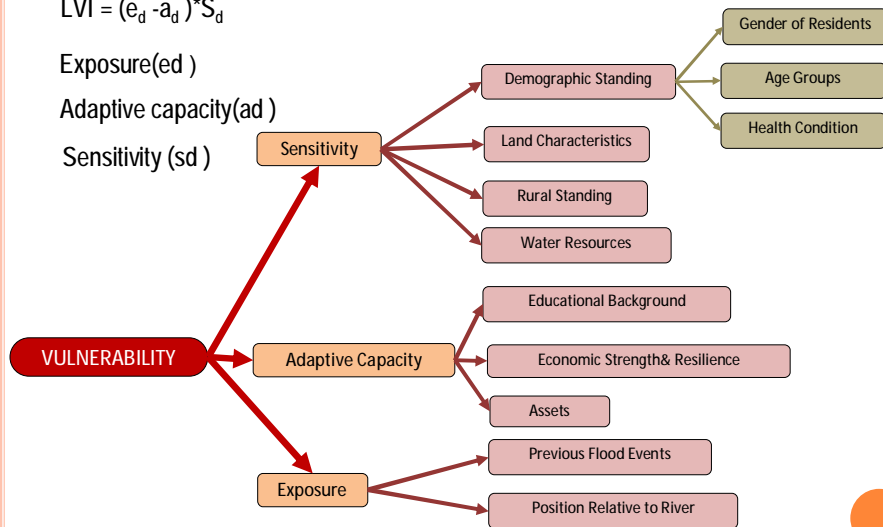
FLOOD RISK ANALYSIS (A CASE STUDY)

$$LVI = (e_d - a_d) * S_d$$

Exposure(e_d)

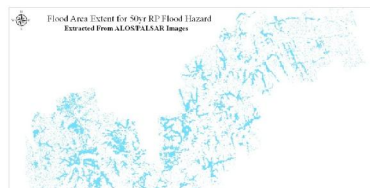
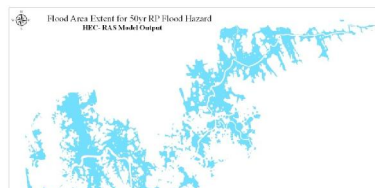
Adaptive capacity(a_d)

Sensitivity(s_d)



Hahn, M. B., Riederer, A. M., & Foster, S. O. (2009). The Livelihood Vulnerability Index: A pragmatic approach to assessing risks from climate variability and change. A case study in Mozambique. *Global Environmental Change*, 19(1), 74-88.

FLOOD RISK ANALYSIS (A CASE STUDY)



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_6851

