

Reasons for the non-use of FOSS GIS
during the reconstruction and
rehabilitation process after the tsunami
2004 in Nanggroe Aceh Darussalam,
Indonesia OR
Call for a stronger lobby for FOSS GIS in
developing countries

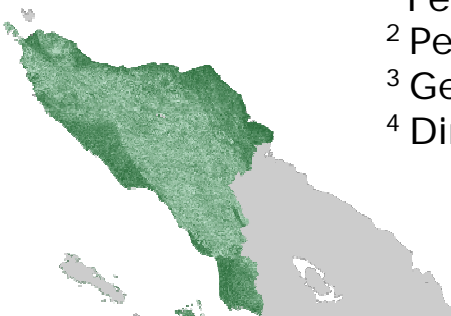
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² Peduli GIS

³ German Technical Cooperation

⁴ Dinas Pertambangan dan Energi NAD



Impact of the Tsunami in Aceh



- Earthquake Magnitude of 9.1
- > 160.000 killed in Aceh Province
- > 5.000.000 affected in NAD

Source: USGS & EM-DAT: Emergency Events Database

- Loss of knowledge/capacities
- Change in Topography
- Loss of data



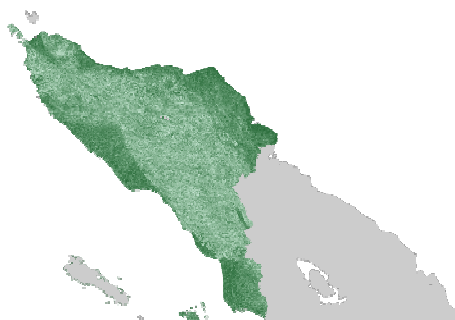
- Existing maps
- Land documents/records



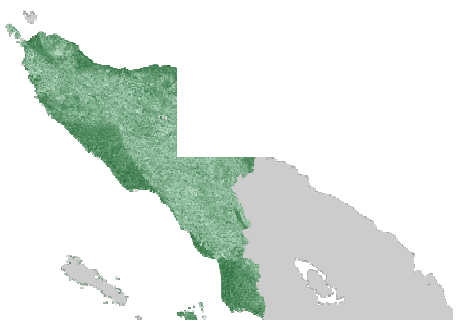
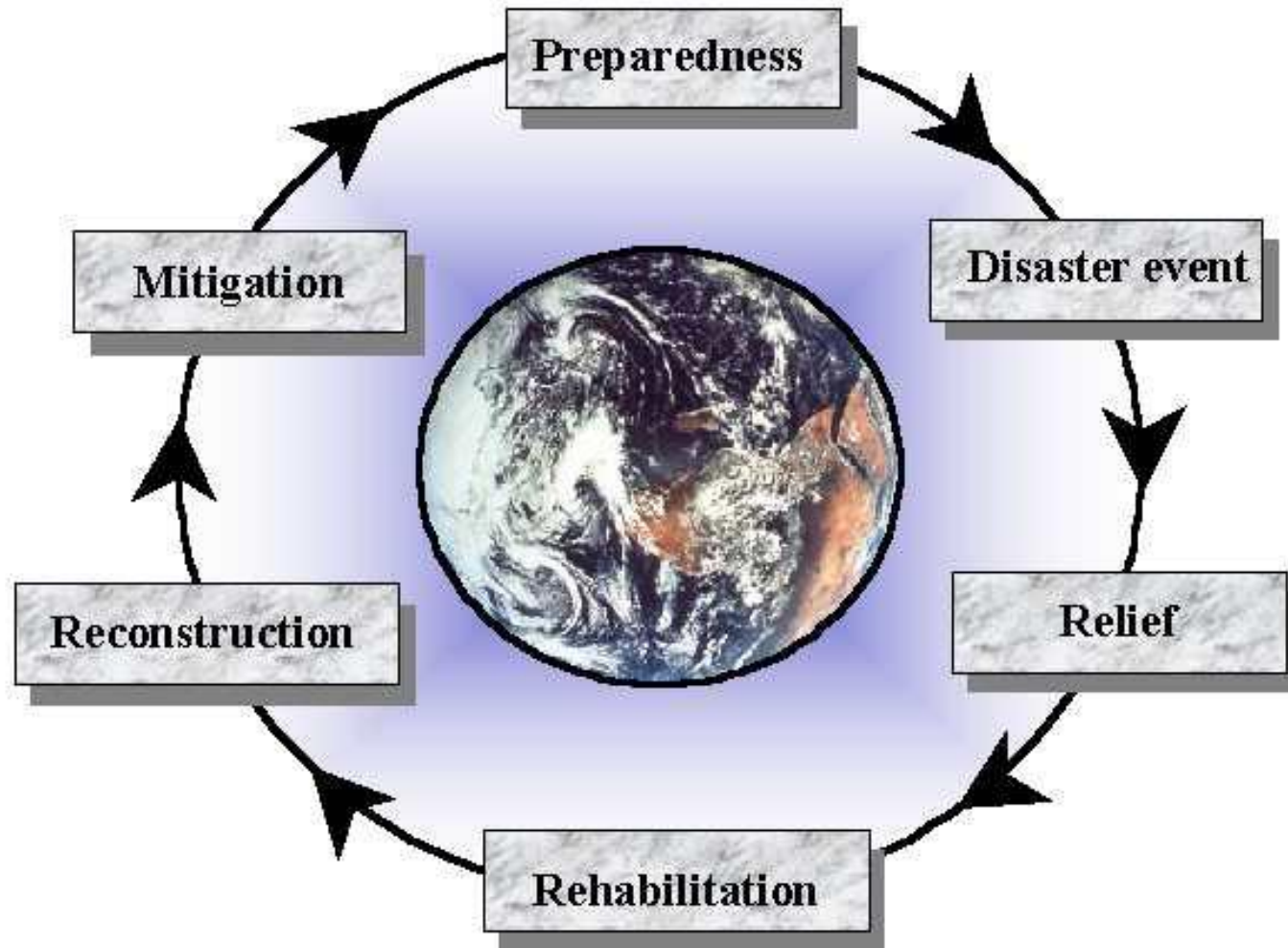
Impact of the Tsunami in Aceh



➤ Pre- & Post-Tsunami as seen by SPOT

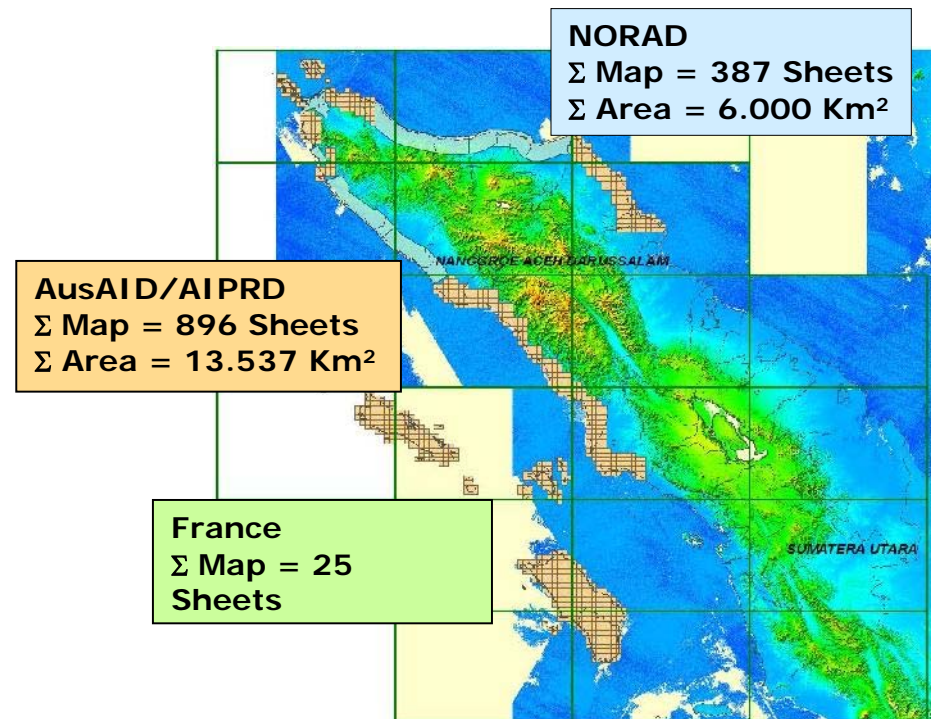


Disaster Management Cycle



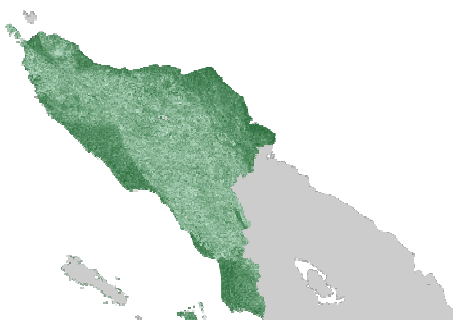
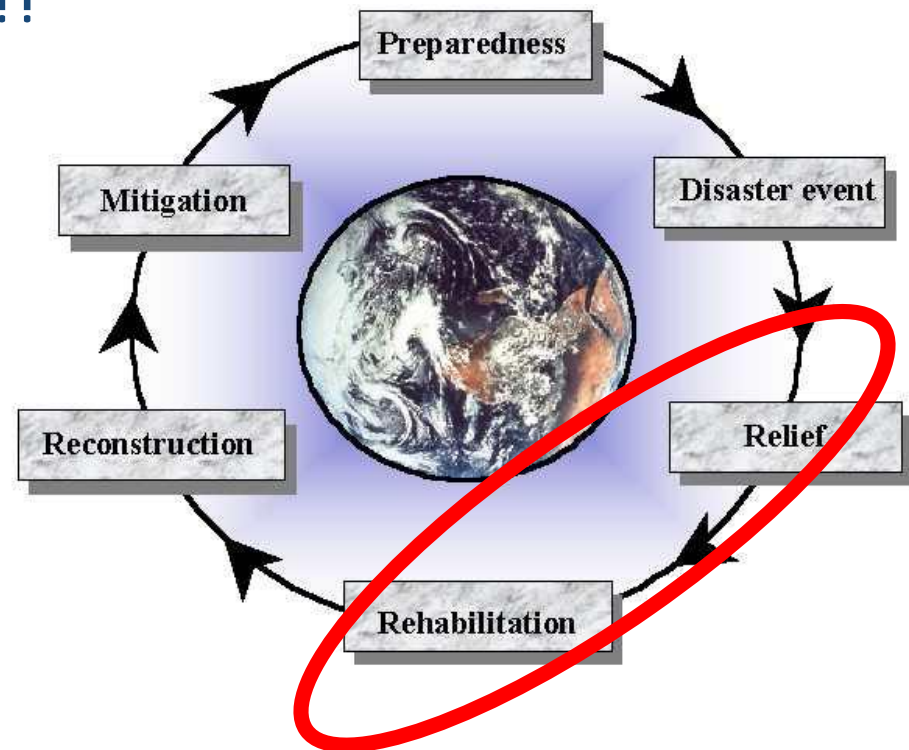
Data provision – Relief phase

- Satellite images (Ikonos, SPOT, Quickbird)
 - International Charta Space and major Disasters and related Organisations
- Aerial photographs (1:1.000)
 - NORAD
- IFSAR (1:10.000)
 - AusAID/AIPRD
- GPS-Survey & mapping
 - French-Enrique

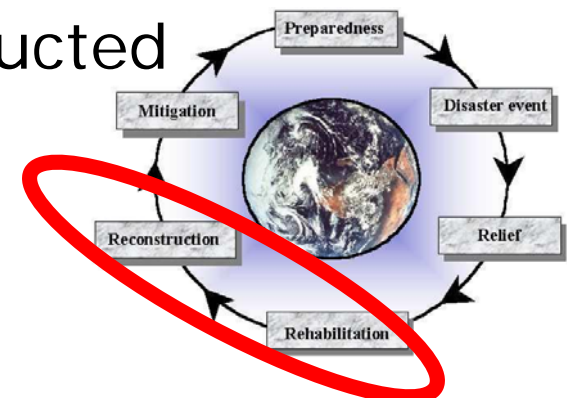
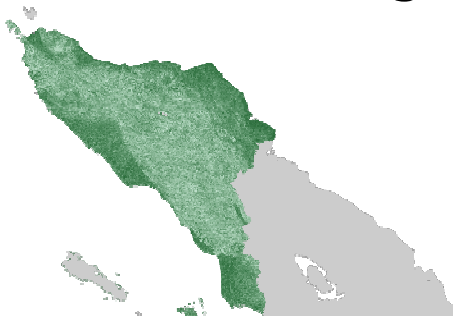


1st Reasons

- During relief/rehabilitation phase data generation (vectorisation) with proprietary software
 - Free licenses (tsunami immediate aid)
 - Trainers are familiar with software
- => Immediate utilizability !!

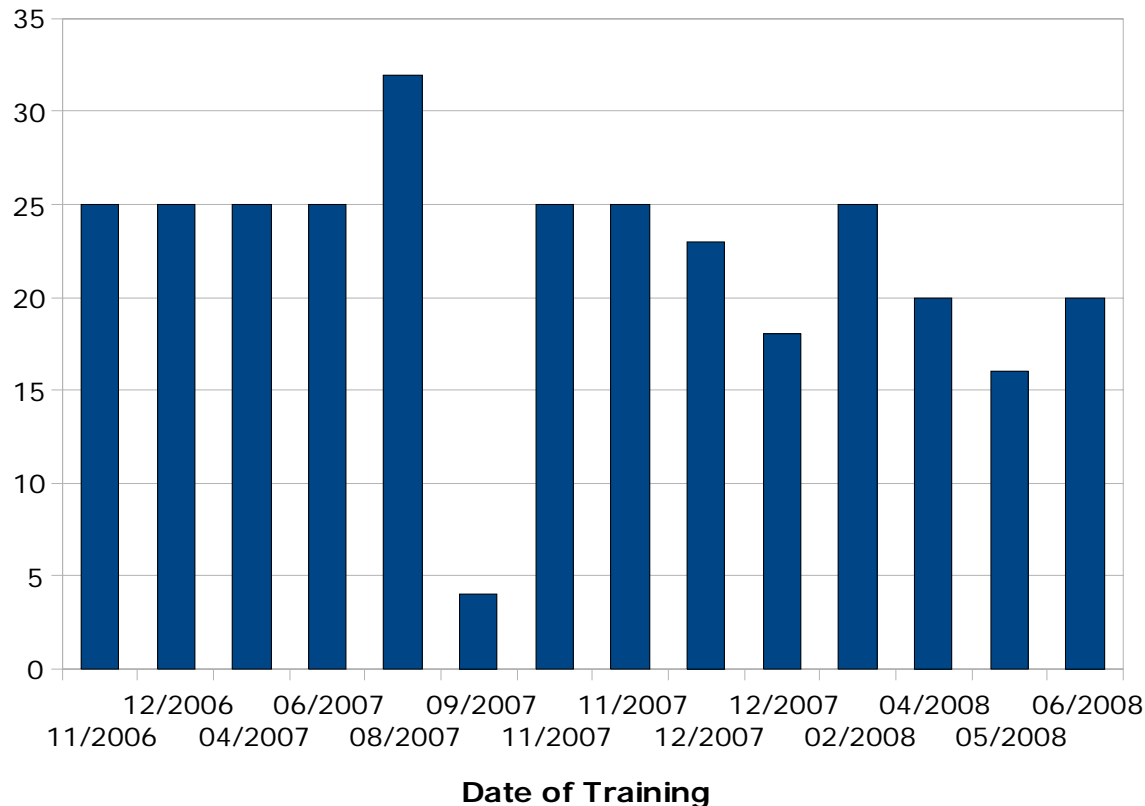


- Rapid development of data management systems
- Strong demand for GIS & -training
 - Program to improve the capacities of HR in GIS on provincial, district and local level
 - ◆ Establishing of a GIS Forum and GIS NGO (pelaGIS)
 - ◆ Establishing of 3 GIS-Centers on district level
 - ◆ Geodata Center (AGDC) on provincial level
 - ◆ Large amount of trainings conducted

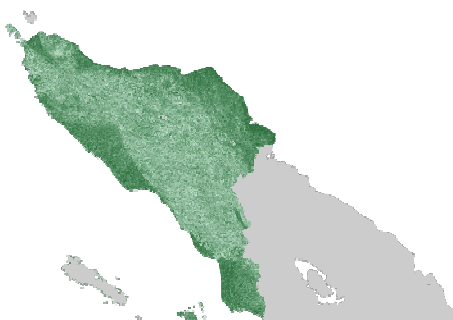


Potential of GIS-users in NAD

Number of Trainees trained by pelaGIS

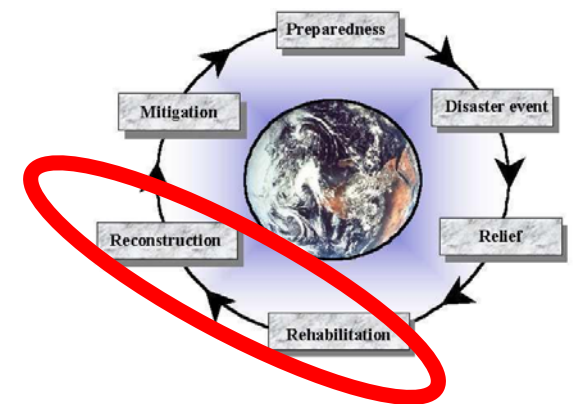
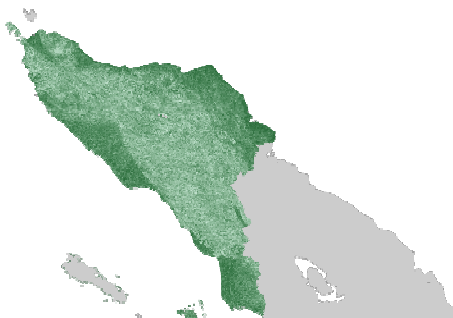


- Σ 308
- Plus numerous trainings by other organisations
 - BGR, Bakosurtanal, CARE, DED, GTZ, FFI, Mercy Corps, USAID, YLI, etc.

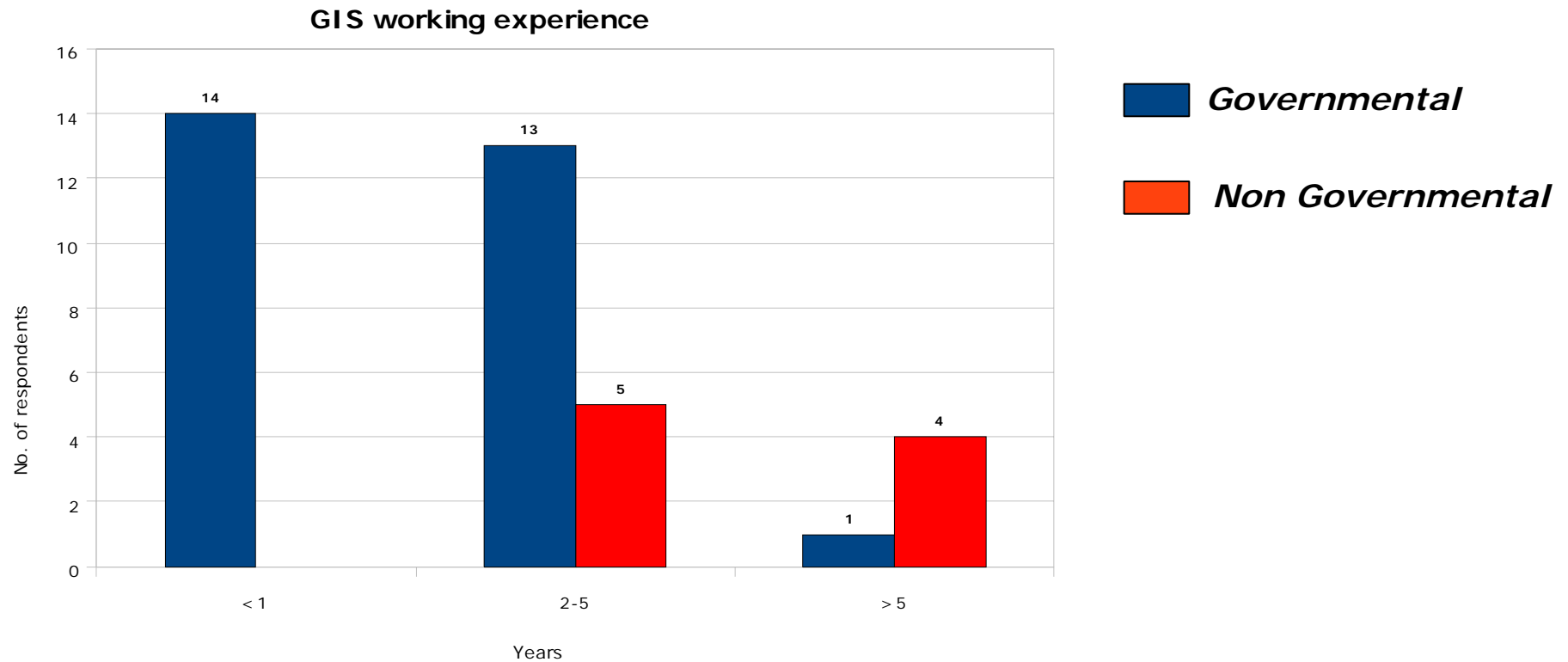


2nd Reasons

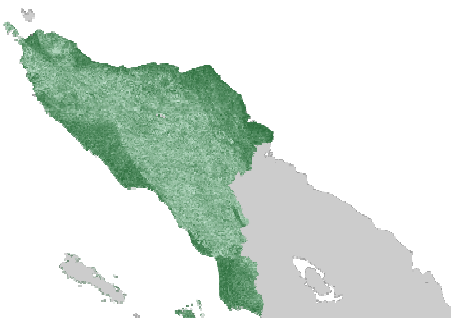
- Due to relief phase
 - Proprietary software already spread
 - ◆ High persistence
 - Trainers of the trainees mainly educated in proprietary software
- = > No change in software during reconstruction & rehabilitation phase



More Reasons...

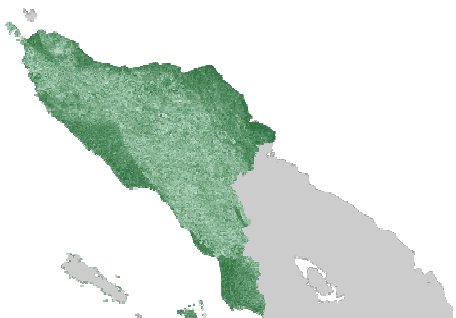
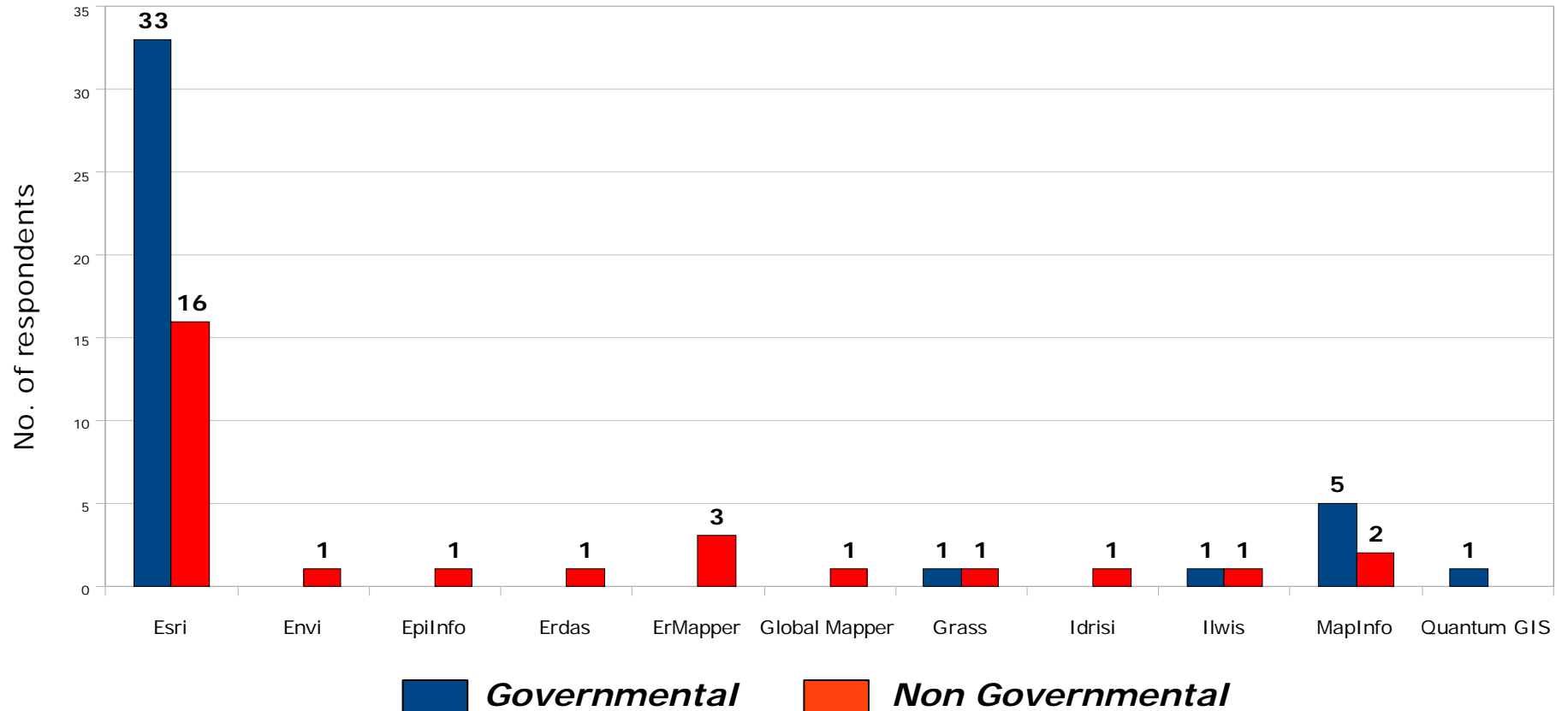


- Most of the GIS users started in the aftermath of the Tsunami
- No barrier for switching to FOSS4G



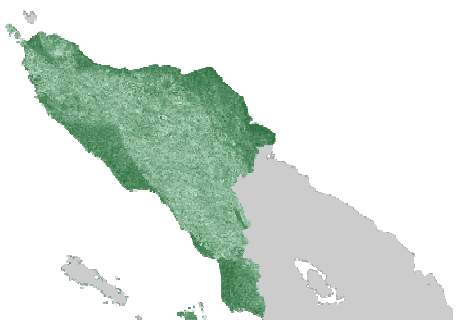
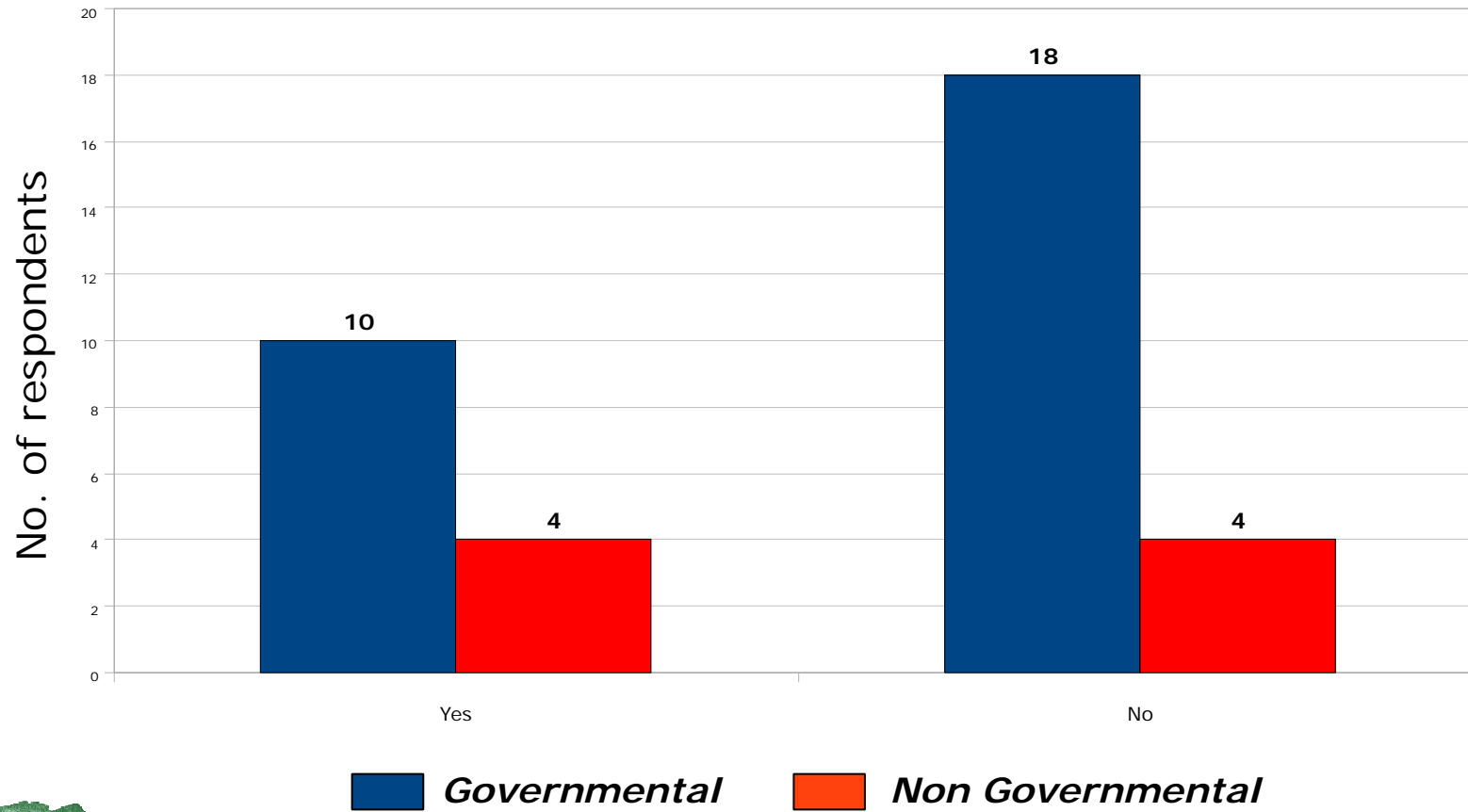
More Reasons...

Which geospatial software are you using frequently?



More Reasons...

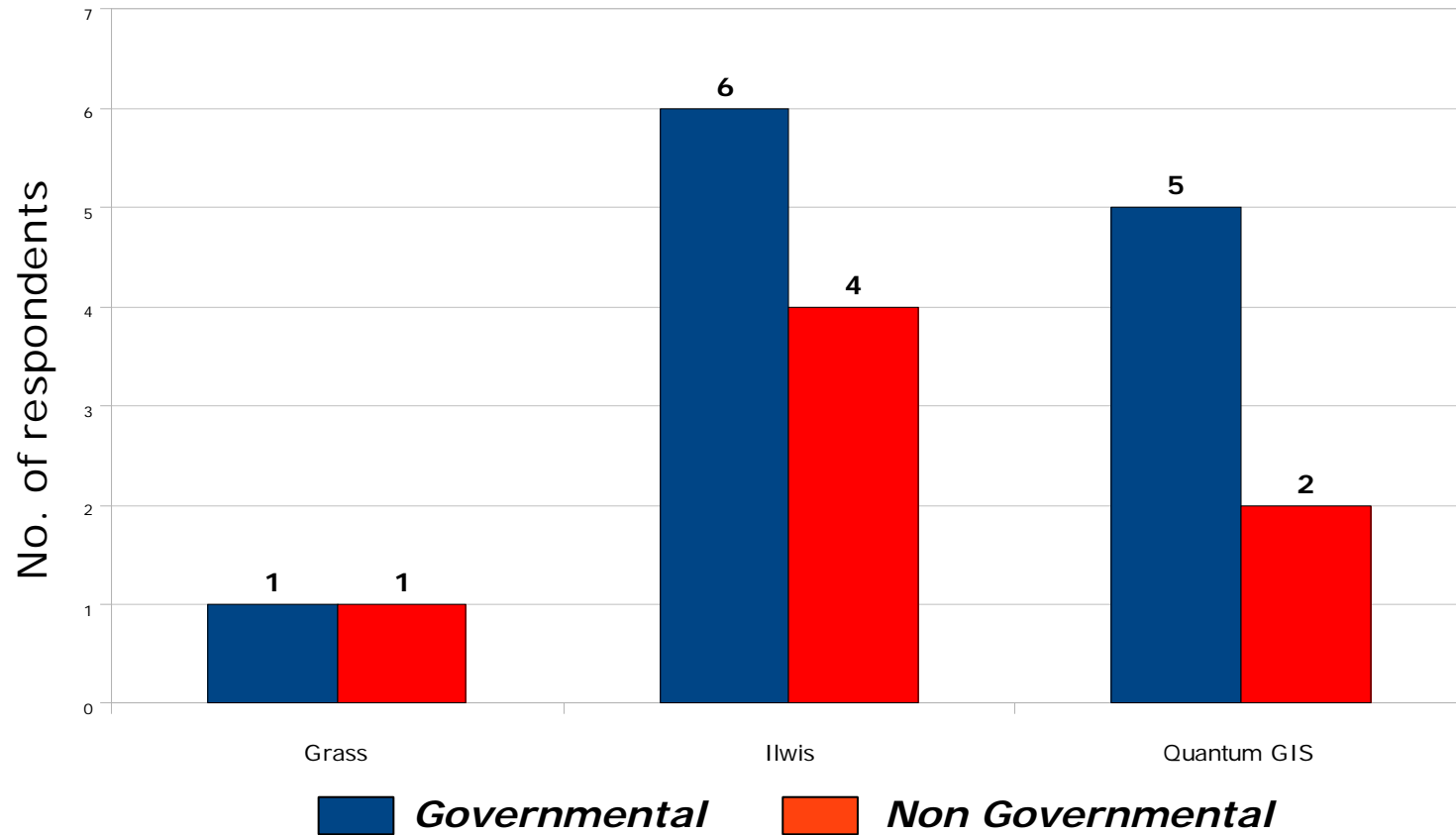
Have you ever used FOSS GIS software?



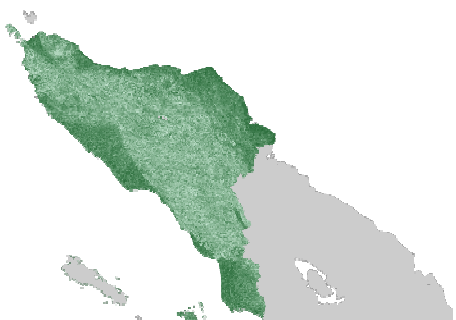
➤ *You cannot use what you don't know!!*

More Reasons...

What FOSS GIS do you use?

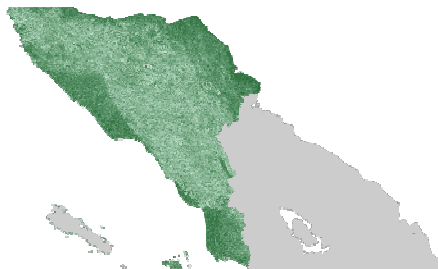
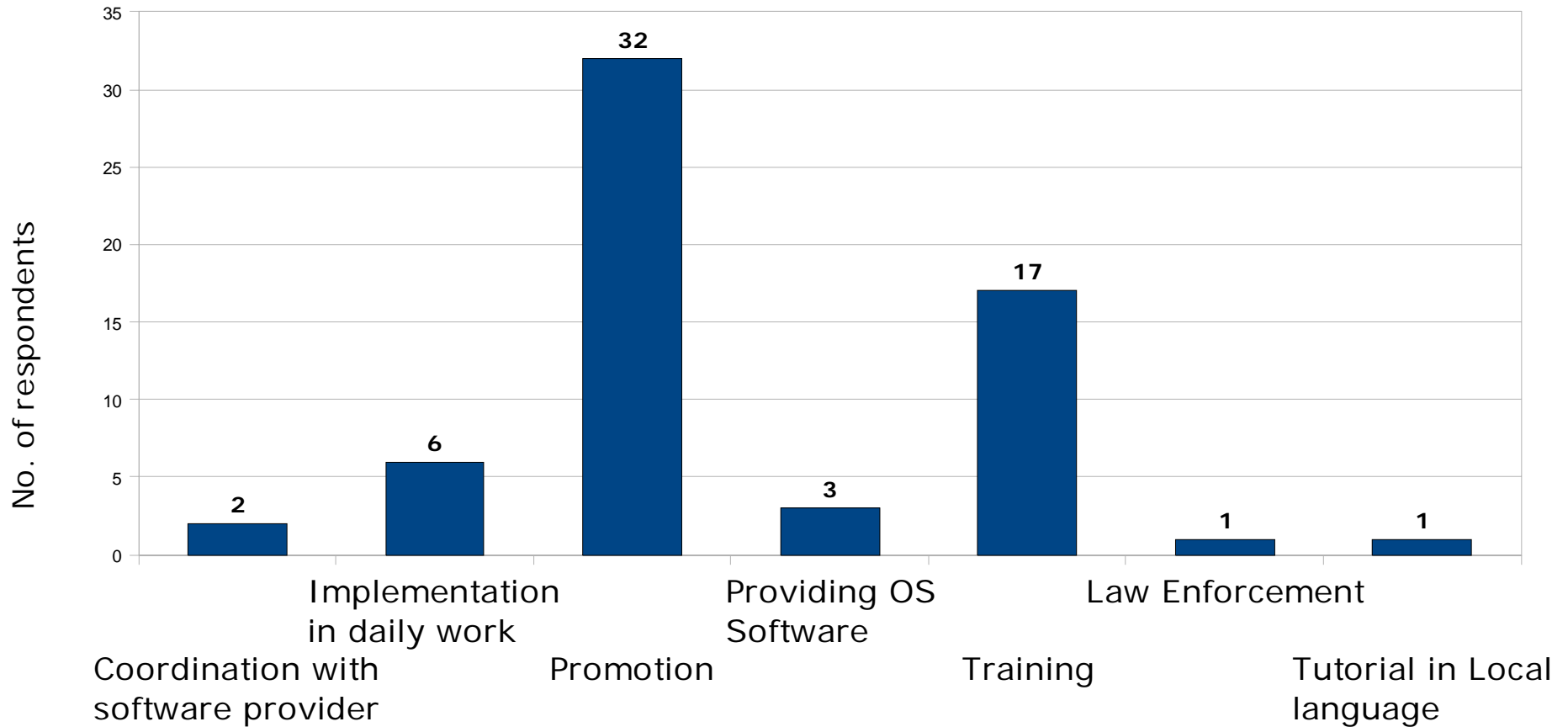


➤ Desktop GIS only



More Reasons...

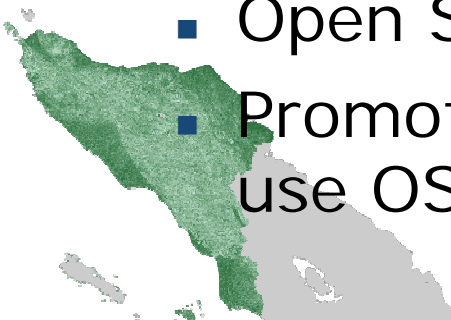
What is needed that you would use OS GIS?



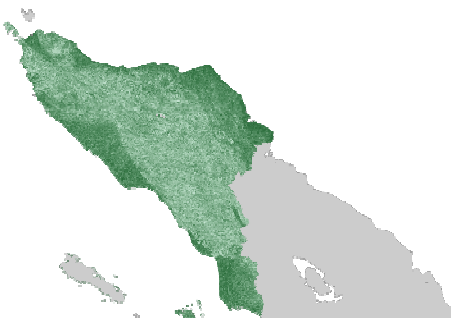
- Aceh Geospatial Data Center (<http://gdc.nad.go.id/>)
 - Central provincial data warehouse
 - Linux Server, GeoNetwork, MapServer
 - ◆ Used for provision of data
- BPDE (Provincial electronic data centre)

(<http://www.webgis.nad.go.id/>)

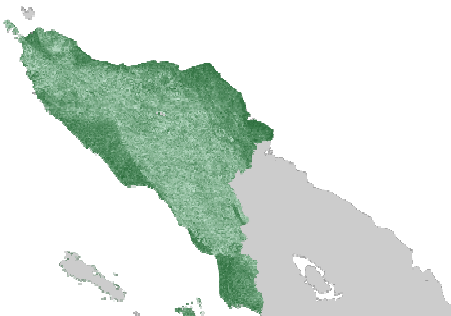
- Linux Server, MapServer, Mapbender
- Promoter of OS Community
- Collaboration with University
- Open Source Blog (<http://oss.nad.go.id/>)
- Promoting MOU that Government should only use OSS



- Aceh Geospatial Data Center (<http://gdc.nad.go.id/>)
- BPDE (Provincial electronic data centre)
(<http://www.webgis.nad.go.id/>)
- BRR/Spatial Information & Mapping -Centre
<http://121.52.52.132/asset/map.phtml>
 - Linux Server, MapServer, p.mapper
 - ◆ Mainly used for 'Asset mapping'
 - ◆ Provide information to the public

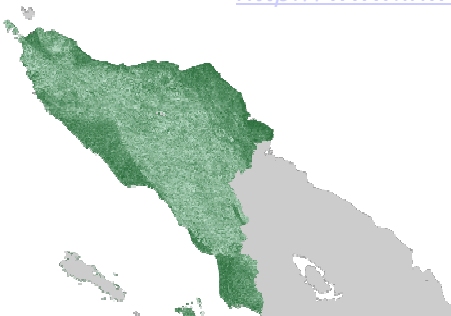


- MIMS: Municipal Information System
 - Planned to be solely based on OS
 - ◆ Information for citizens
 - ◆ CMS for administration officers
- Data Centres planned for every provincial department
 - Central storage & data processing of specific data
 - OS? ...we're working on it

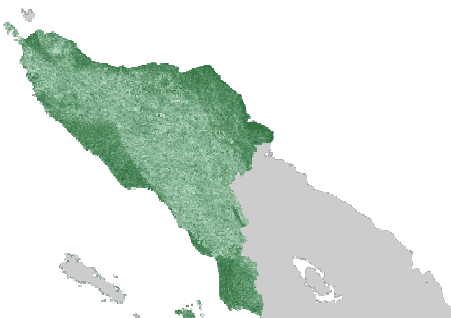


- Disaster response mapping with proprietary software only
 - Situation for FOSS GIS would have been ideal
 - ◆ Introduction of new methodology
 - ◆ Building infrastructure from scratch
- No policy in GO/NGO technical cooperation to use FOSS/FOSS GIS
 - What's happening after expiration of aid licenses?
 - Example for approach: it@foss by inwent

http://www.inwent.org/themen_reg/themen/nachhaltig/itk/foss/index.en.shtml



- Disaster response mapping with proprietary software only
- No policy in GO/NGO technical cooperation to use FOSS/FOSS4G
- Capabilities of desktop applications might be still too limited
 - Especially production of high quality maps
 - Need to concentrate
- On the server side no alternative to FOSS



How to lobby FOSS4G ?

- In case of a disaster satellite data & maps are made available for free
 - UNOSAT, Respond, ZKI, ITC, ...
- For following mapping activities no common board exists

- Existing approaches (not using FOSS4G)

- ◆ MapAction (<http://www.mapaction.org/>)

- ◆ Global map aid (<http://www.globalmapaid.rdvp.org/index.htm>)

- Is it realistic to set up a 'mapping task force' using FOSS GIS?

- Where to integrate in FOSS4G/OsGeo-structure?



Thank You !!

