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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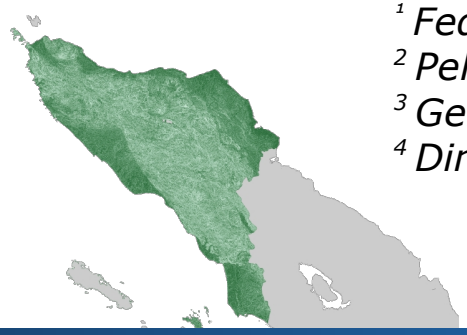
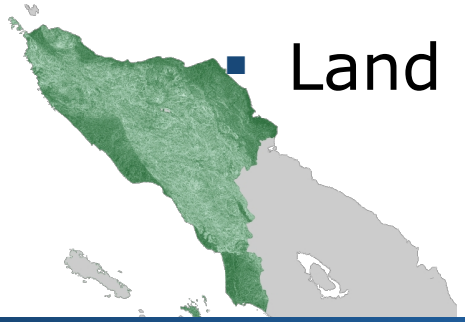


Impact of the Tsunami in Aceh

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

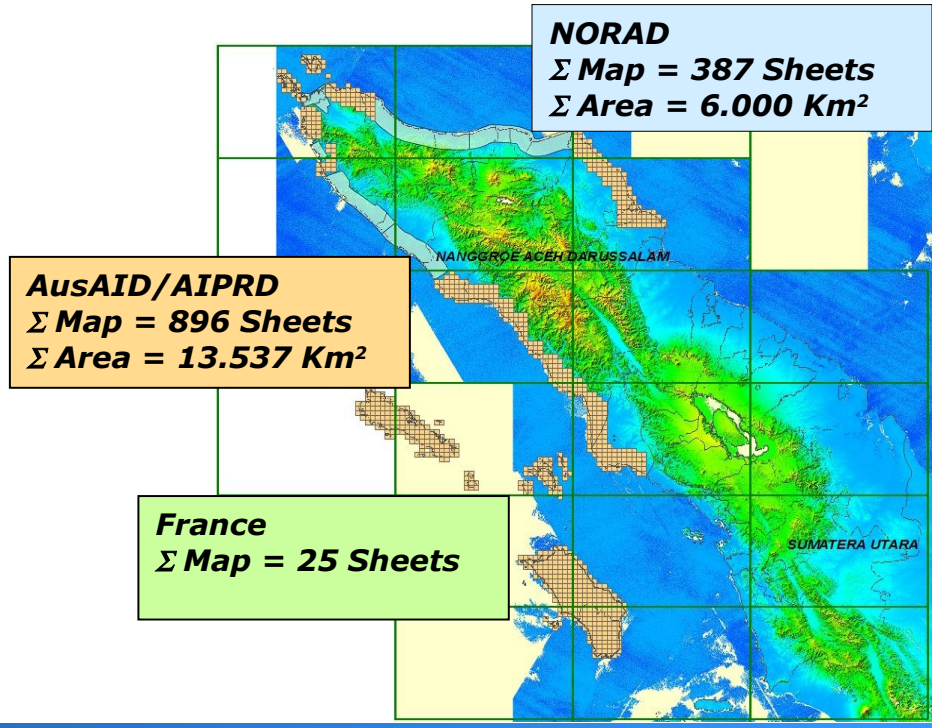
Source: USGS & EM-DAT: Emergency Events Database

- Change in Topography
- Loss of data
  - Existing maps
  - Land documents/records



Data provision – Relief phase

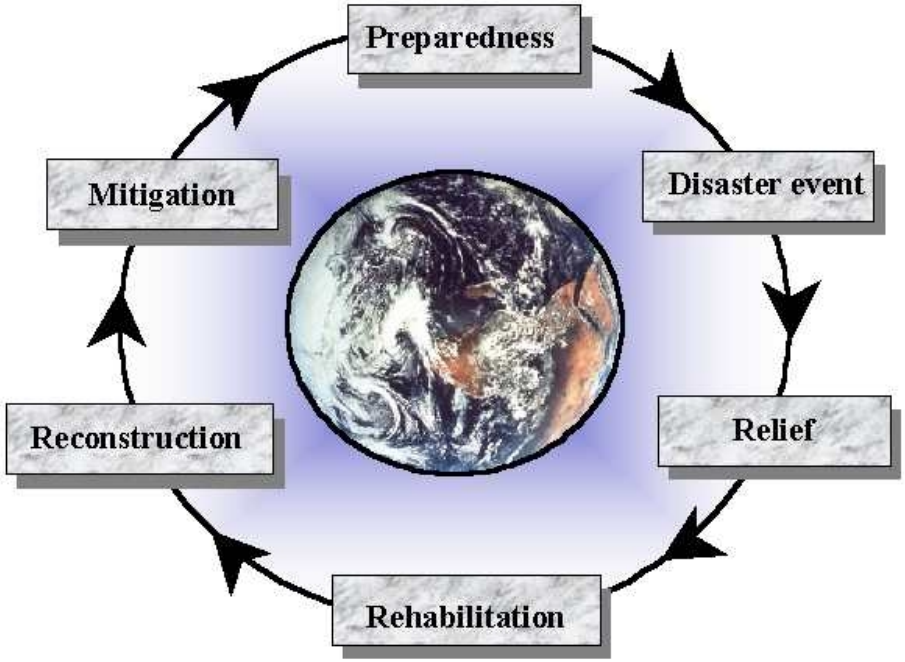
- Satellite images (Ikonos, SPOT, Quickbird)
  - International Charta Space and major Disasters and related Organisations
- Aerial photographs (1:1.000)
  - NORAD
- IFSAR (1:10.000)
  - AusAID/AIPRD
- GPS-Survey & mapping
  - French-Enrique Indonesia



1st Reasons

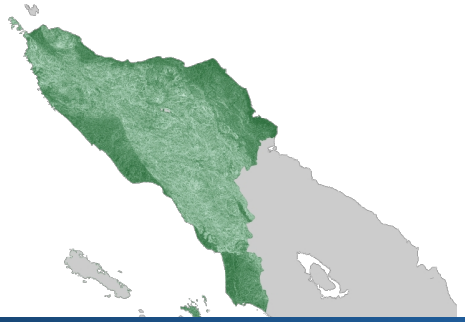
- During relief/rehabilitation phase data generation (vectorisation) with proprietary software
  - Free licenses (tsunami immediate aid)
  - Trainers are familiar with software

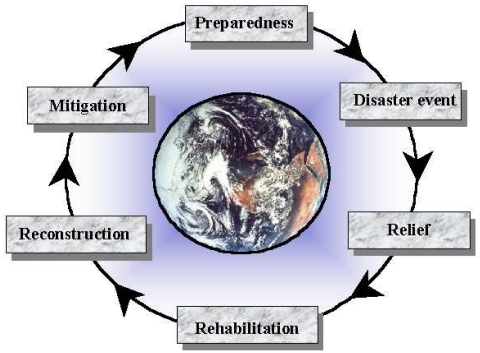
=> Immediate utilizability !!



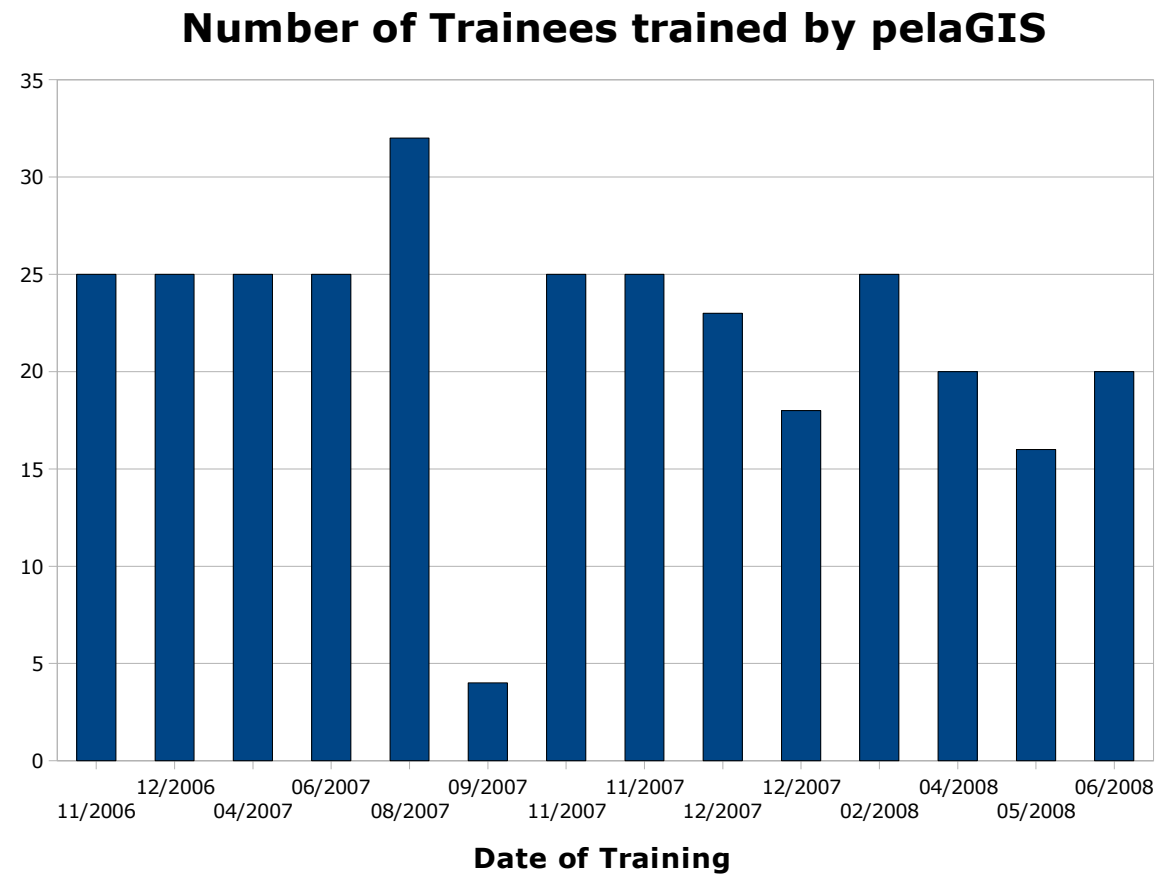
Rehabilitation/Reconstruction

- 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 conduct





Potential of GIS-users in NAD



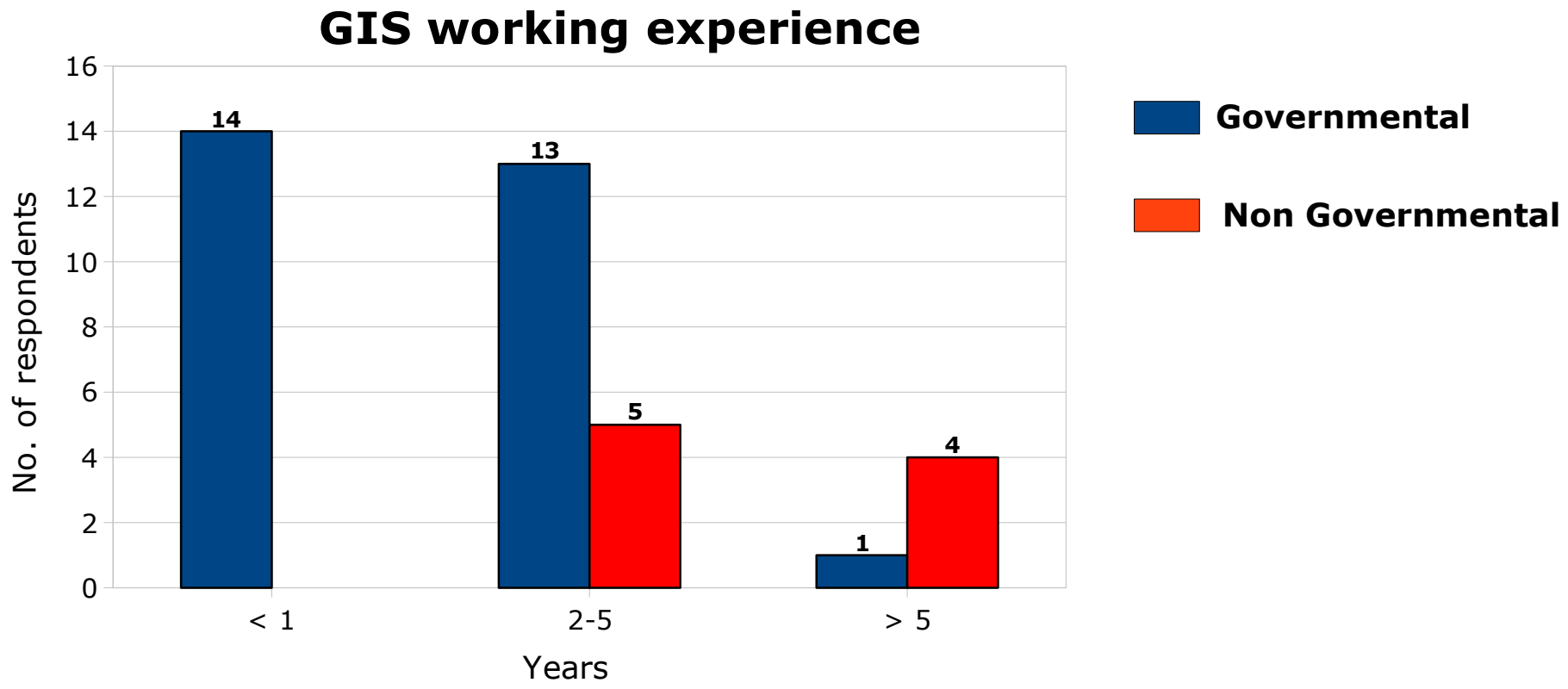
- Σ 308
- Plus numerous trainings by other organisations
  - BGR, Bakosurtanal, CARE, DED, GTZ, FFI, Mercy Corp, USAID, YLI, etc.

2nd Reasons

- Due to relief phase
  - Proprietary software already spread
    - High persistence
  - Trainers of the trainees mainly educated in proprietary software

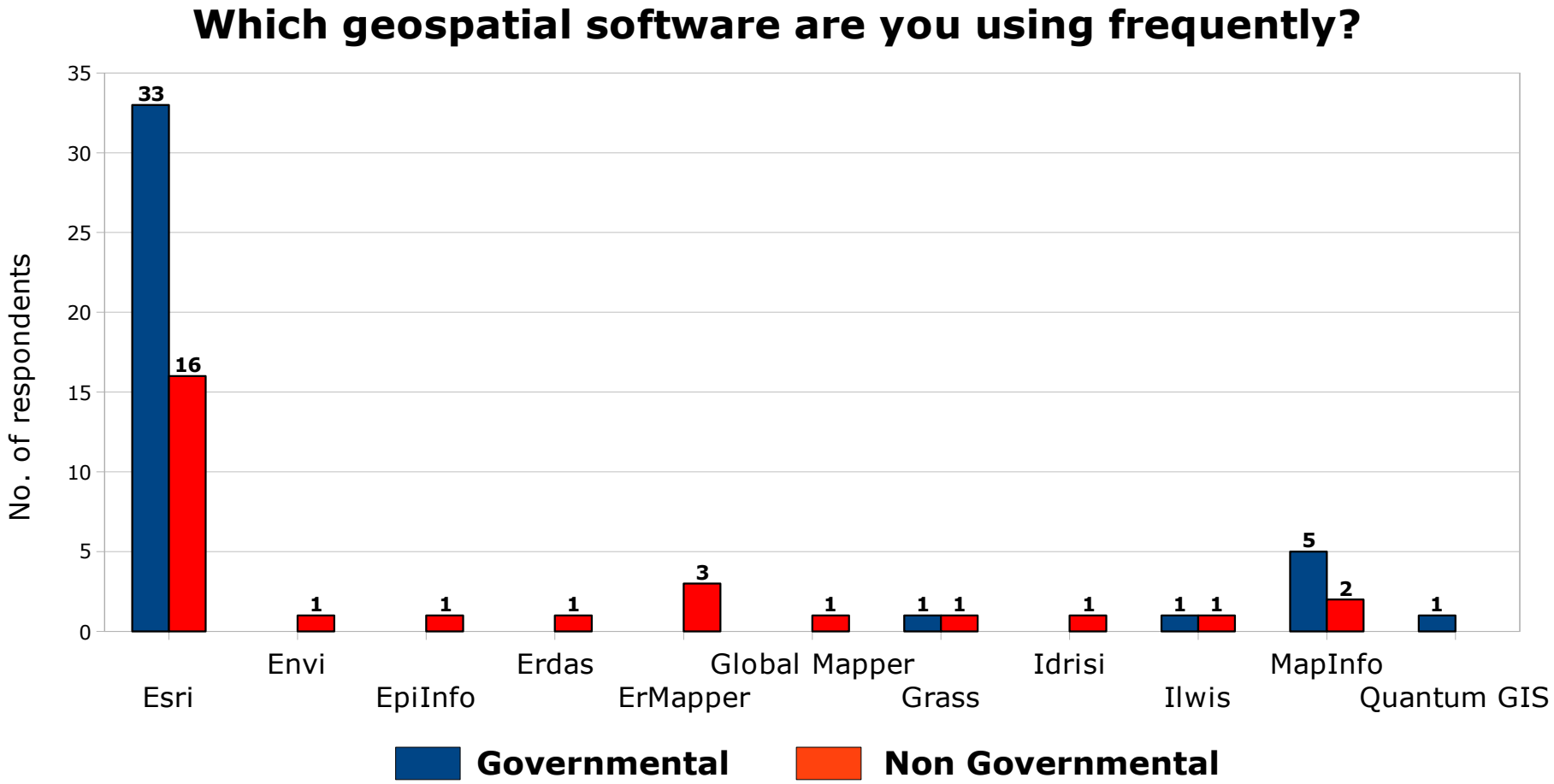
=> No change in software during reconstruction & rehabilitation phase

More Reasons...



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

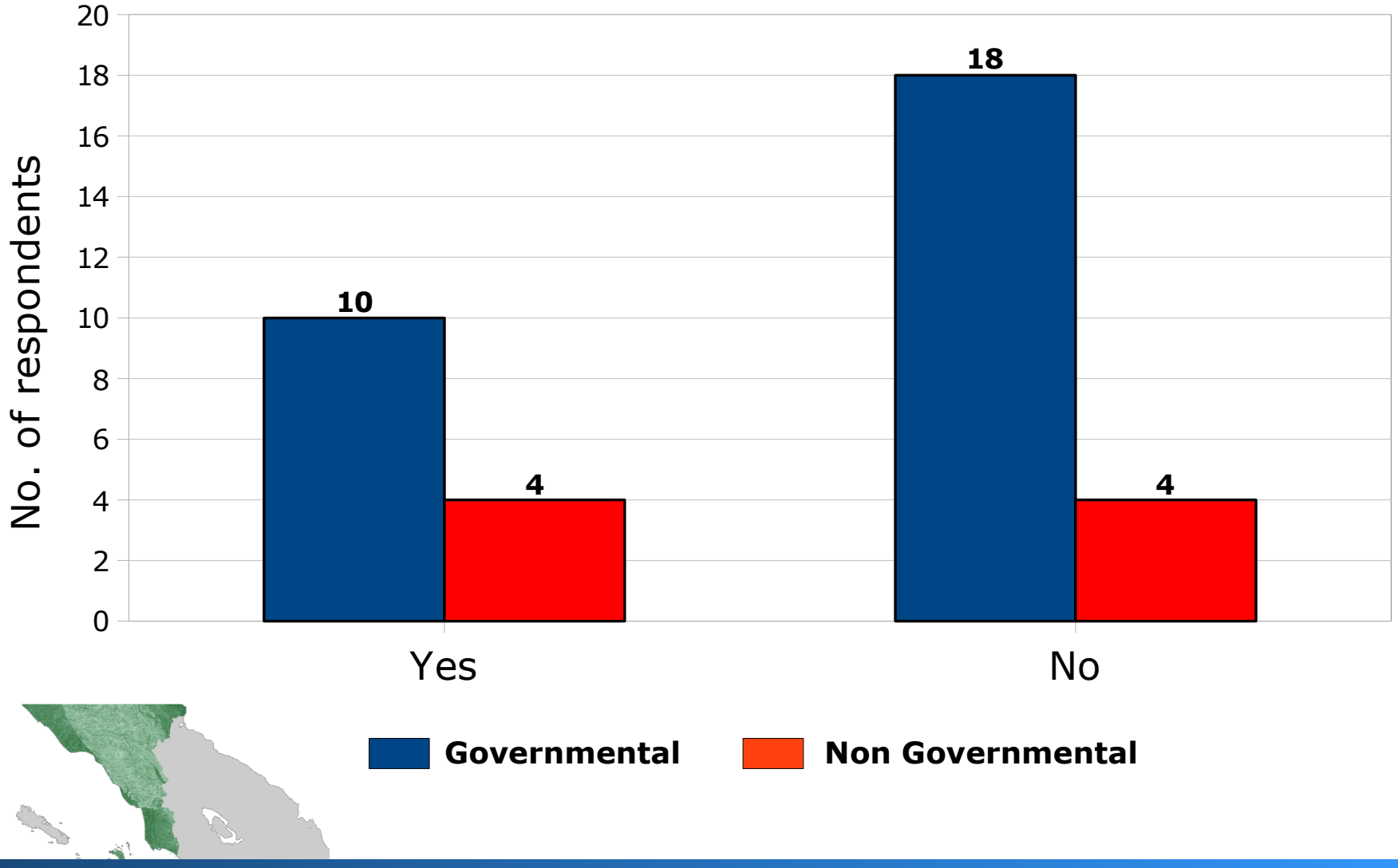
More Reasons...



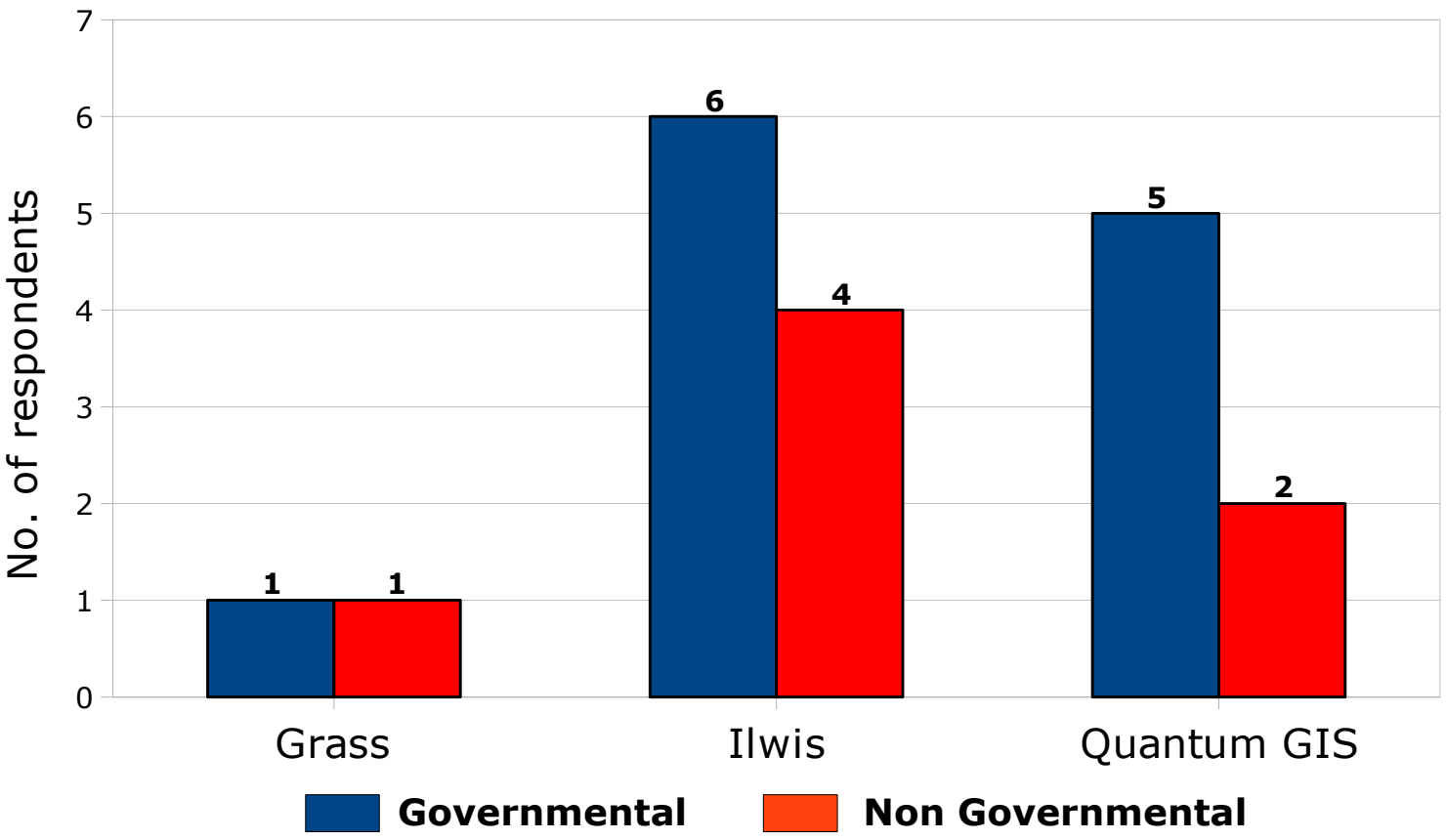
- You cannot use what you don't know!!

More Reasons...

Have you ever used FOSS GIS software?

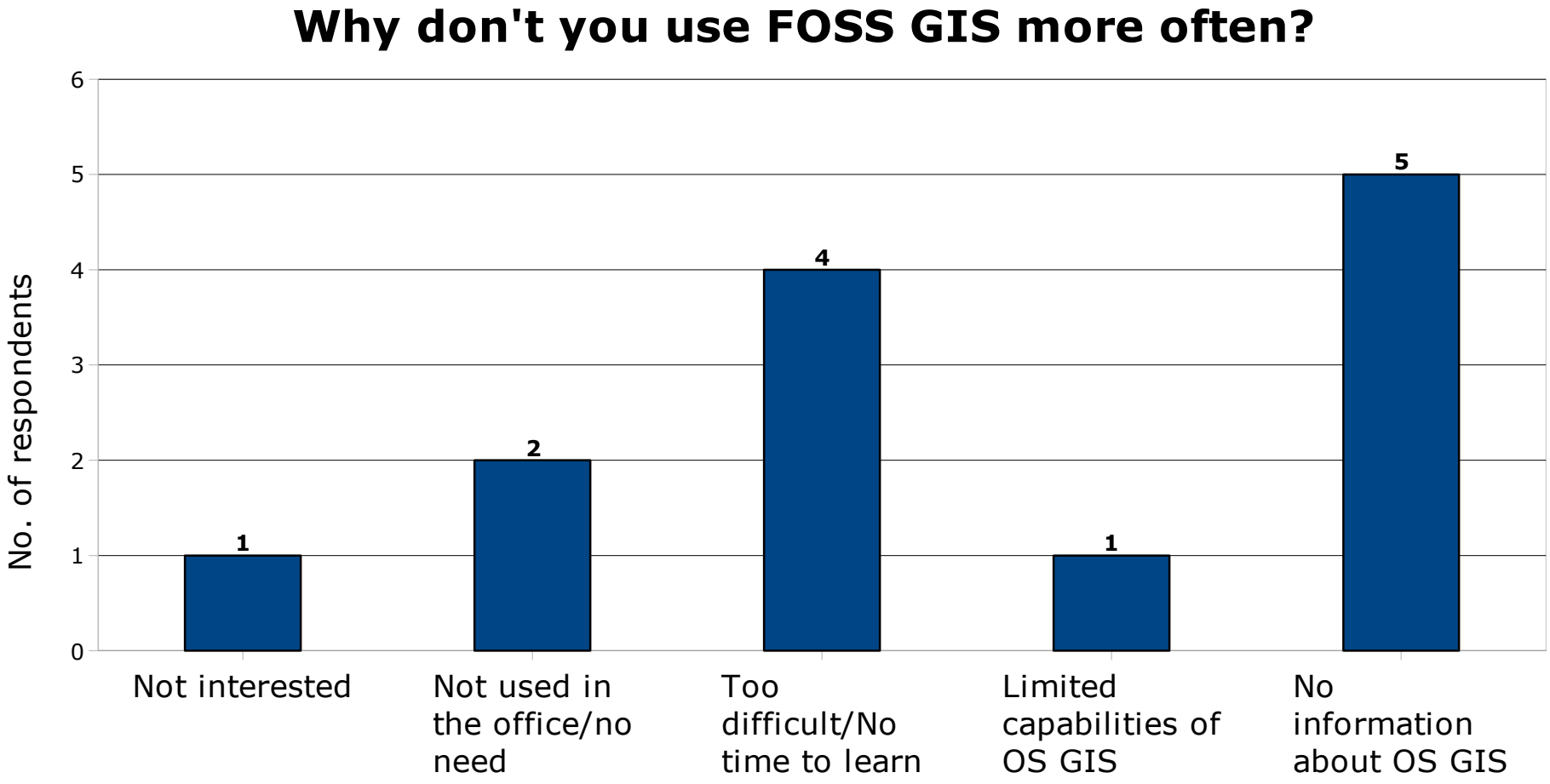


More Reasons...



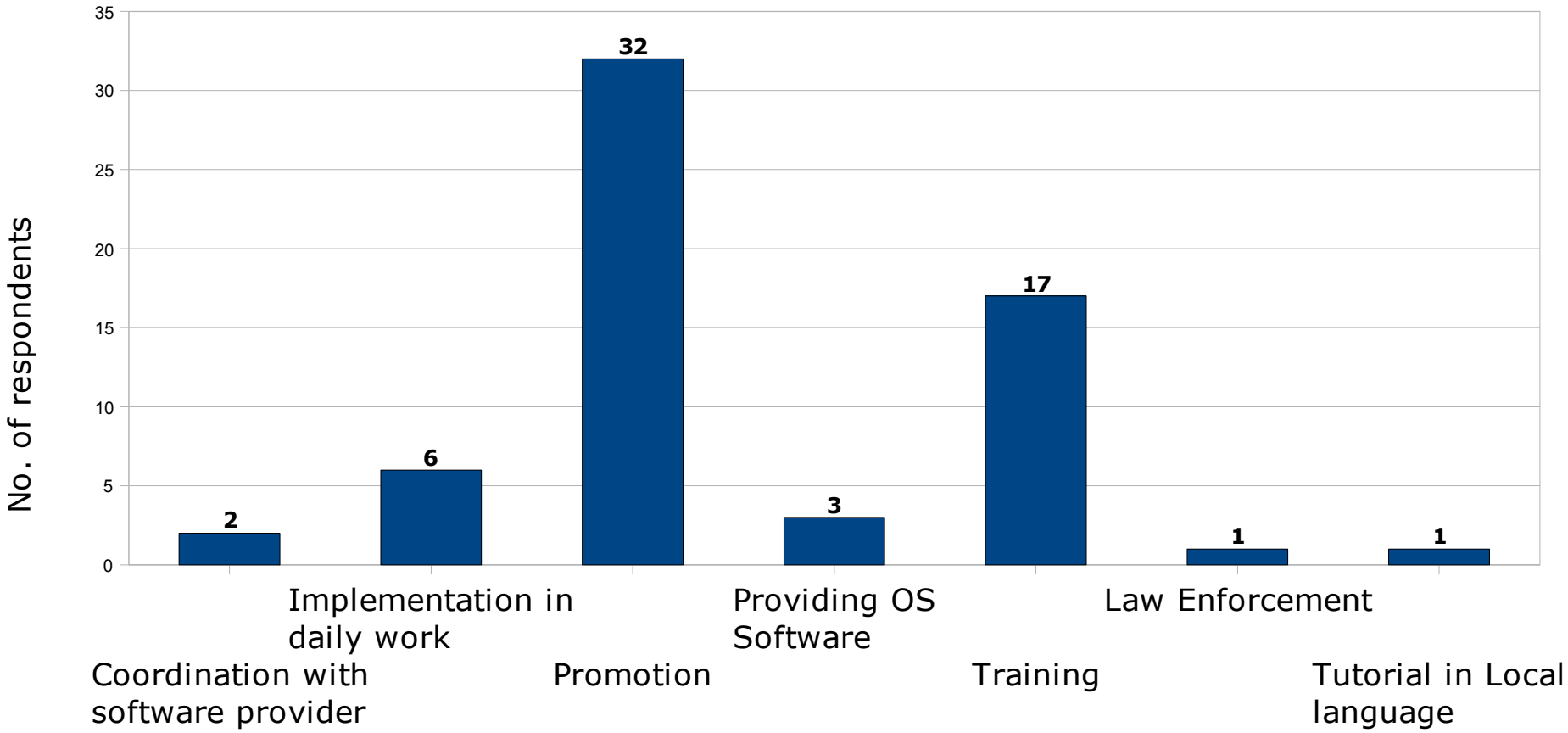
- Desktop GIS only

More Reasons...



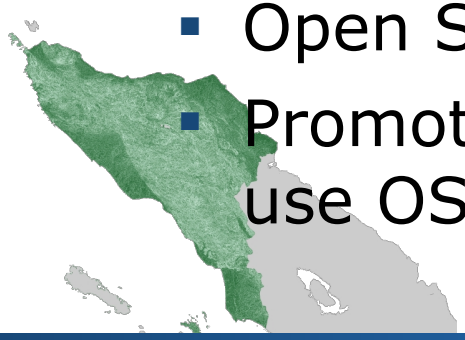
More Reasons...

What is needed that you would use OS GIS?



Hope for FOSS4G: The Server Side

- Aceh Geospatial Data Center (http://gdc.nad.go.id/)
  - Central provincial data warehouse
  - Linux Server, GeoNetwork, MapServer
    - Used for provision of data
- BGPDE (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



Hope for FOSS4G: The Server Side

- Aceh Geospatial Data Center (http://gdc.nad.go.id/)
- BGPDE (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

Promising Initiatives

- 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

Summary/Lessons learned - I

- Disaster response mapping with proprietary software only
  - Situation for FOSS4G would have been ideal
    - Introduction of new methodology
    - Building infrastructure from scratch
- No policy in GO/NGO technical cooperation to use FOSS/FOSS4G
  - 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)

Summary/Lessons learned - II

- 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 FOSS4G?
- Where to integrate in FOSS4G-structure?