



**BNPB**

# **Applying Science to Practice in DRR Experiences from Indonesia**

**Dr. Sutopo Purwo Nugroho**

Head of Center for Data, Information, and Public Relations National Agency  
for Disaster Management (BNPB)

Geneva, 22 May 2013, 15:00-16:30

Room 3

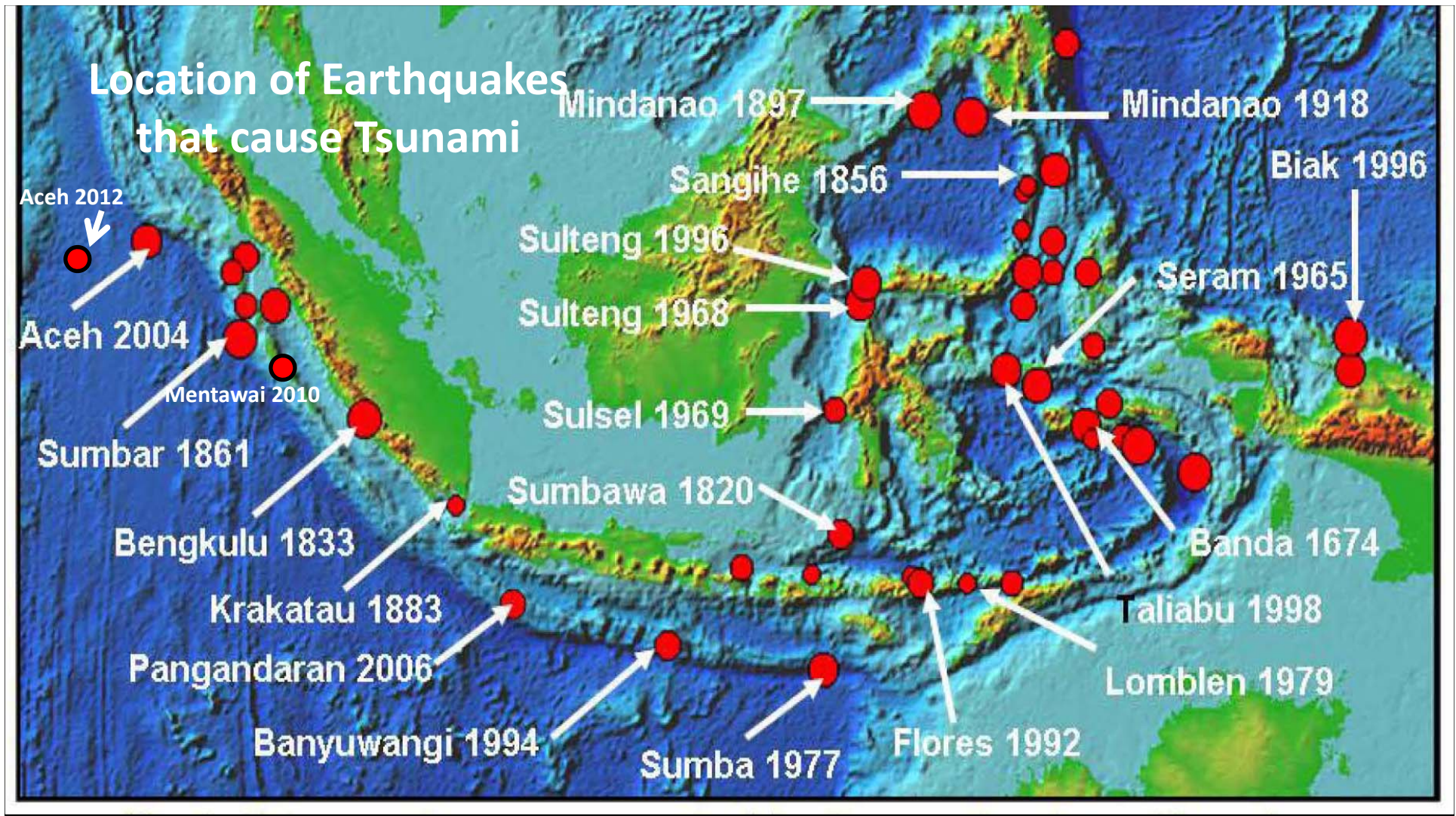


# Applying Science to Practice in DRR

**“science helps us to  
save lives”**

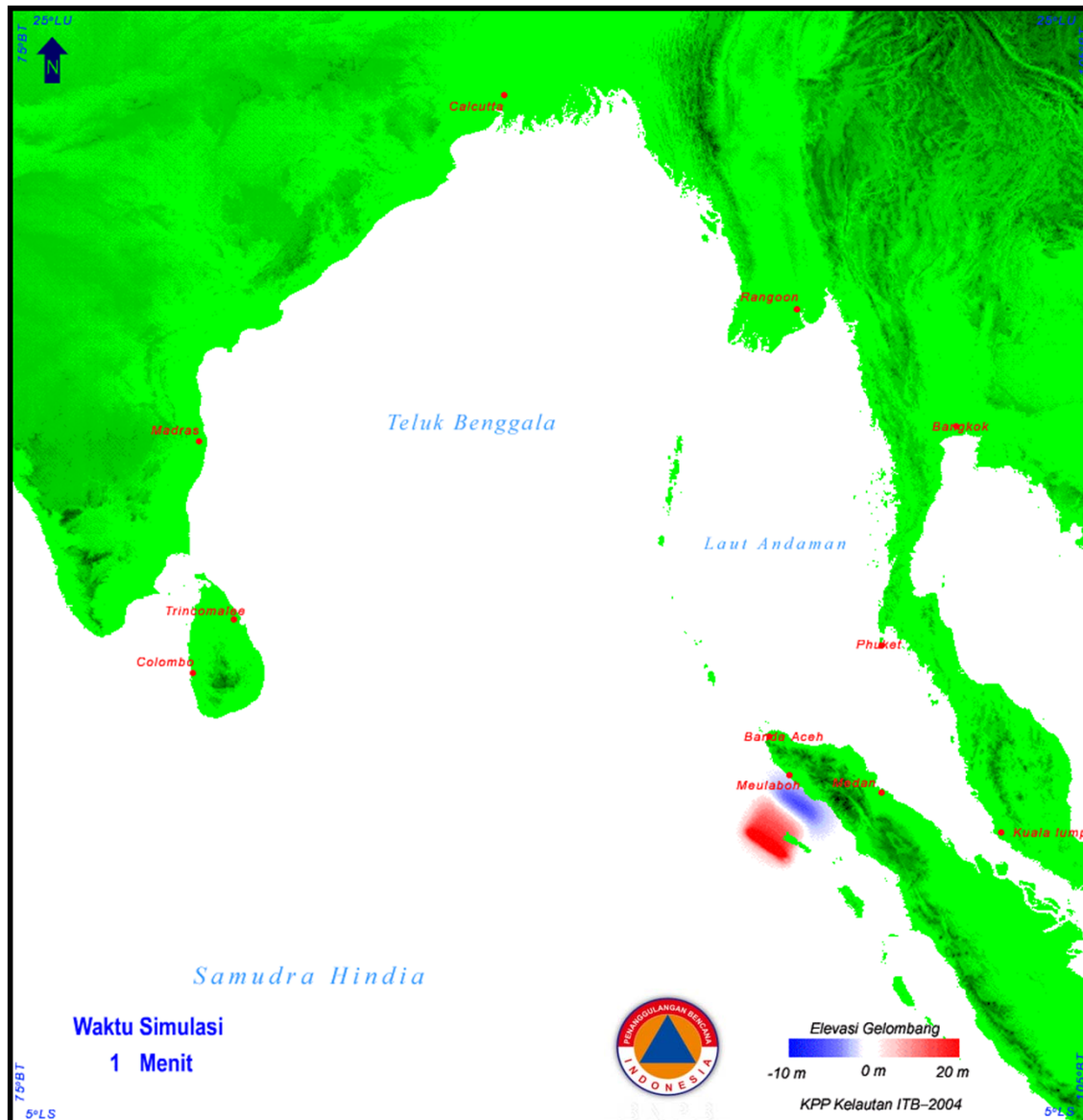
**we can use science to help us  
better understand the  
challenges we face and  
identify specific, effective  
actions that reduce risk**





- One of Indonesia's most significant hazards is tsunami.
- On average there is one fatal tsunami every three years in Indonesia.

# Aceh Tsunami 2004 as Wake Up Call



Since the tragedy of the 2004 Indian Ocean Tsunami there has been a big investment in developing the Indonesian Tsunami Early Warning System and Indonesia is now much better prepared for tsunami.

Despite the gains, the response to recent large earthquakes shows that we still need to do more to prepare for tsunami.

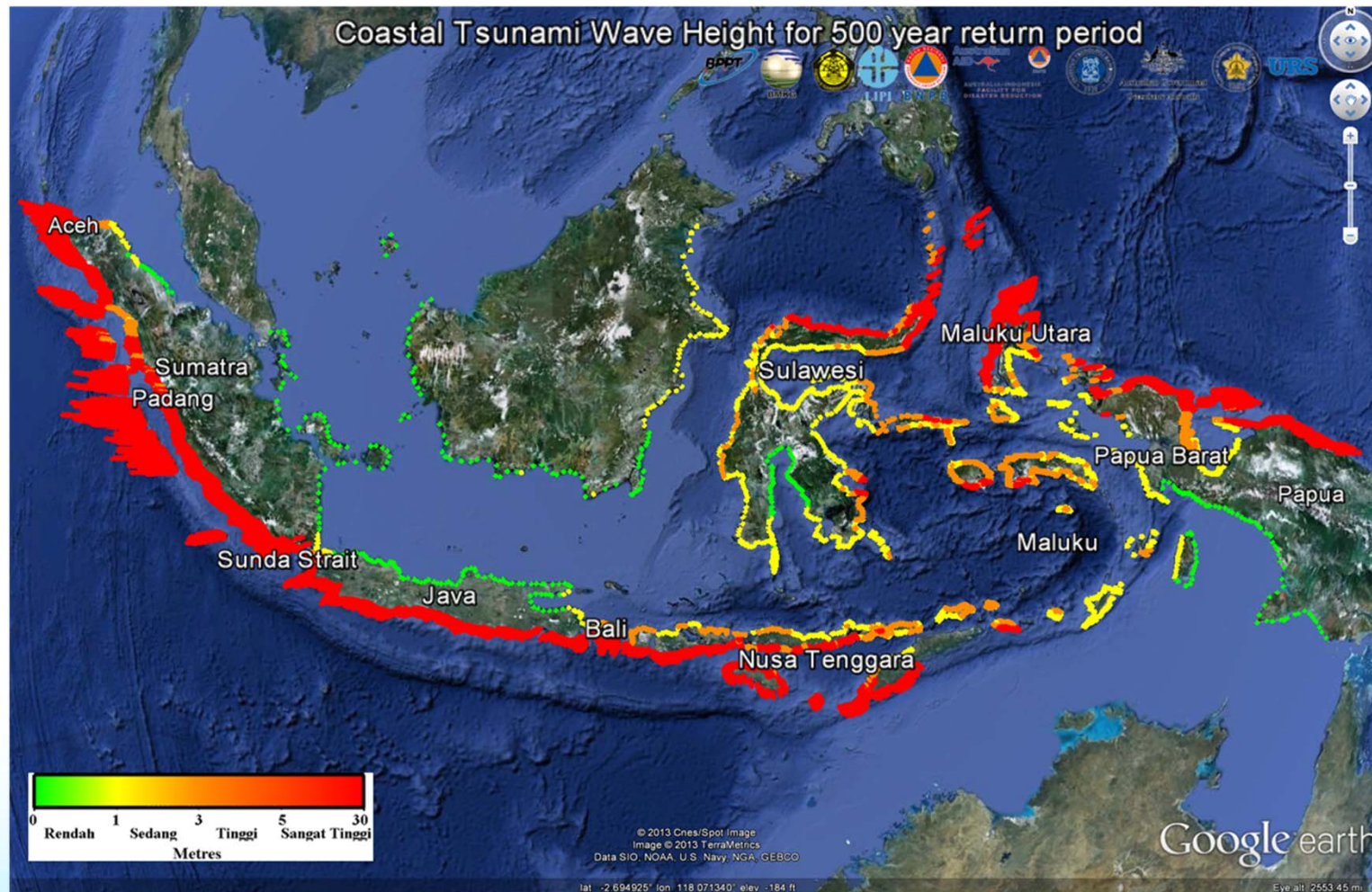
# Indonesian of Masterplan for Tsunami Risk Reduction



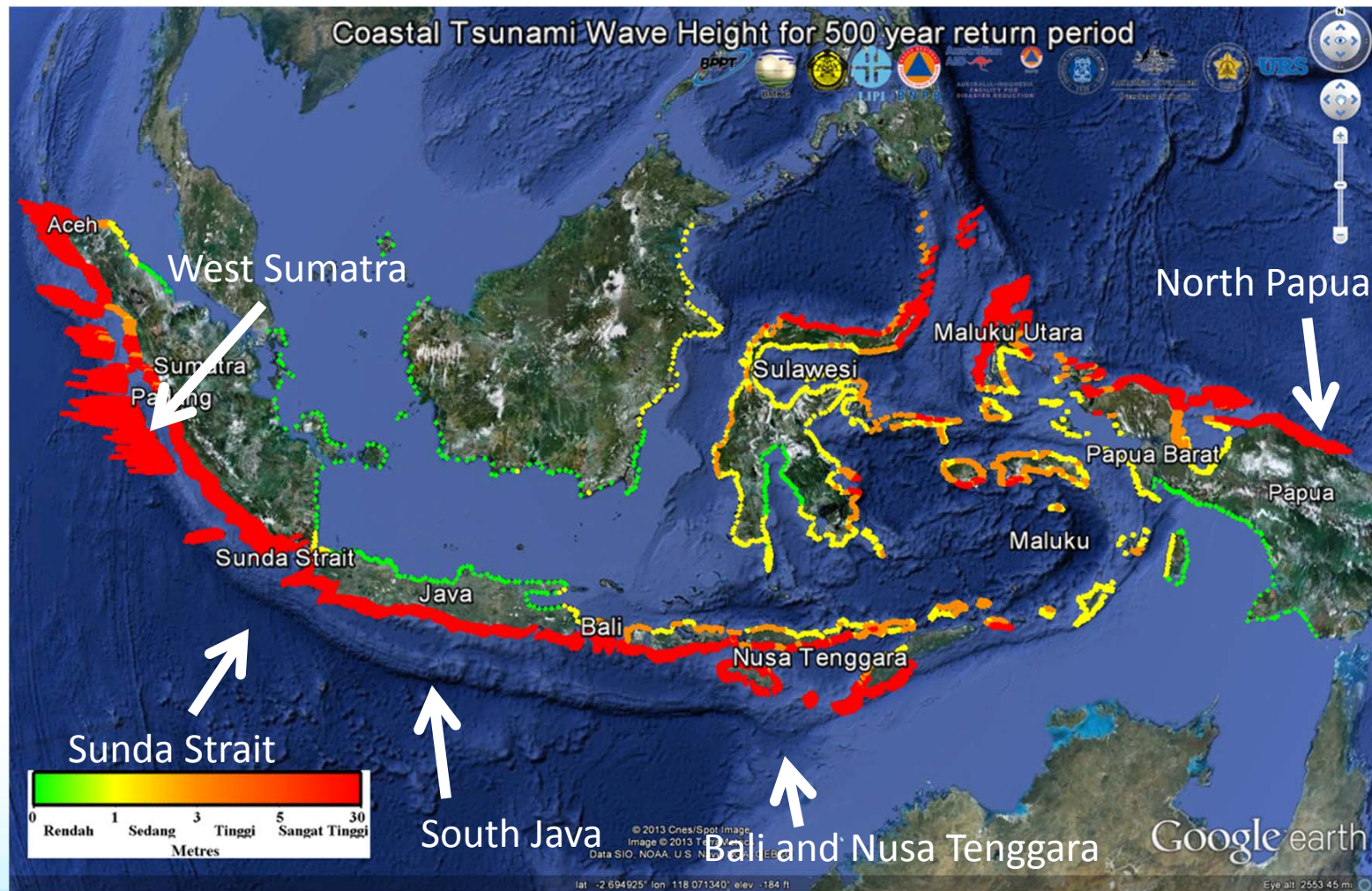
Indonesia allocate  
\$ US 1.8 billion for  
2013-2017

1. **Strengthening chain of tsunami early warning** → development of sirenes, information, earthquake detections, etc.
2. **Development and increase of temporary evacuation locations** → shelter development, evacuation routes, beacons, socializations, etc.
3. **Strengthening of preparedness capacity and DRR** → development of EOC, resilient villages, rules, drills, logistics, equipment, contingency plans, etc.
4. **Development of autonomous disaster industries** → instrumentation industries, SME (Small and Medium Enterprise).

# Where do we invest first?



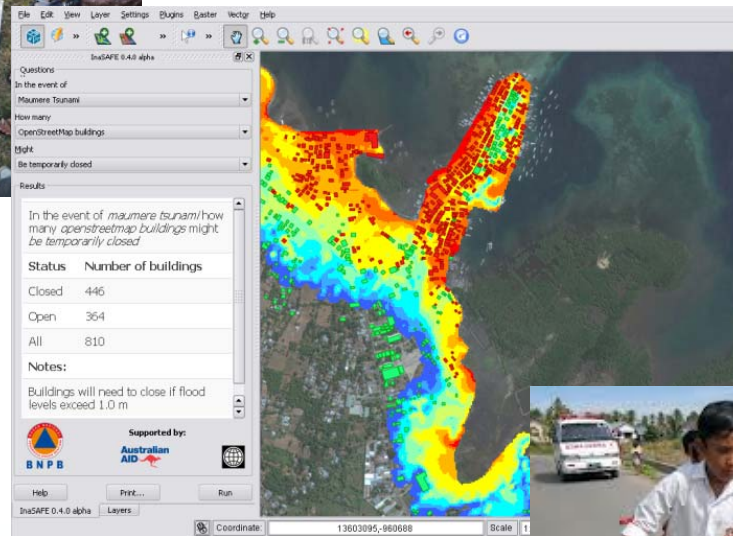
# Where do we invest first?



# Lives are saved at the local level



Community mapping  
OpenStreetMap



Scenario development  
[www.inasafe.org](http://www.inasafe.org)



Preparedness





Quantum GIS 1.8.0-Lisboa - video

File Edit View Layer Settings Plugins Vector Raster Database Help

Layers

- Earthquake magnitude 8.9 and tsuna...
  - <1.0
  - 1.0 - 3.0
  - 3.0 - 5.0
  - 5.0 - 10.0
  - >10.0
- Building
- Bing Aerial

InaSAFE 1.1.1 final

Question: In the event of

Earthquake magnitude 8.9 and tsunami (Sipora)

How many

Building

Might

Be flooded

Aggregate results by

Entire area

**Ready**

You can now proceed to run your model by clicking the *Run* button.

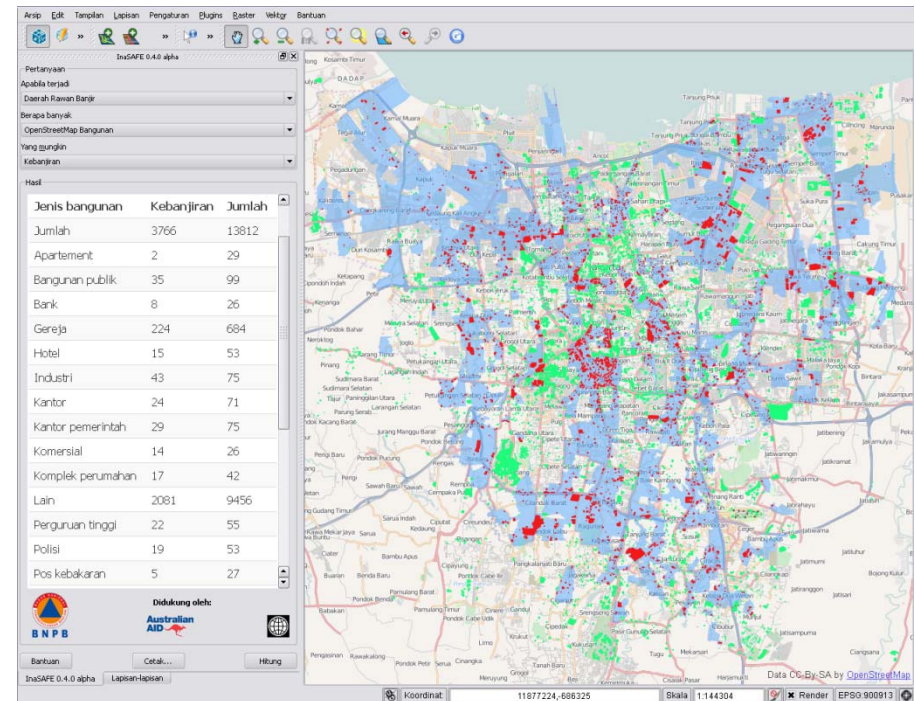
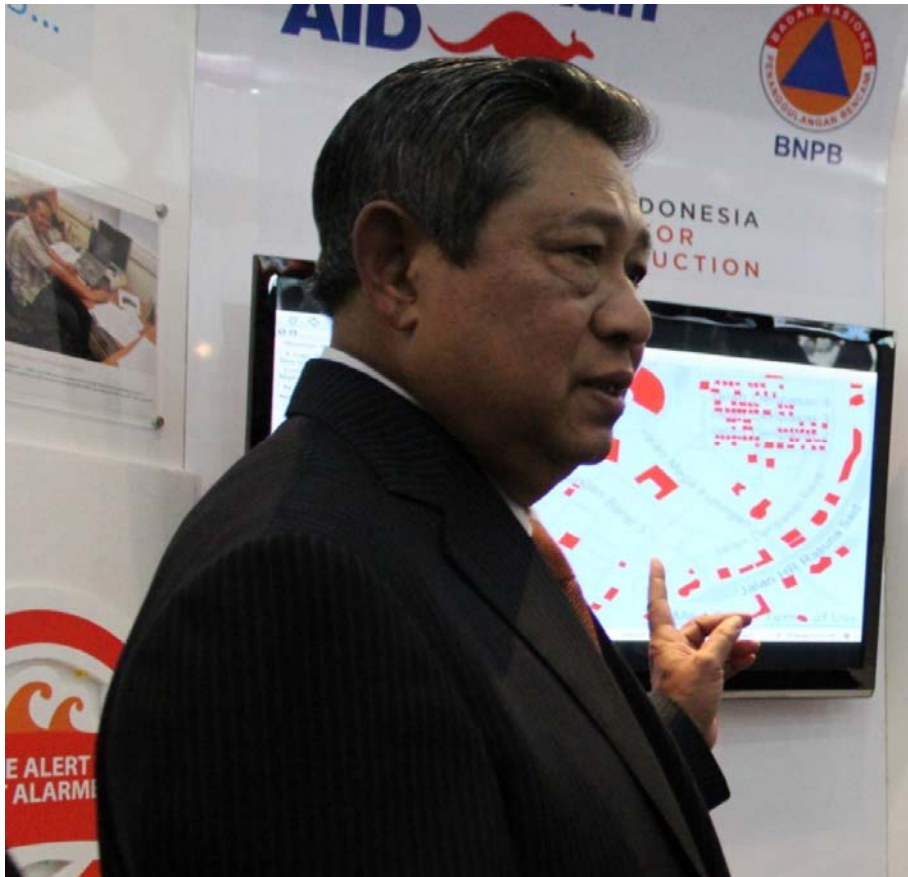
Control rendering order

Coordinate: 99.16,-1.65 Scale: 1:17062927 Render EPSG:4326

BNPB Australian AID



# InaSAFE very beneficial for us



# Summary

- As DRM practitioners our goal is to decrease risk and save lives. We can exploit new science and technology to turn policy into action.
- Implementation of the President's DRR agenda for tsunami is supported by science that defines the scale of the problem and tells us where to work first.
- Innovative technology (InaSAFE) is used to combine scientific and local knowledge, and translate this into a set of questions aimed at disaster managers to trigger specific actions.




# **BADAN NASIONAL PENANGGULANGAN BENCANA**

*(National Agency for Disaster Management)*

Jl. Ir. H.Juanda No. 36 Jakarta Pusat 10120

Telp. : 021-3458400 

Fax. : 021-3458500 

Email : [contact@bnpb.go.id](mailto:contact@bnpb.go.id) 

Website : [www.bnpb.go.id](http://www.bnpb.go.id) 

Facebook : [www.facebook.com/infobnpb](https://www.facebook.com/infobnpb) 

Twitter : @BNPB\_Indonesia 

YouTube : [BNPBIndonesia](https://www.youtube.com/BNPBIndonesia) 