

RIMES' TSUNAMI SERVICES

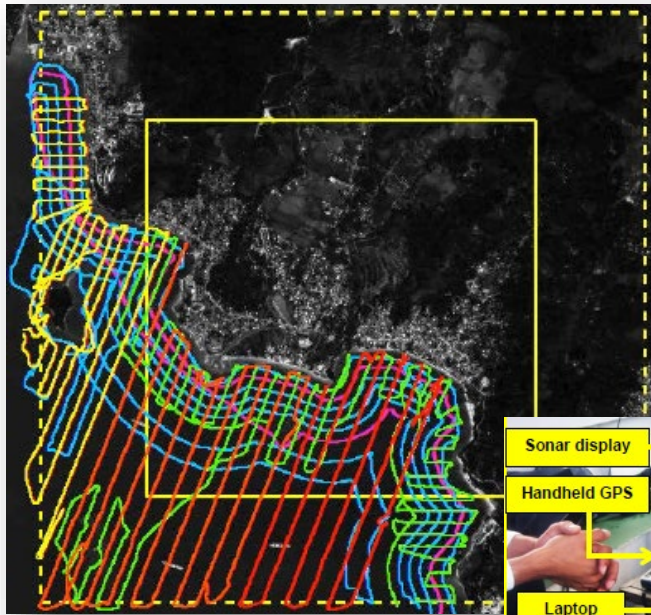
Capacity Assessment Validation Workshop

2024 Tsunami Preparedness Capacity Assessment in Indian and Pacific Oceans Project

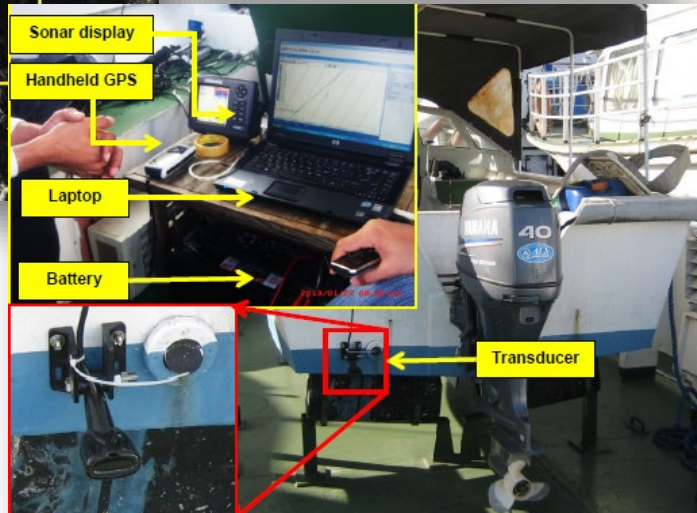
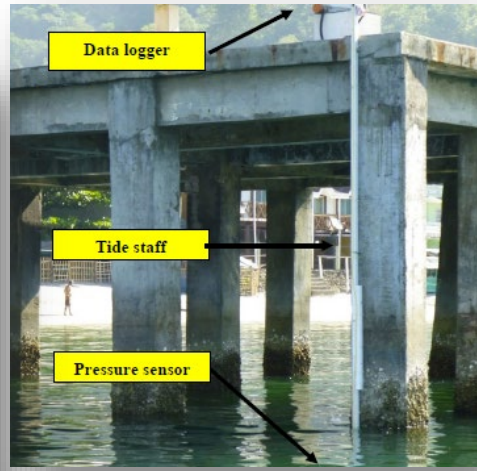
6 September 2024
Thailand



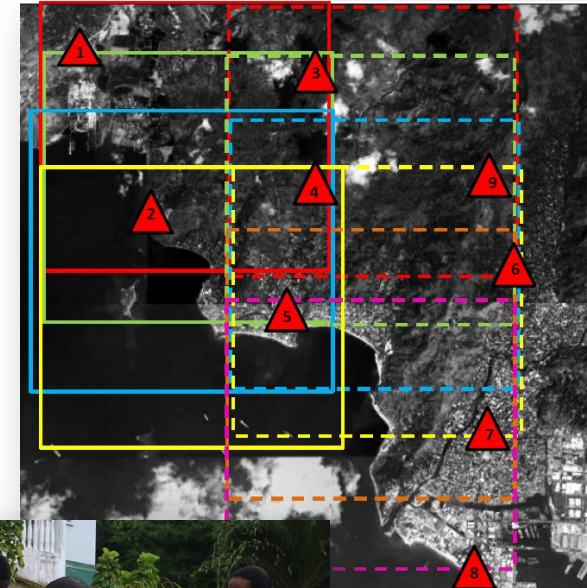
- Enhanced availability of data through enhanced capacities on seamless multi-source near-shore topography and bathymetry and exposure database development



Bathymetric survey



Topographic survey

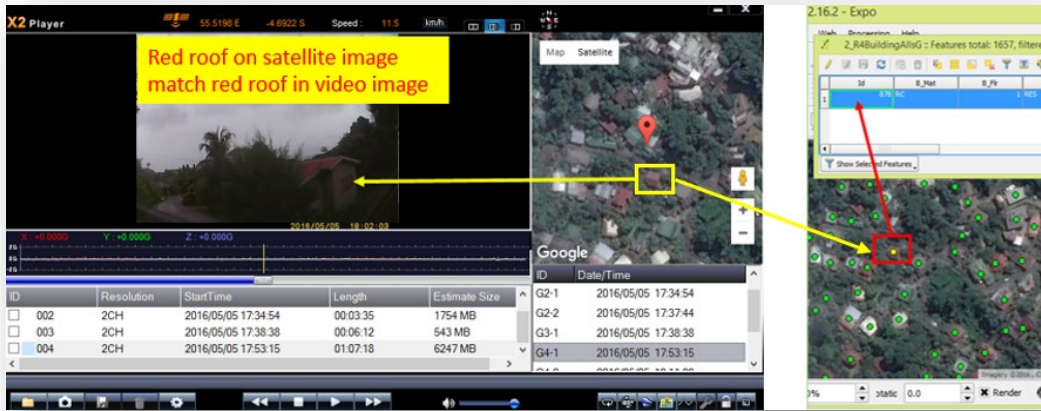




IOTWMS PILLAR 1

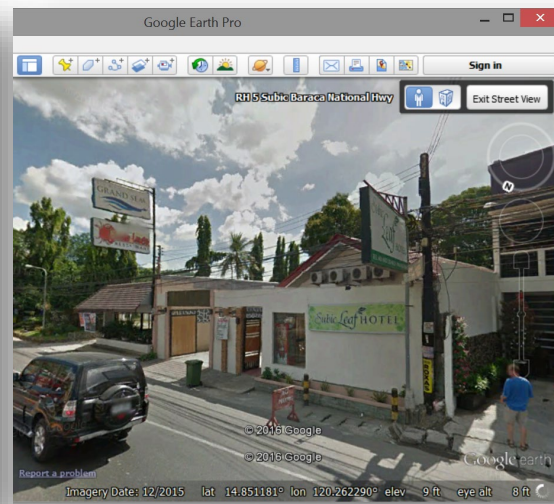
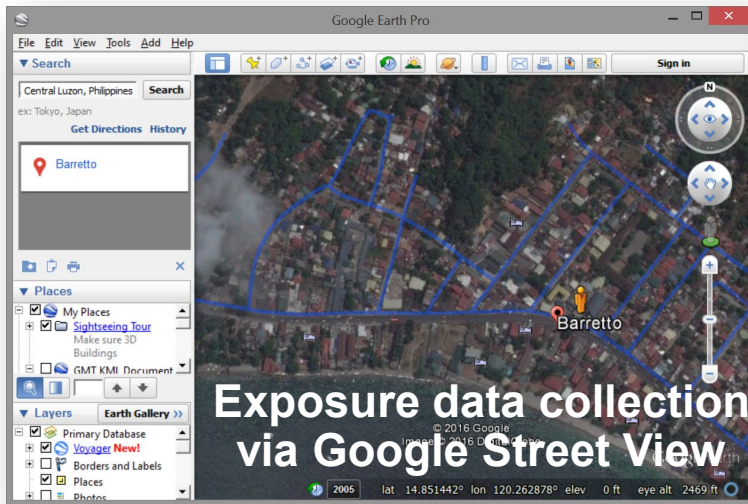
TSUNAMI RISK ASSESSMENT & REDUCTION

- Enhanced availability of data through enhanced capacities on seamless multi-source near-shore topography and bathymetry and exposure database development

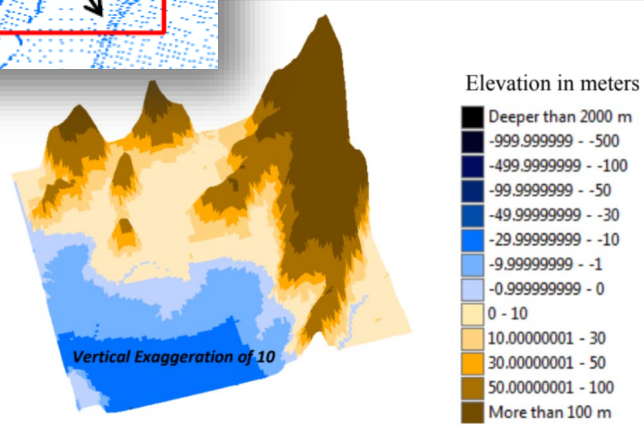
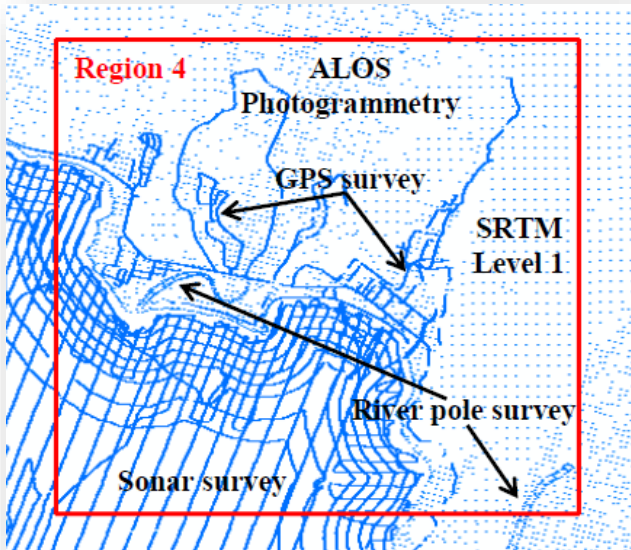


Exposure data collection via Street view survey

Building material & Building usage



- ❖ Enhanced availability of data through enhanced capacities on seamless multi-source near-shore topography and bathymetry and exposure database development



ToT in Seychelles

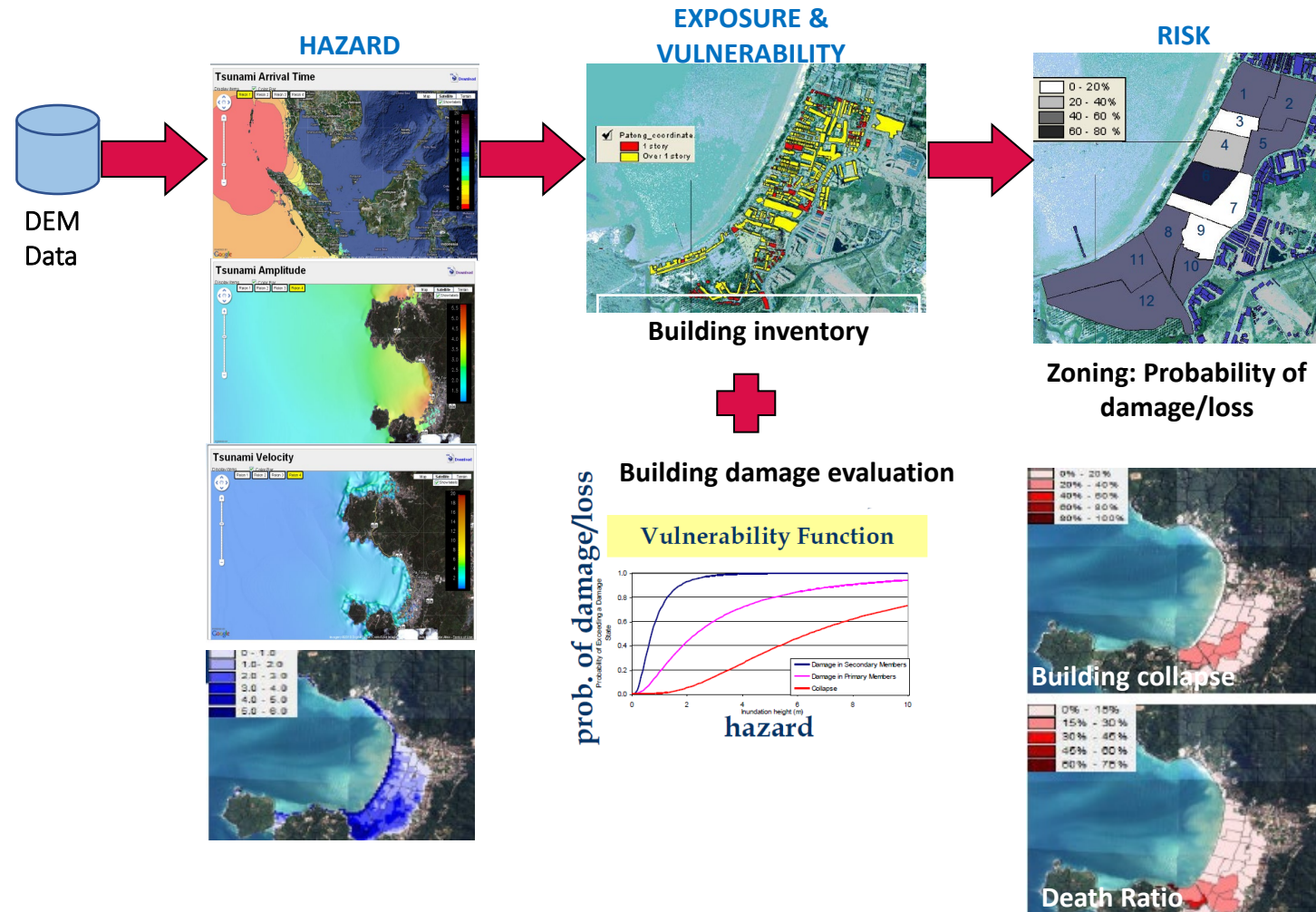
Topobath DEM development

- Enhanced user agencies' preparedness for tsunami hazard emergencies through improved tsunami hazard and risk assessment capacities

What is the arrival time?
 Where is the area and depth of inundation?
 What are the impacts on population & critical facilities?



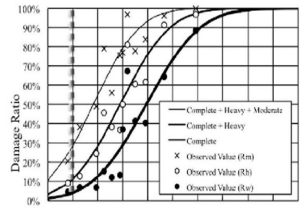
INSPIRE, a computer-based tsunami propagation and inundation risk assessment tool



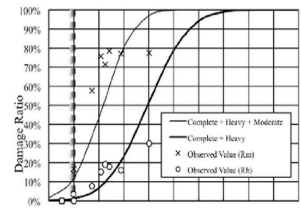
Fragility Curve

BUILDING MATERIAL TYPE

Type	Non-solid buildings	Solid buildings
Structure (material)	Brick-built, block-built, or wooden	Reinforced concrete, steel
The number of floors	One or two	Two or more
Usage	Housing (commercial)	Public, commercial, or office
Image		



(a) Non-solid buildings



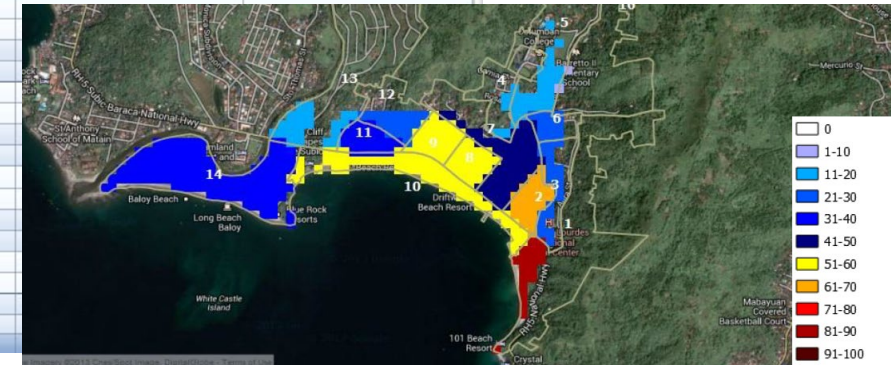
(b) Solid buildings

BUILDING DAMAGE LEVEL

Damage Rank	Complete Damage	Heavy Damage	Moderate Damage	No/Slight Damage
Definition	Complete structural damage	Structural damage and unusable	No visible structural damage and reusable	No visible mentionable damage
Image				

Estimated Casualty

Zone No.	Total Population (person) %	Survival (person) %	Casualty (person) %
1	240	51	189
1	100	21	79
2	364	14	350
2	100	4	96
3	300	175	125
3	100	58	42
4	180		
4	100		
5	600		
5	100		
6	132		
6	100		
7	1292		
7	100		
8	682		
8	100		
9	898		
9	100		
10	1090		
10	100		
11	650		
11	100		



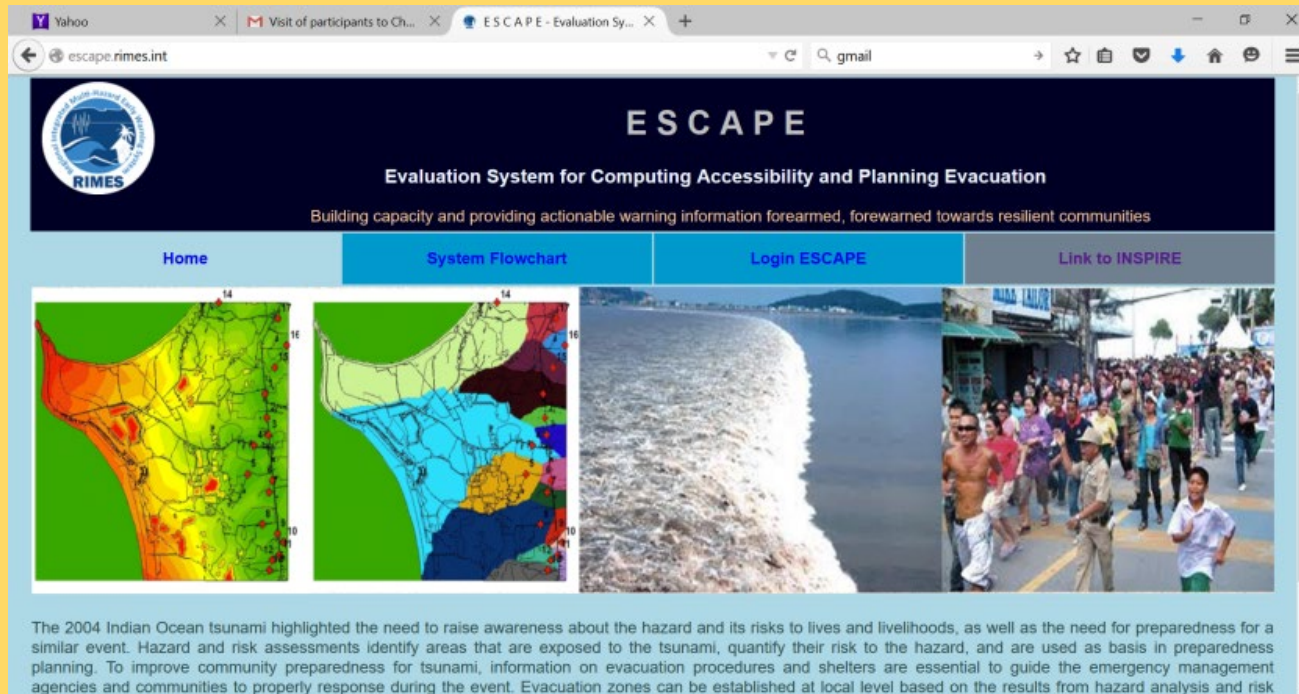
Estimate Building Damage

Zone No.	No. of Building in Zone (building) %	No. Damage (building) %	DL01 (building) %	DL02 (building) %	DL03 (building) %
1	6	0	0	0	3
1	100	0	100	100	50
2	24	0	24	23	16
2	100	0	100	96	67
3	0	0	0	0	6
3	100	0	0	0	6
4	6	0			
4	100	0			
5	40	15			
5	100	31			
6	9	1			
6	100	11			
7	91	3			
7	100	3			
8	73	0			
8	100	0			
9	42	0			
9	100	0			
10	28	0			
10	100	0			
11	15	0			
11	100	0			

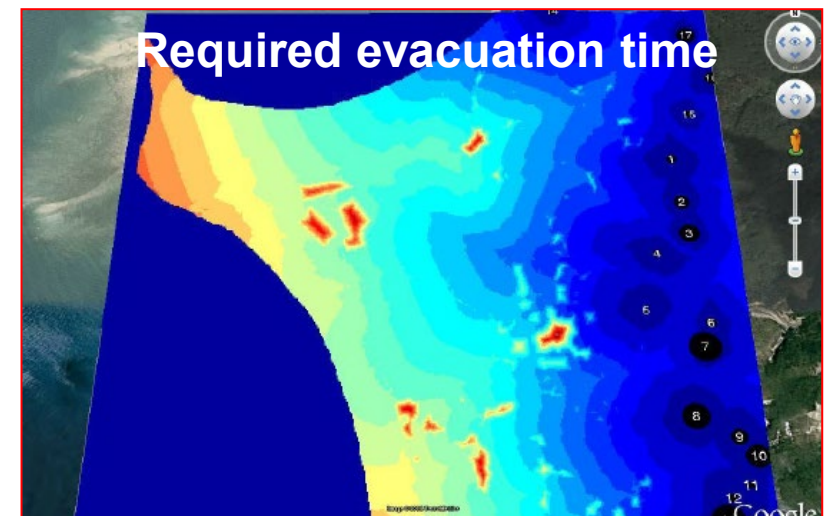


❖ Enhanced response capabilities within disaster management organizations and communities

Where should we go?
Which route is safe and fastest?
Do we have enough time?
Do shelters have enough capacity?



ESCAPE, a computer-based tool for computing shelter accessibility & planning evacuation

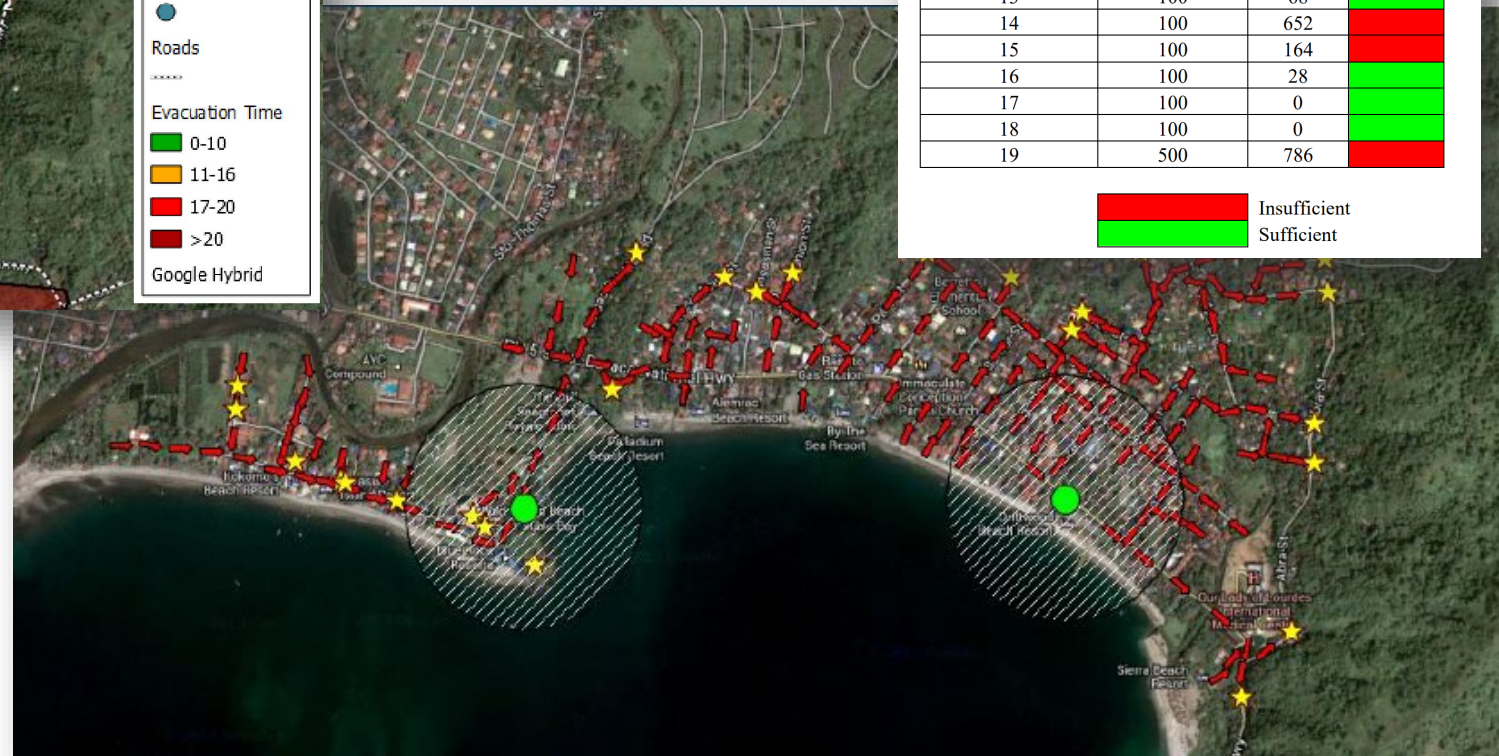




Capacity of assembly points versus expected evacuees for Case 1

Assembly Point Number	Assembly Point Capacity (person)	Expected Evacuees (person)	Assembly Point Status
1	200	308	Insufficient
2	300	4	Sufficient
3	200	2,906	Insufficient
4	400	532	Insufficient
5	200	674	Insufficient
6	200	0	Sufficient
7	40	710	Insufficient
8	50	292	Insufficient
9	140	106	Sufficient
10	3,000	76	Sufficient
11	300	526	Insufficient
12	100	2,244	Insufficient
13	100	68	Sufficient
14	100	652	Insufficient
15	100	164	Insufficient
16	100	28	Sufficient
17	100	0	Sufficient
18	100	0	Sufficient
19	500	786	Insufficient

■ Insufficient
■ Sufficient






IOTWMS PILLAR 2

DETECTION, WARNING AND DISSEMINATION

Enhanced efficiency in data processing, analysis, and dissemination of tsunami information

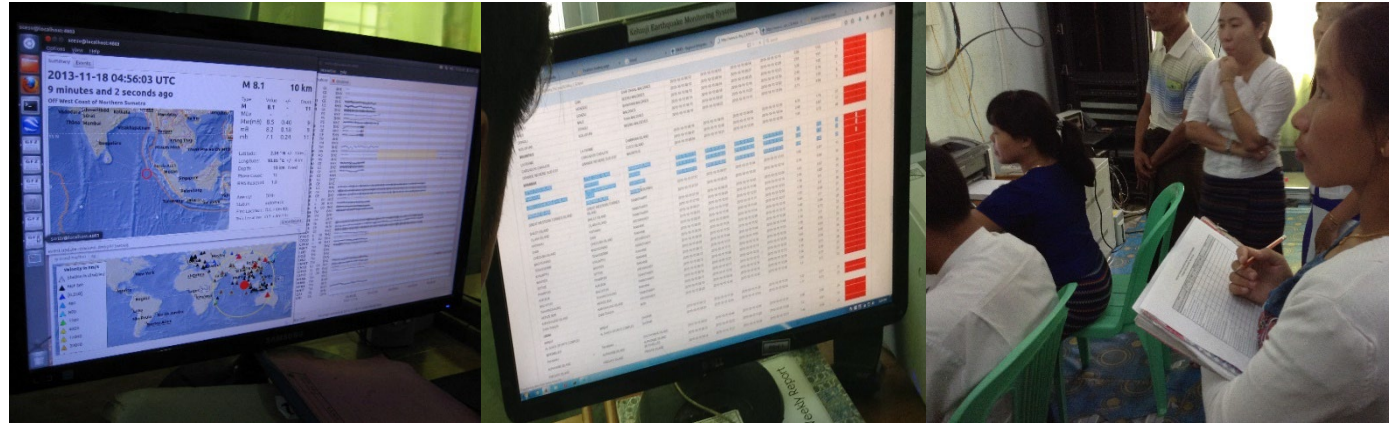
Send sms for Off West Coast of Northern Sumatra, Magnitude: 9.0 Mw(mB), Depth: 27 km.



ID: dmh2015ueyh

SEND CLOSE

Bulletin Type
 Earthquake News
 Earthquake News
 Tsunami Alert
 Tsunami Warning
 Tsunami Warning Info: 14:02:03 MST Lon=93.20 Lat=2.25 Mag=9.0 Depth=27 Km
 Tsunami Cancellation: DMH-NEDC



??NEDC DRILL?? RIMES EQ
 Verified Sol'n
 OT=2015-10-15 04:02:02 UTC
 Lon=95.87 Lat=22.94 Mag=6.8
 Depth=19 Km
 Region=Myanmar
 Message sent by RIMES
 10:44 AM

TEST TEST TEST TEST
 OT=2015-10-15 10:32:07 MST
 Lon=95.80 Lat=22.90 Mag=6.7
 Depth=19 Km
 Region=Myanmar
 Message sent by DMH-NEDC

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
 ဝန်ဆောင်ခရောင်းကြီးစွာ
 ဖိုလေသယုန်မလေလေညွှန်ကြားမှုဦးစီးဌာန
 မြေငြိမ်ထောက်

ရက်စွဲ: ၂၀၁၅ ခုနှစ်၊ အောက်တိုဘာလ ၁၅ ရက်

မြေငြိမ်ထောက်သတိပေးချက်ကို ဖြန့်ဝေပေးခြင်း ဖြစ်ပါသည်။
 အမှန်တကယ် ဖြစ်ပါပြီ ဖြစ်ပါသည်။

မြေငြိမ်ထောက်သတိ:
 (မြန်မာနိုင်ငံတစ်ဝန်း ဝင်ရောက် ဖြန့်ဝေခြင်း ဖြစ်ပါသည်။)

၂၀၁၅ ခုနှစ်၊ အောက်တိုဘာလ ၁၅ ရက်နေ့၊ မြန်မာနိုင်ငံတစ်ဝန်း (၁၀) နာရီ (၁၅) မိနစ် ၊
 (၁၅) မိနစ်တွင် မန္တလေးမြို့လှိုင်မော်မြို့ မြောက်-အနောက်မြောက်ဘက် (၆) မိုင်ခန့်၊ တွာ
 လေးသာ မြန်မာနိုင်ငံမြို့တွင်း (သစ်တံတိုင်းမြို့၊ အီအေအောက်ဘက် (၁၀) မိုင်) ခန့်အကွာတွင် ဝင်ရောက်
 ဖြစ်ပေါ်ခဲ့သော (၆.၇) အားရှိ အင်အားမြင့်သော မြေငြိမ်ထောက်လှုပ်မှု ဖြစ်ပေါ်ခဲ့ခြင်း
 ဖြစ်ကြောင်း တိုင်ကြားရရှိပါသည်။

EARTHQUAKE NEWS
 (Issued at 10:45 hours M.S.T Today)



Development/testing of a tool to support tsunami information dissemination by NEDC-DMH, Myanmar



THANK YOU FOR YOUR ATTENTION!