



WASEDA University



Sunda Strait Post Tsunami Survey

Research Collaboration

Waseda University (Japan)

Institut Teknologi Bandung (Indonesia)

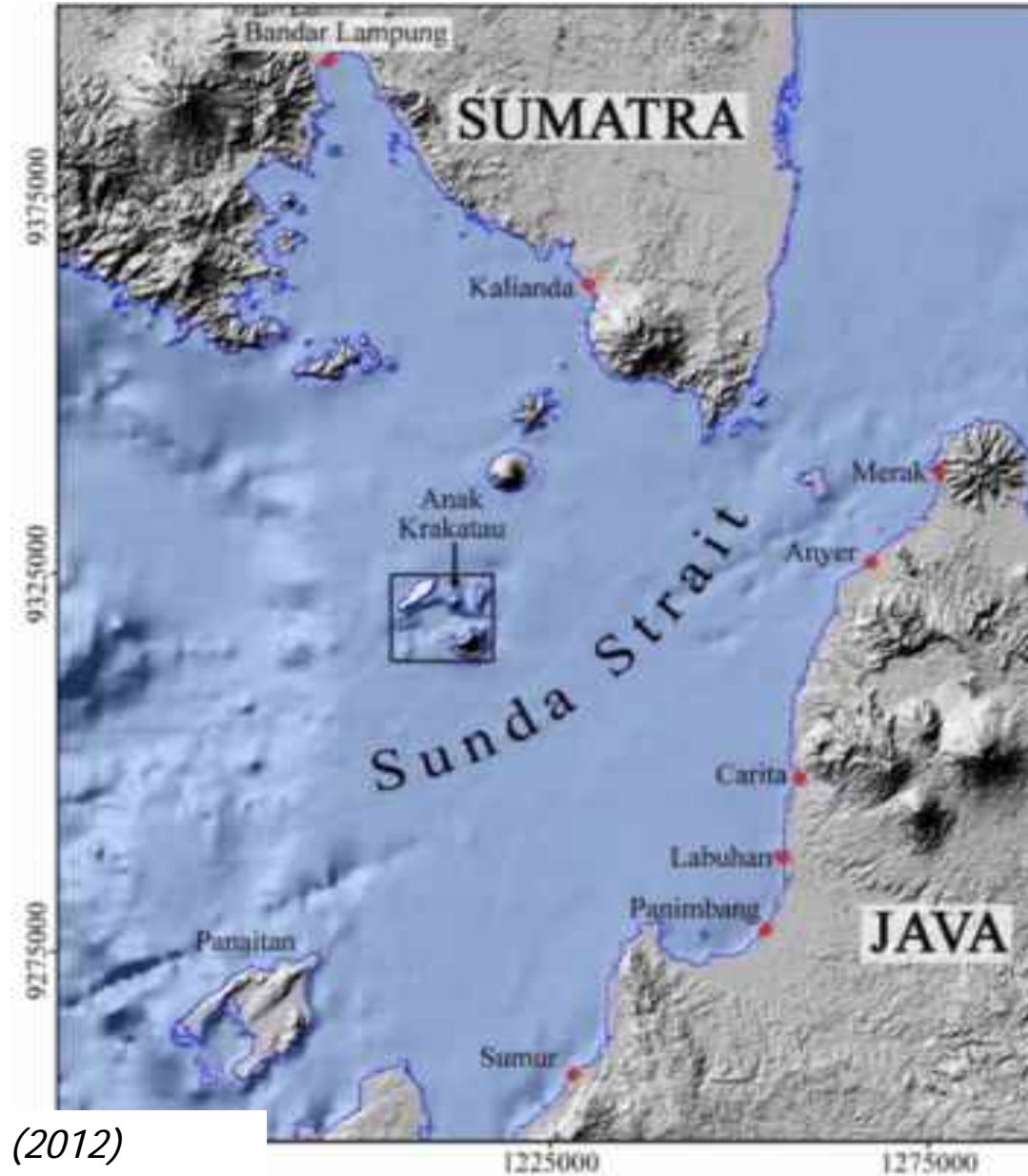
Institut Teknologi Sumatera (Indonesia)

12-17 January 2019

Goals

- ▶ To observe the run-up height and inundation height of Sunda Strait Tsunami in December 2018 through water mark tracing
- ▶ To investigate the mechanism of tsunami wave attack wave propagation according to the interview to eyewitness and based on field fact finding
- ▶ Having the interview to resident regarding preparedness and evacuation behavior through Questionnaire survey

Location



Source : *Thomas Giachetti (2012)*

Field Survey:

1. Identify water mark and measurement



Field Survey:

2. Bathimetric survey

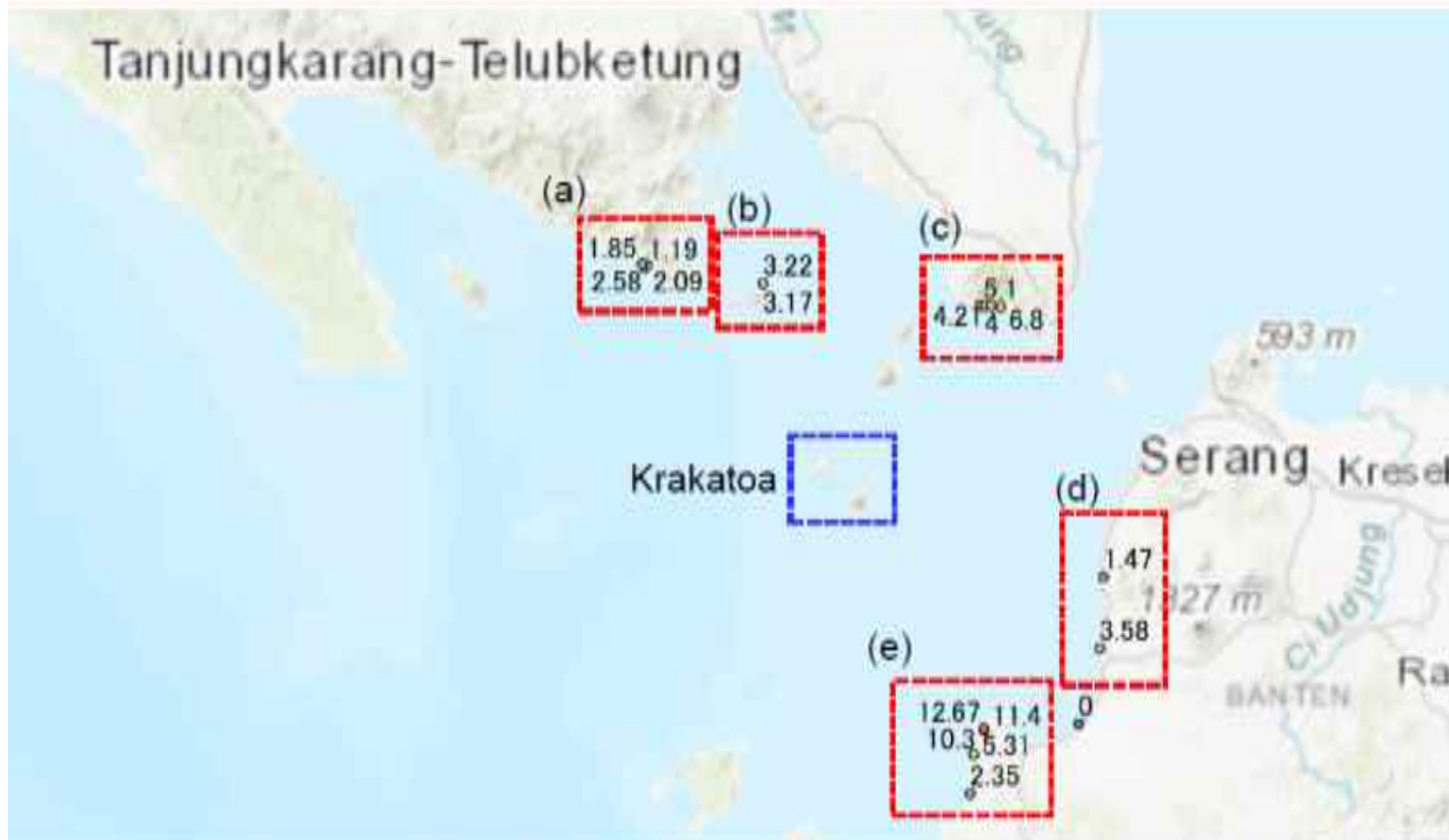
3. Questionnaire



Survey Team (12-13 January 2019)



Measurement results

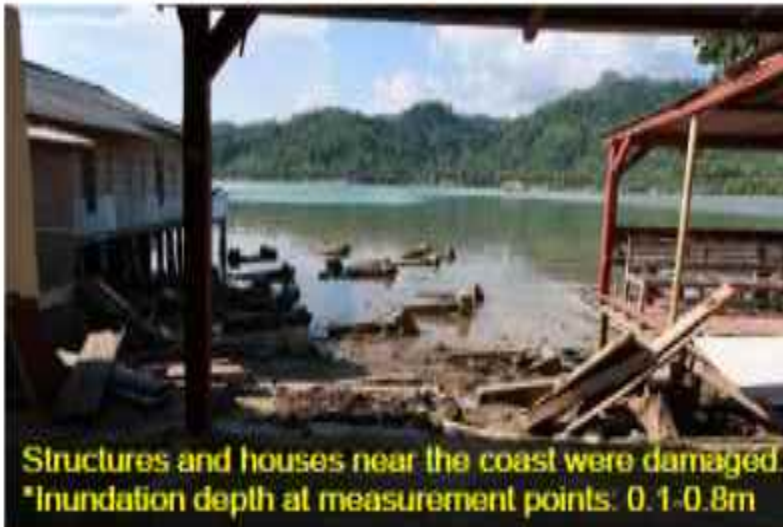


Note: The results are not corrected to the heights above the estimated tide level at the time of tsunami arrival.

(a)



Bandung Jaya Village / Sinar Agung Village, Kiluan



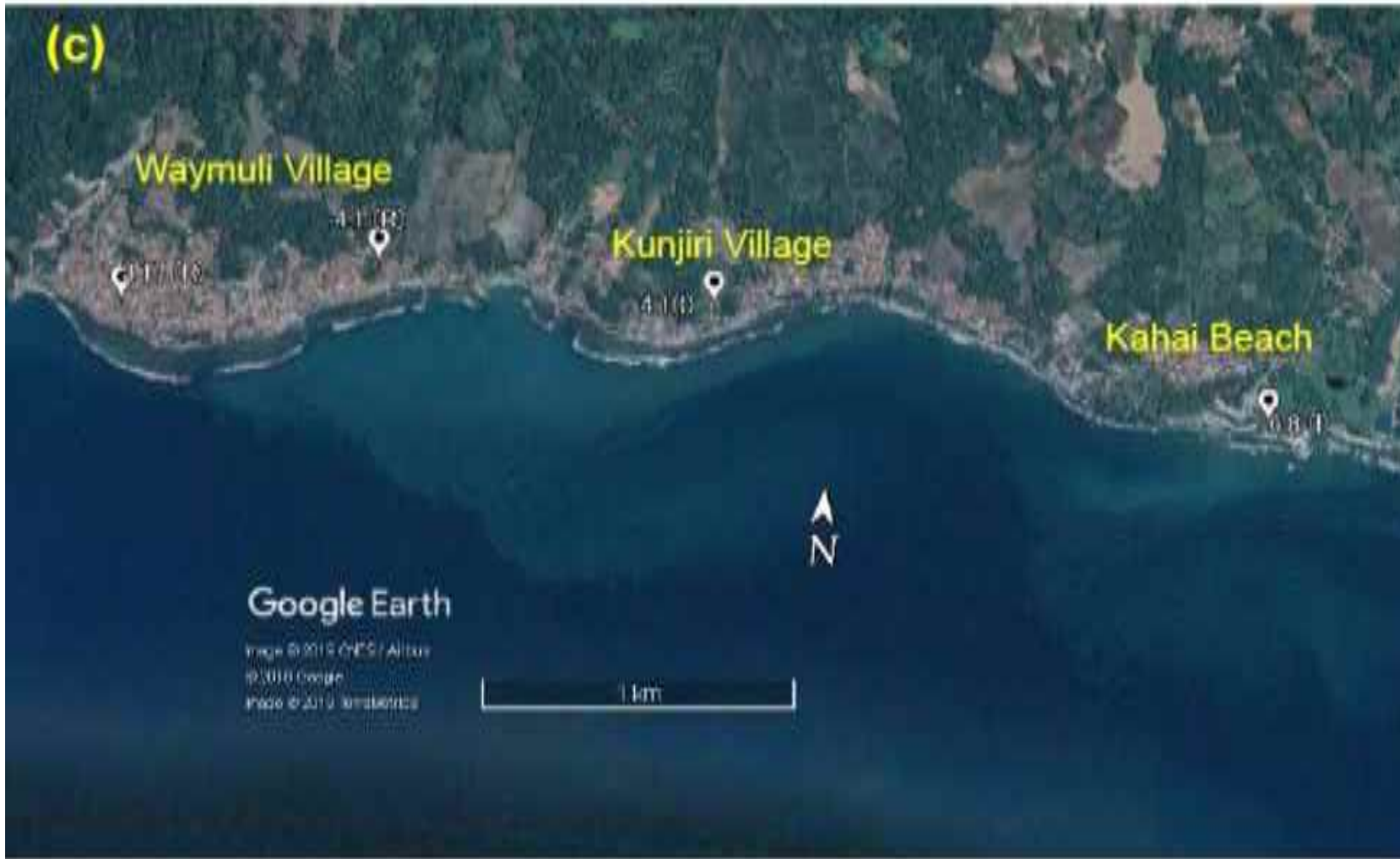


Selesung Village, Legundi island



Collapsed houses near the coast (Inundation depths at measurement points: 1.2-1.3m)



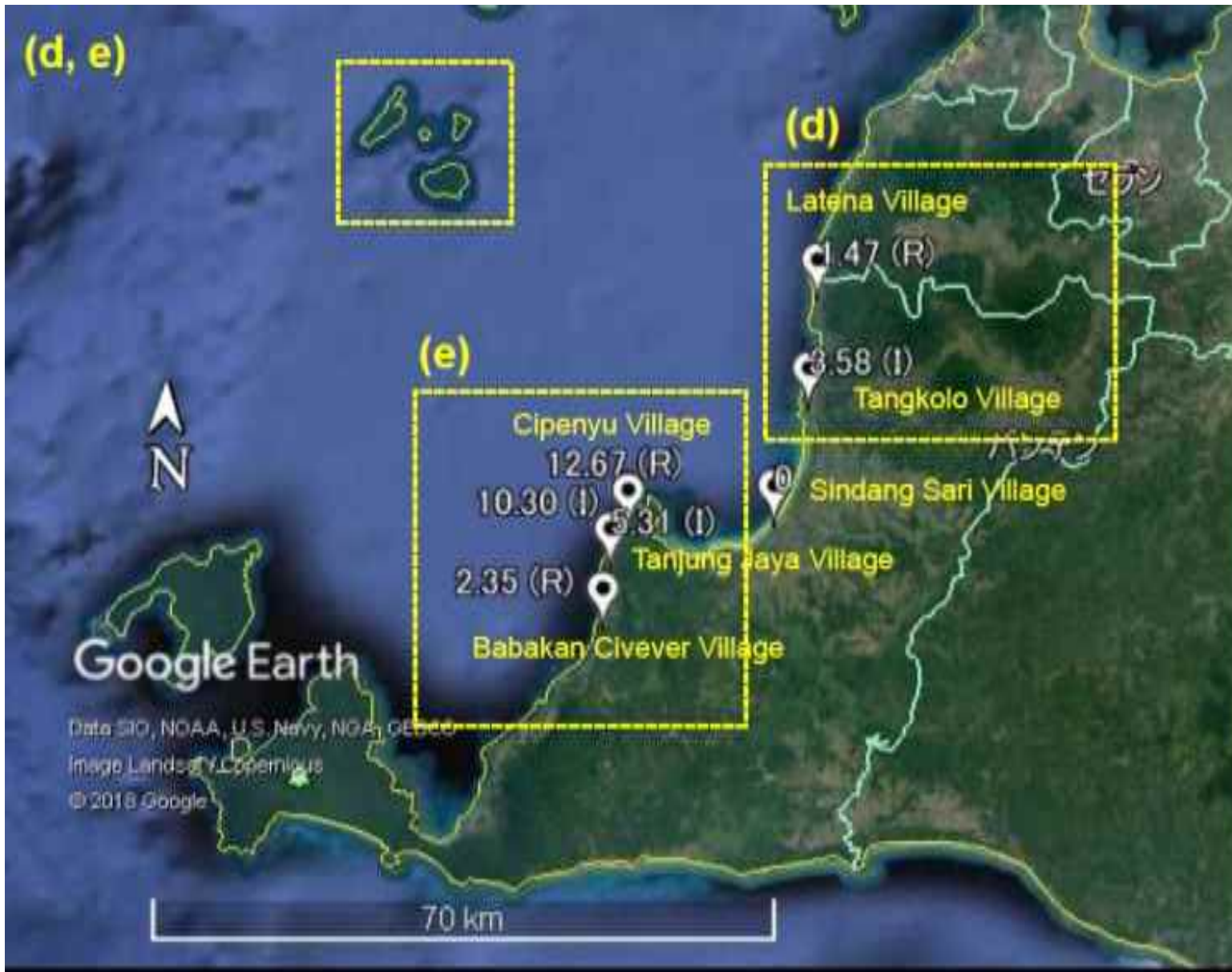


Waymuli Village / Kunjiri Village / Kahai Beach, Kalianda



Survey Team (14-17 January 2019)





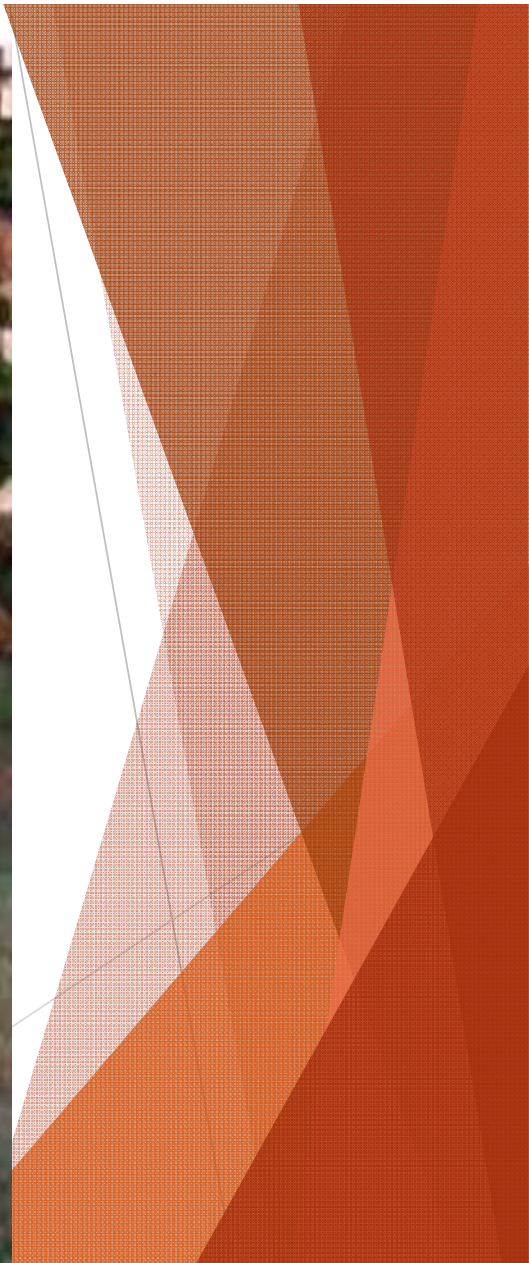
Lantera Village / Tangkolo Village, Labuan



Floated container
*These containers were planned to be used for hotel rooms



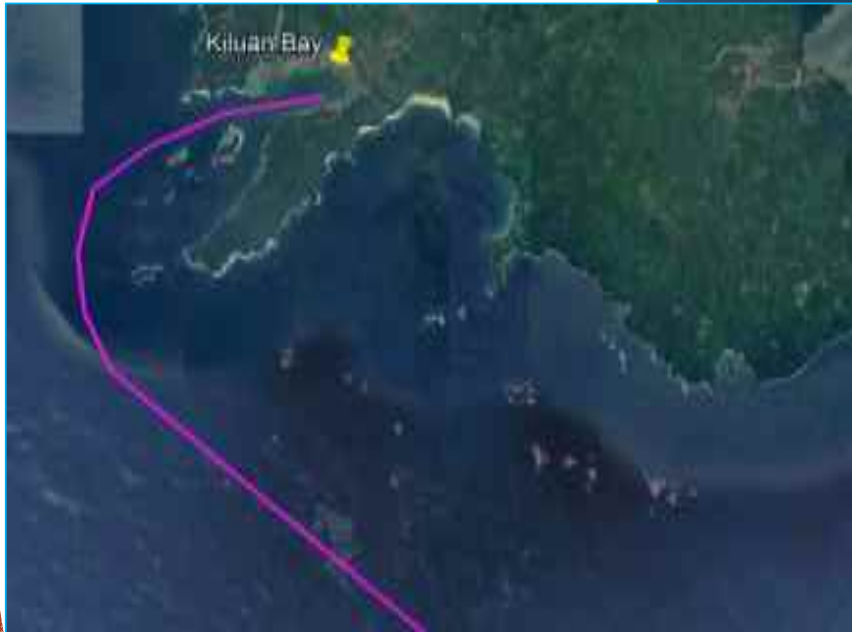
(e)



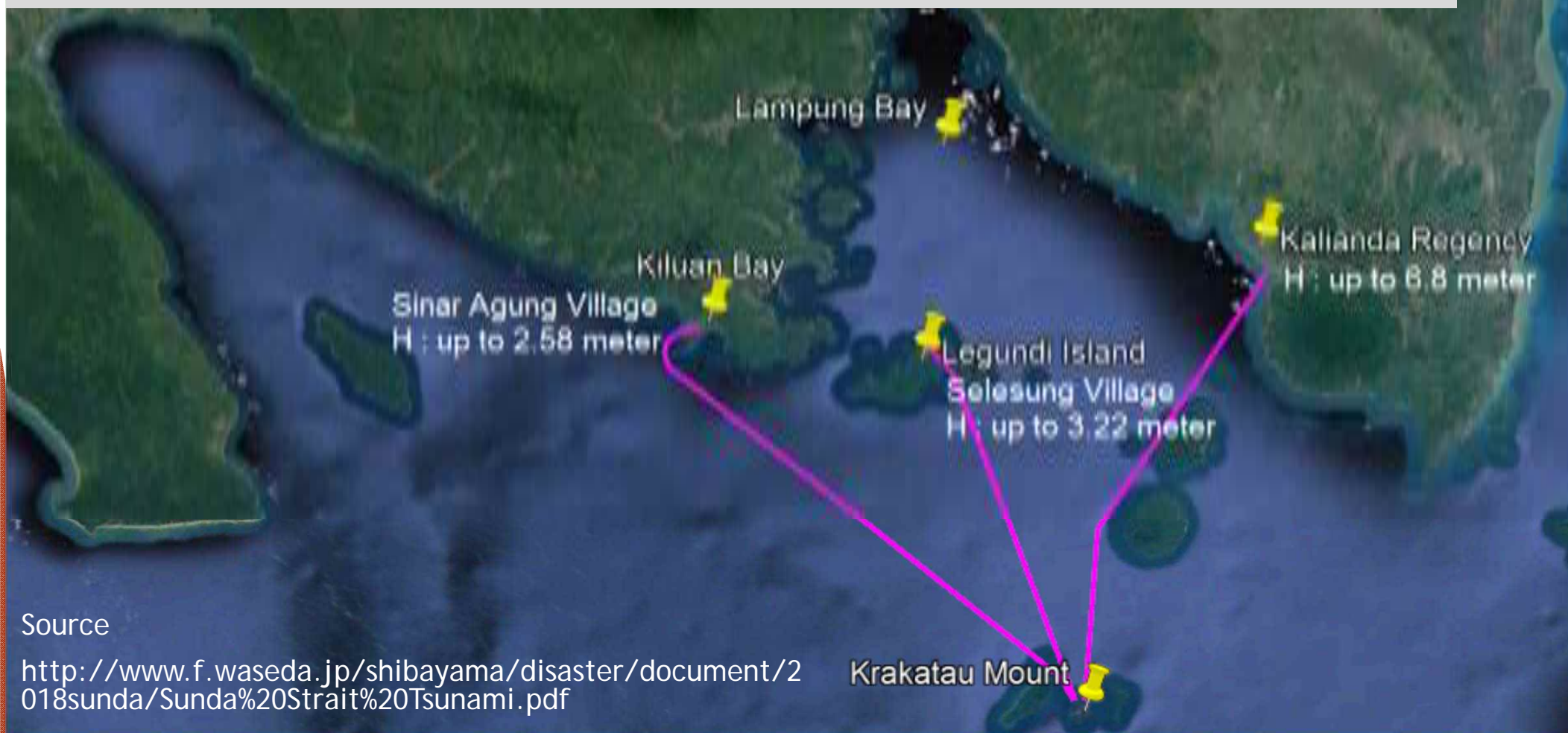
Tanjung Jaya Village / Cipenyu Village, Panimbang



Estimated Direction Of Coming Waves From Mt Karakatao



Previous survey result of Tsunami Height (m) on South Lampung Province



Source

<http://www.f.waseda.jp/shibayama/disaster/document/2018sunda/Sunda%20Strait%20Tsunami.pdf>



Kiluan Bay



Kiluan Bay

Location : Kiluan Bay

- Killed = -
- Injured = -
- Missing person = NA
- Affected = -
- Damaged house (severe) = 4
- Damaged house (medium) = -
- Damaged house (light) = -

Source:

Badan Nasional Penanggulangan
Bencana, 2019.

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Legundi Island



Legundi Island

Location : Legundi

- Killed = -
- Injured = 1
- Missing person = NA
- Affected = -
- Damaged house (severe) = 53
- Damaged house (medium) = -
- Damaged house (light) = 82

Source:

Badan Nasional Penanggulangan
Bencana, 2019.

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Disaster Victim Data

Location : Kalianda

- ▶ Killed = 118
- ▶ Injured = 4007
- ▶ Missing person = 8
- ▶ Affected = 7942
- ▶ Damaged house (severe) = 543
- ▶ Damaged house (medium) = 70
- ▶ Damaged house (light) = 947

Source:

Badan Nasional Penanggulangan Bencana, 2019.

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TSUNAMI SELAT SUNDA

(UPDATE 14 JANUARI 2019)



laporan Penanggulangan
Bencana SK Nasional
tanggal 2 bulan 05/1
/2019 - 6/3/2019



laporan Lapangan Selatan
tanggal SK tanggal
tanggal 13 hari 05/1
/2019 - 19/1/2019

KABUPATEN PERAWARAN	KABUPATEN LAMPUNG SELATAN	KABUPATEN SERANG	KABUPATEN PANDEGLANG
1 Meninggal Dunia	118 Meninggal Dunia	21 Meninggal Dunia	296 Meninggal Dunia
23 Luka-luka	11.810 Luka-luka	3.306 Luka-luka	16.712 Luka-luka
	7 Hilang	- Hilang	3 Hilang
	6.999 Mengungsi	1.227 Mengungsi	7.972 Mengungsi

UPAYA

- DPOD MELAKUKAN PENYEMPURNAAN DI WILAYAH TERGAMBAR
- MENYERIKAN BANTUAN DSP SEBESAR RP 100 JUTA
- PERKERJAAN HUNTARA BERKORDINASI BNPB, TNI DAN PUPERA

HUNTARA KAB. PANDEGLANG

- Verifikasi akhir 826 unit
- BNI bangun Huntara 100 unit
- Huntara yg disalurkan 726 unit

PERINCIAN

Kec. Labuan	Kec. Carita
• Huntara 310 unit	• Huntara 44 unit
• 1 unit Mushola	• 1 unit Mushola
• MCK 31 unit	• MCK 3 unit
• 1 titik lokasi huntara	• 1 titik lokasi huntara

Kec. Panimbang	Kec. Sukaresmi
• Huntara 90 unit	• Huntara 58 unit
• 1 unit Mushola	• 1 unit Mushola
• MCK 8 unit	• MCK 8 unit
• 1 titik lokasi huntara	• 1 titik lokasi huntara

Kec. Sumur
• Huntara 342 unit
• 3 unit Mushola
• MCK 31 unit
• 3 titik lokasi huntara

KABUPATEN TANGGAMUS
1 Meninggal Dunia
92 Luka-luka
Lokasi Gunung Krakatau

TOTAL KORBAN MENINGGAL
437 JIWA

TOTAL KORBAN HILANG
10 JIWA

TOTAL KORBAN LUKA-LUKA
31.943 JIWA

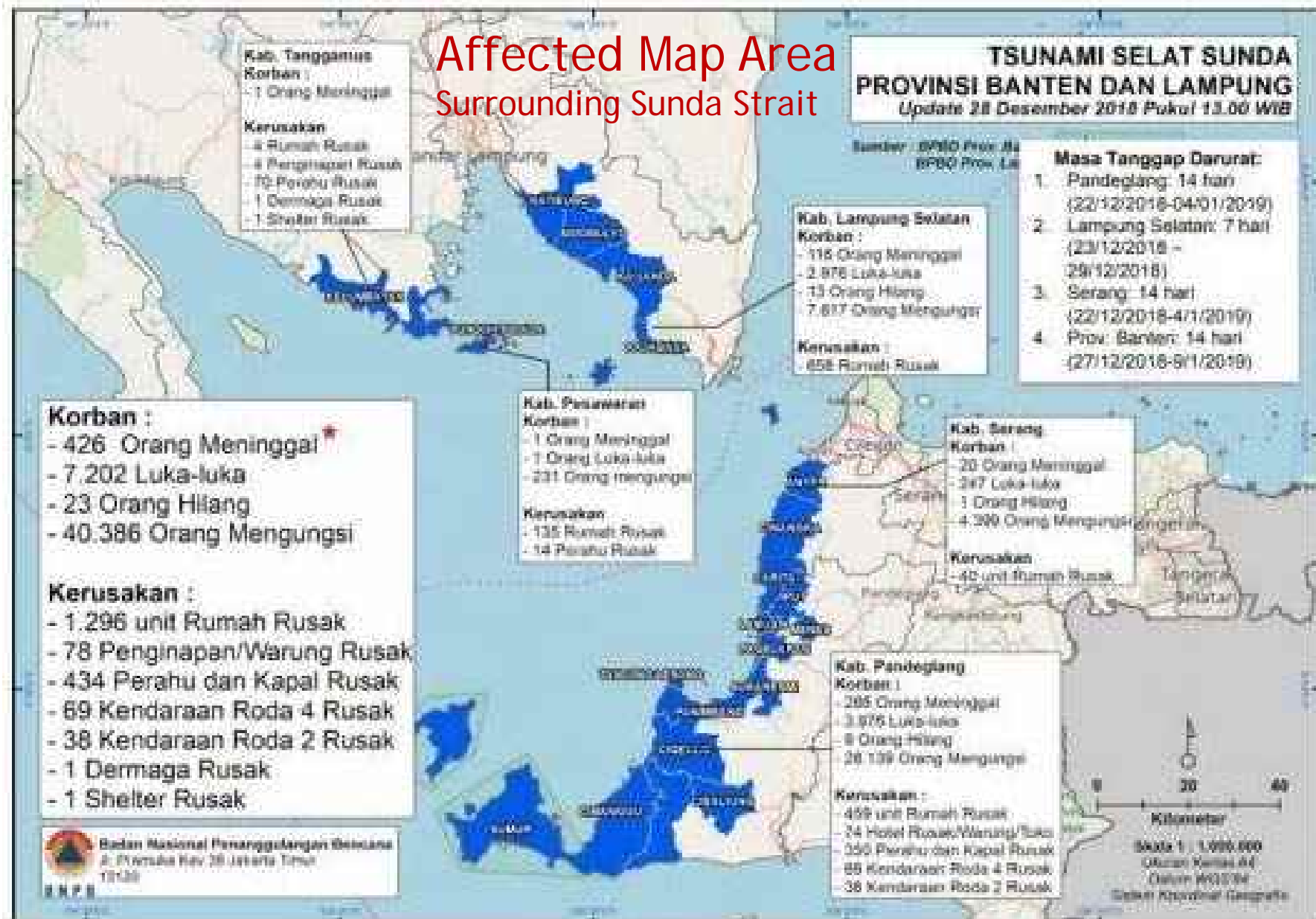
TOTAL MENGUNGGI
16.198 JIWA

KONDISI AKHIR

- Verifikasi rumah rusak oleh Tim PU, Perkim, TNI, Polri, pemerintah Camat & Desa selesai
- Pengungsi berangsur berkurang
- Mayoritas pengungsi yg rumah rusak
- Aktifitas warga berangsur normal
- Kebutuhan dasar pengungsi - Dinsos, BPBD, swasta dan bantuan

Sumber : BNPB (2012)

Affected Map Area Surrounding Sunda Strait



Research Collaboration paper

Survey Report

Field survey and evacuation behaviour during the 2018 Sunda Strait tsunami

Tomoyuki Takabatake , Tomoya Shibayama , Miguel Esteban, Hendra Achari, Nanda Nurisman, Mustarakh Gelfi, Trika Agnestasia Tarigan, Elsa Rizkiya Kencana, Muhammad Aldhiansyah Rifqi Fauzi, Satriyo Panalaran, Anisa Shafiyya Harnantaryi & Thit Oo Kyaw [... show less](#)

Received 18 Mar 2019, Accepted 12 Jul 2019, Published online 07 Aug 2019

 Download citation <https://doi.org/10.1080/21664250.2019.1647963>

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ABSTRACT

On the 22nd of December 2018 the shorelines of Sunda Strait, Indonesia, were hit by tsunami waves generated by the flank collapse of the Anak Krakatau volcano. The authors conducted a field survey of the affected areas in both Sumatra and Java islands to collect information on tsunami inundation and run-up heights, damage patterns at each coastal community, and the evacuation behaviour and tsunami awareness of the