

**Supplementary material for**

**Tsunami scenario triggered by submarine landslide offshore  
of northern Sumatra Island and its hazard assessment**

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**Supplementary information:**

In line with our objectives to evaluate the possibility of the offshore extension of submarine environment of a strike-slip fault could produce a significant tsunami, the low Factor of Safety (FS) value at eastern offshore of Aceh island as it is shown in Fig. 6b, may also be seen as a candidate of a submarine landslide location and evaluate its capability to produce a tsunami. The location of the hypothetical submarine landslide as described in Table

2 and shown in Fig. 6c, are shown below (addition to the scenarios 4 and 7 that already shown in Figs. 8 and 9):

- Submarine Landslide Source Location 1 (Scenario 1)

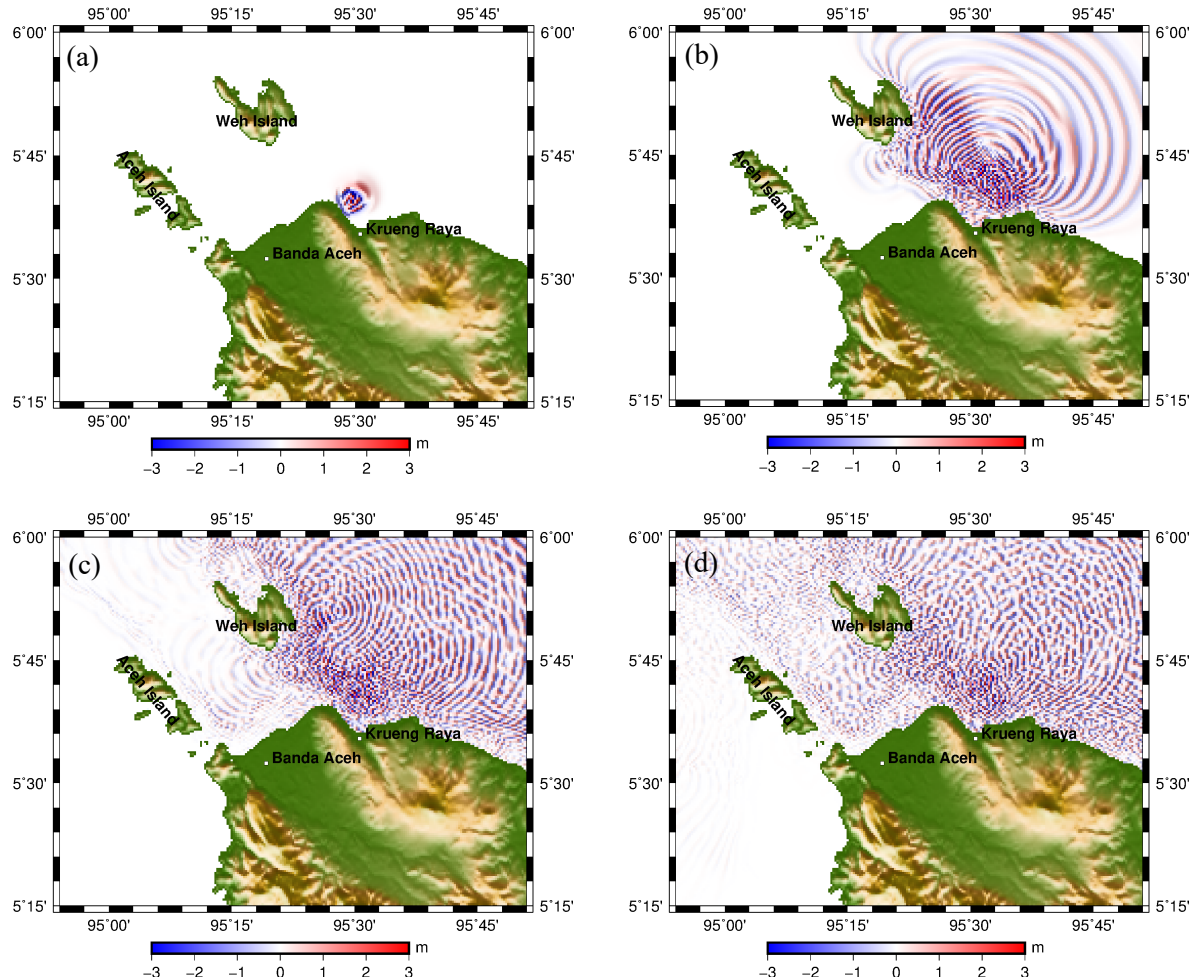


Figure S.1 Snapshot of tsunami wave from a submarine landslide source at location 1 of Fig. 6c, at propagation times: (a). 2 minutes, (b). 10 minutes, (c). 20 minutes and (d). 40 minutes.

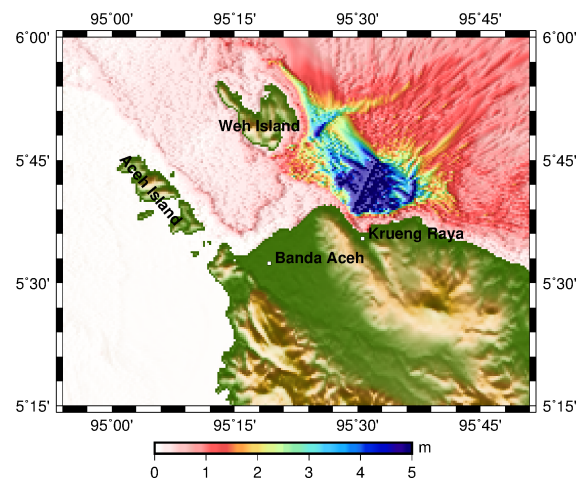


Figure S.2 Maximum tsunami wave amplitude from the corresponding source in Fig. S.1.

- Submarine Landslide Source Location 2 (Scenario 2)

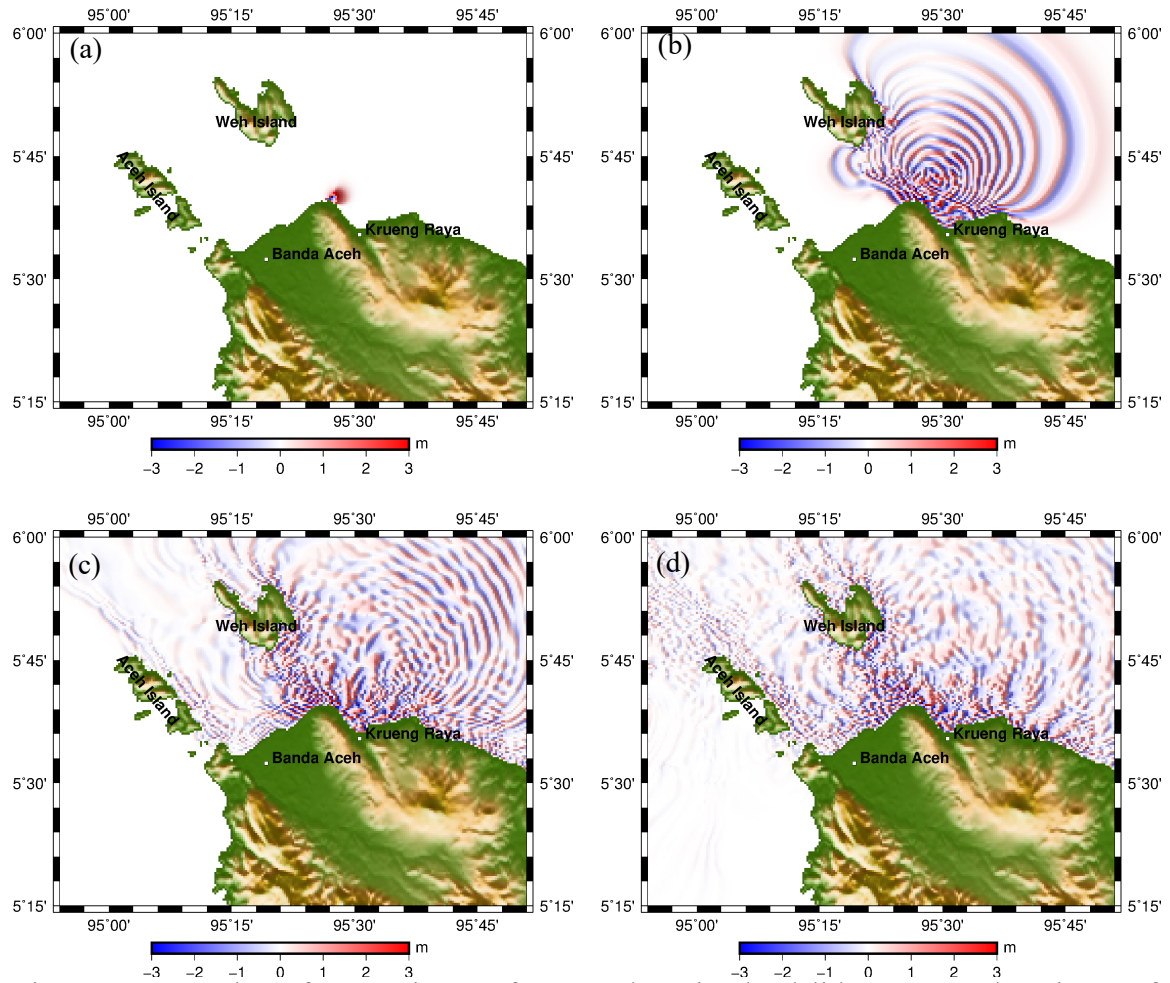


Figure S.3 Snapshot of tsunami wave from a submarine landslide source at location 2 of Fig. 6c, at propagation times: (a). 2 minutes, (b). 10 minutes, (c). 20 minutes and (d). 40 minutes.

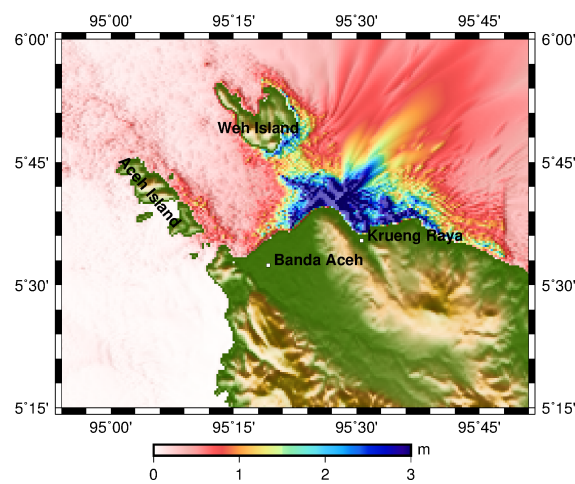


Figure S.4 Maximum tsunami wave amplitude from the corresponding source in Fig. S.3.

- Submarine Landslide Source Location 3 (Scenario 3)

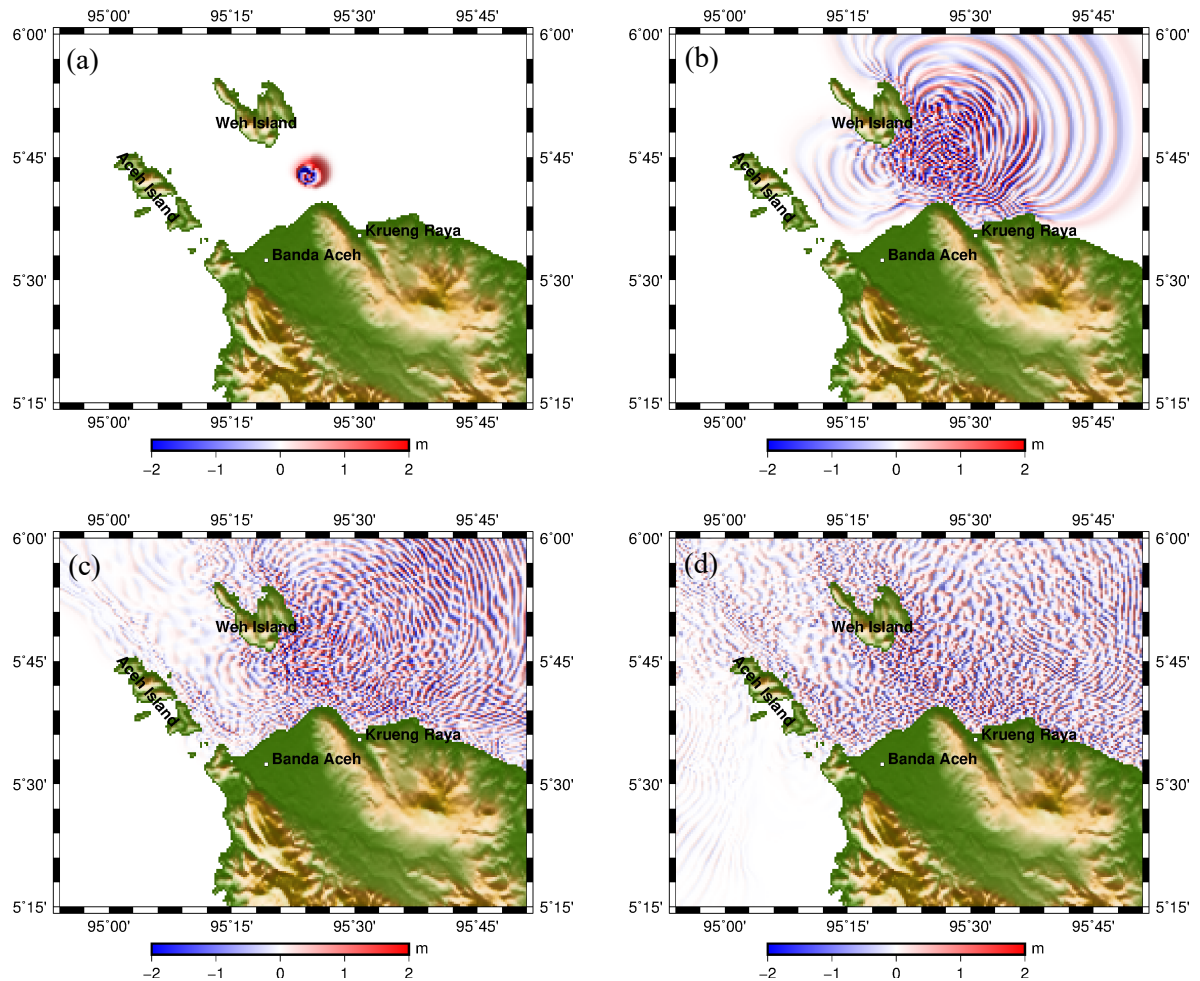


Figure S.5 Snapshot of tsunami wave from a submarine landslide source at location 3 of Fig. 6c, at propagation times: (a). 2 minutes, (b). 10 minutes, (c). 20 minutes and (d). 40 minutes.

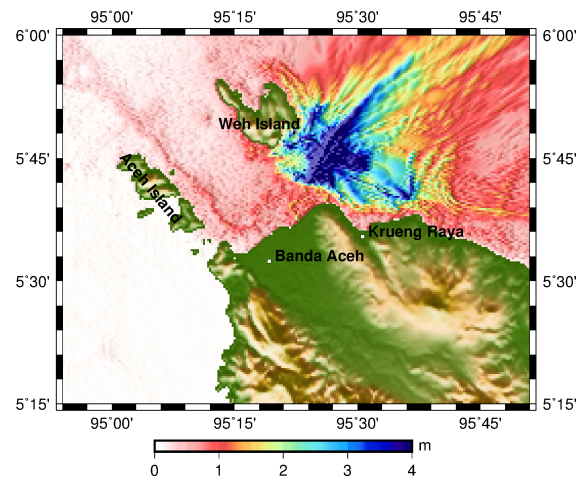


Figure S.6 Maximum tsunami wave amplitude from the corresponding source in Fig. S.5.



- Submarine Landslide Source Location 4 (Scenario 4)

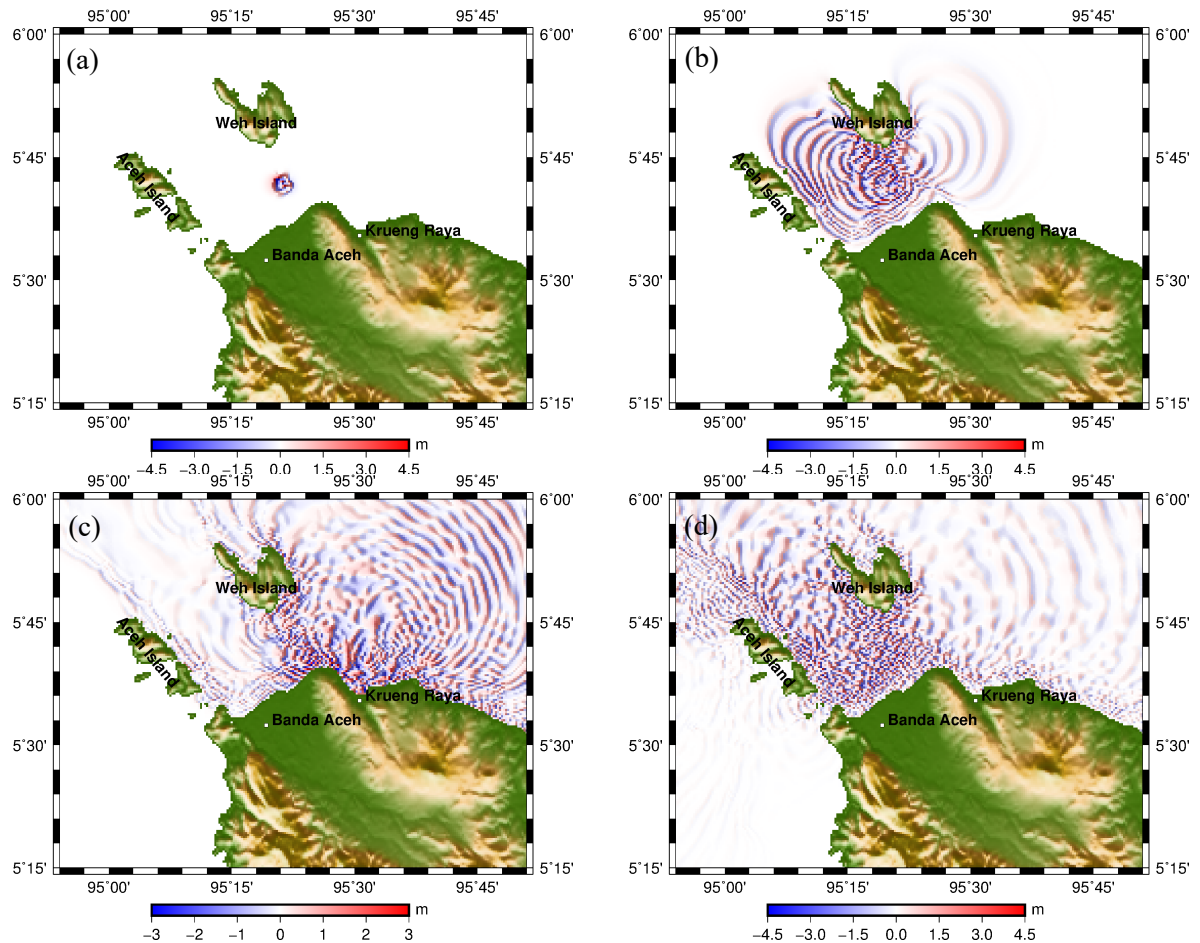


Figure S.7 Snapshot of tsunami wave from a submarine landslide source at location 4 of Fig. 6c, at propagation times: (a). 2 minutes, (b). 10 minutes, (c). 20 minutes and (d). 40 minutes.

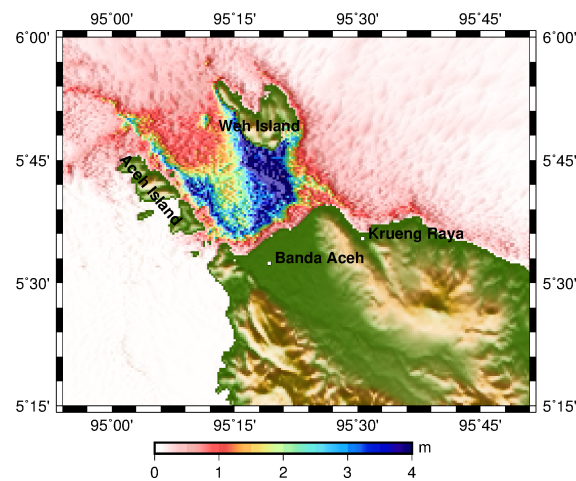


Figure S.8 Maximum tsunami wave amplitude from the corresponding source in Fig. S.7.

- Submarine Landslide Source Location 5 (Scenario 5)

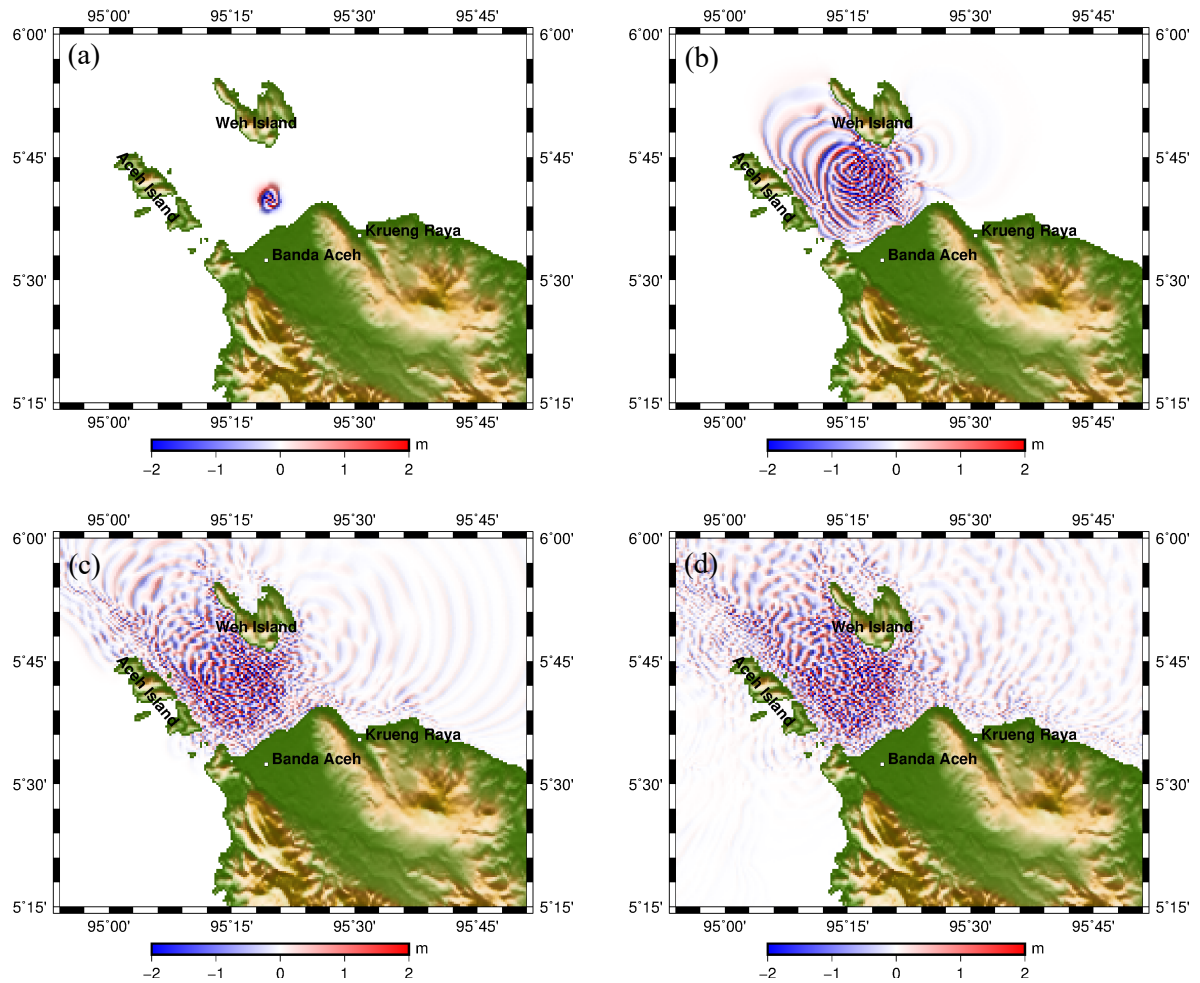


Figure S.9 Snapshot of tsunami wave from a submarine landslide source at location 5 of Fig. 6c, at propagation times: (a). 2 minutes, (b). 10 minutes, (c). 20 minutes and (d). 40 minutes.

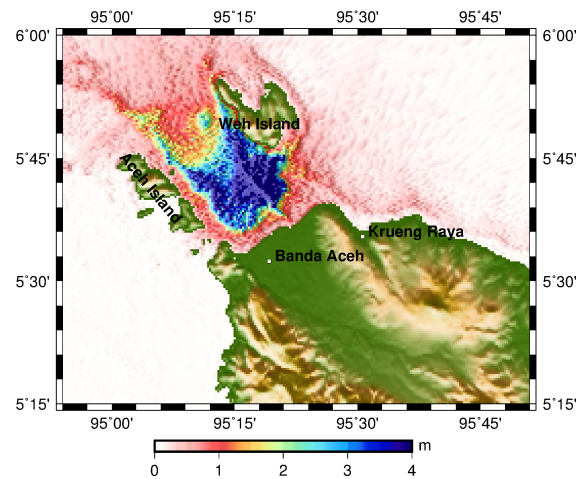


Figure S.10 Maximum tsunami wave amplitude from the corresponding source in Fig. S.9.

- Submarine Landslide Source Location 6 (Scenario 6)

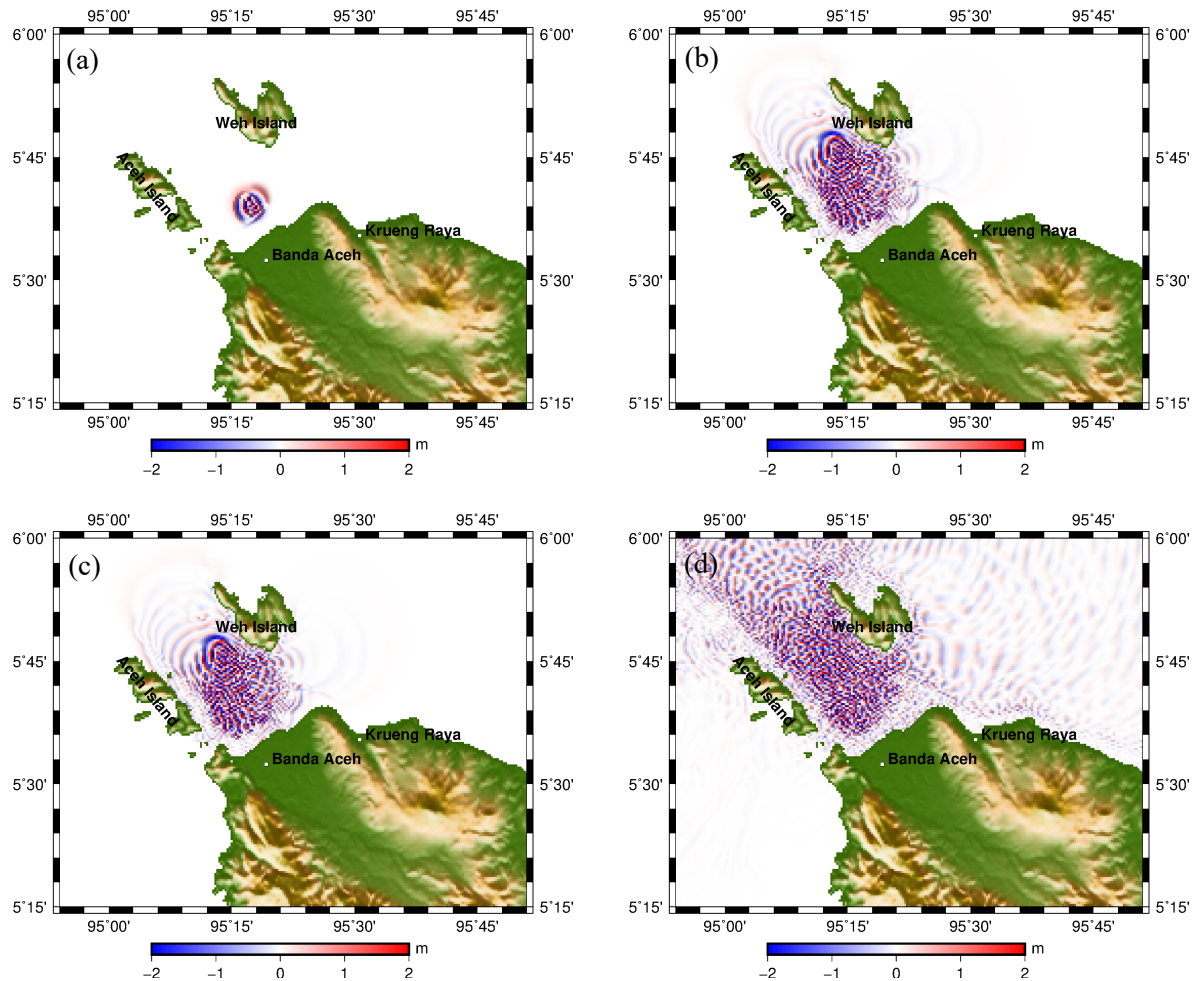


Figure S.11 Snapshot of tsunami wave from a submarine landslide source at location 6 of Fig. 6c, at propagation times: (a). 2 minutes, (b). 10 minutes, (c). 20 minutes and (d). 40 minutes.

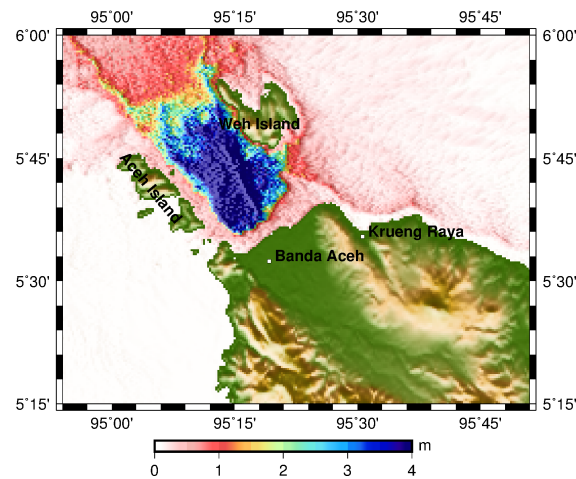


Figure S.12 Maximum tsunami wave amplitude from the corresponding source in Fig. S.11.

- Submarine Landslide Source Location 7 (Scenario 7)

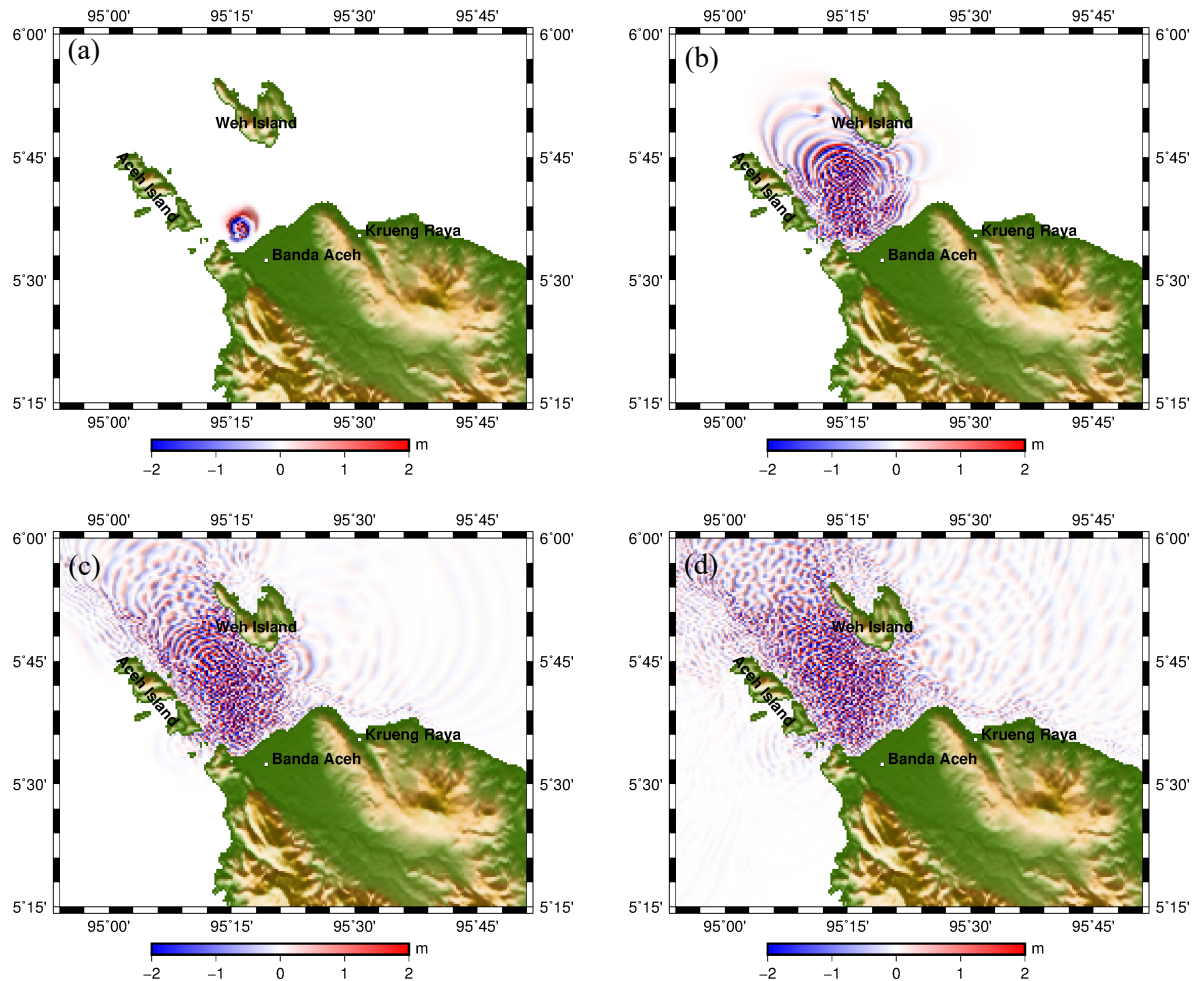


Figure S.13 Snapshot of tsunami wave from a submarine landslide source at location 7 of Fig. 6c, at propagation times: (a). 2 minutes, (b). 10 minutes, (c). 20 minutes and (d). 40 minutes.

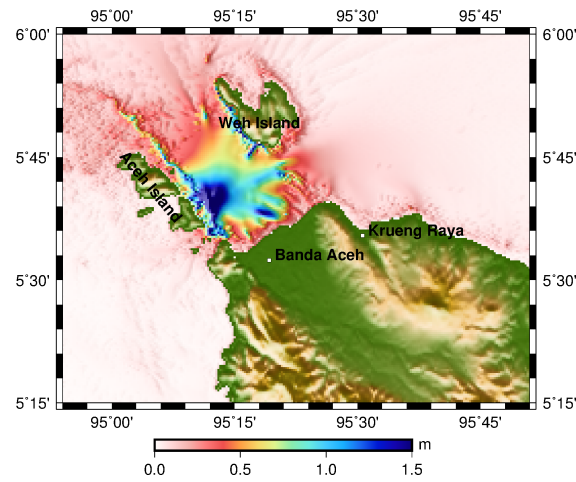


Figure S.14 Maximum tsunami wave amplitude from the corresponding source in Fig. S.13.



- Submarine Landslide Source Location 8 (Scenario 8)

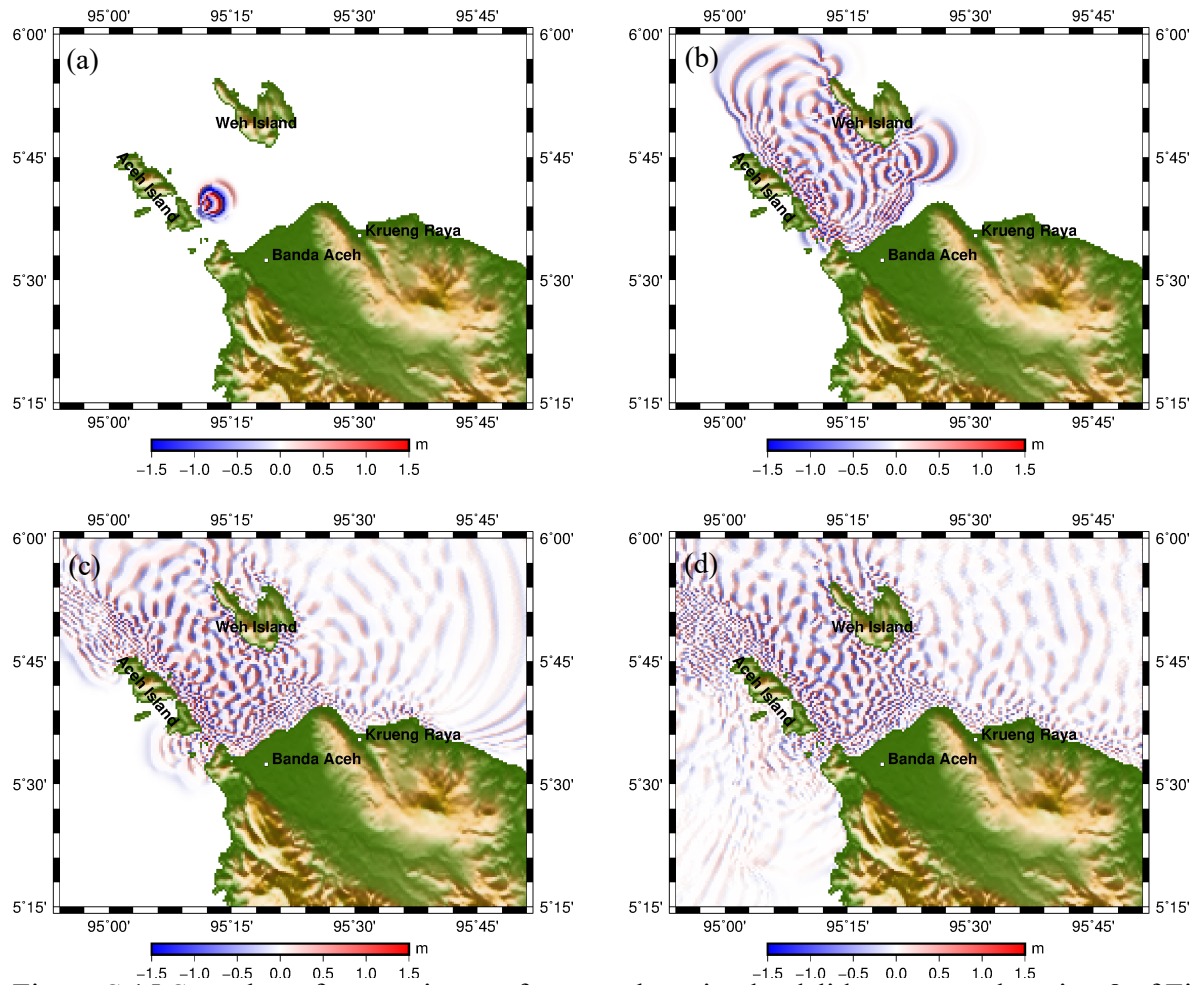


Figure S.15 Snapshot of tsunami wave from a submarine landslide source at location 8 of Fig. 3.6c, at propagation times: (a). 2 minutes, (b). 10 minutes, (c). 20 minutes and (d). 40 minutes.

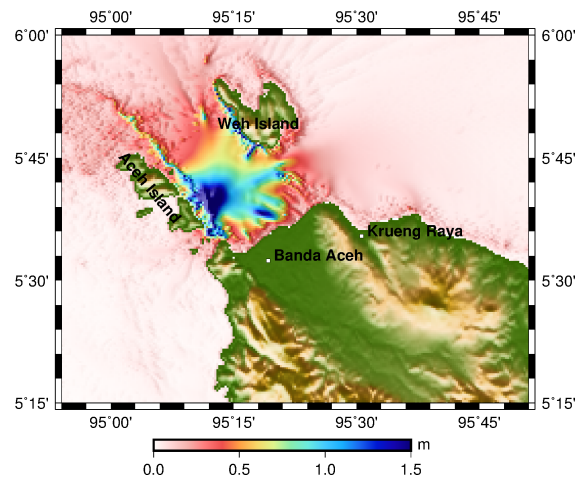


Figure S.16 Maximum tsunami wave amplitude from the corresponding source in Fig. S.15.