

Quick report of 2021 Cyclone Seroja disaster in Timor Leste

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Capital Dili and several regions of East Timor and the Eastern Indonesia are now undergoing countless losses as they were hit by the deadly tropical cyclone Seroja. This anomalous weather caused the torrential downpour and strong wind led to the occurrence of flash flood and several significant landslides which in turned have taken more than 100 lives (i.e., 27 people in East Timor) and dozens are still missing in these two countries.

Based on the local report from Maria, the intense precipitation associated with strong wind onset at midnight, 4 April 2021, increased its intensity drastically toward dawn, 5 AM local time and incessantly pouring until nightfall in the Capital Dili, Manatuto and central regions of East Timor. Due to its topography which is bounded by mountain range at southern tip and further flattening out toward the ocean on the Northern part, all of the main rivers and their branches across the Capital Dili were fed by this extreme rain from various small gullies and valleys northward.

Consequently, it damaged the major and minor infrastructures such as houses, roads, bridges, water dams and pipes and was able to paralyze all the electricity feeders and cables along the mentioned rivers, on the floodplain and mostly lowland in the agglomerated areas.

In addition, the inundation was likely to occur as a result of excessive runoff by existing rivers prior to the great thickening up channel sediments, obstruction of plants detritus to the flow direction, riverbank erosion and the gradual entry of floods into the ocean. Main and minor rivers were flooded and some cases resulted from a river dam being barricaded by a bridge filled with woods and gravels flowing down along the river. The upstream of the river overflow by such a bridge dam effect. These woods and gravels were flowing down along the rivers. These were supplied from the bare mountains that were cut for getting natural energy. This bare mountains should be one of the significant geological issues toward the rain disasters.

The latter aspect was probably resulted by higher ocean waves at coastal zones which directly correlated to the clockwise rotation and East-west trending of this cyclone. This rotation eventually could provoke stronger winds and rain from the North coast being making high tide along the coastal region.

On the other side, this extreme weather could trigger mass movement such as debris flow, rock fall, and creep and so on due to the greater water percolation into the impermeable soil layer and the steeper slopes as well.

We hope to be better and back soon to beautiful Timor Leste

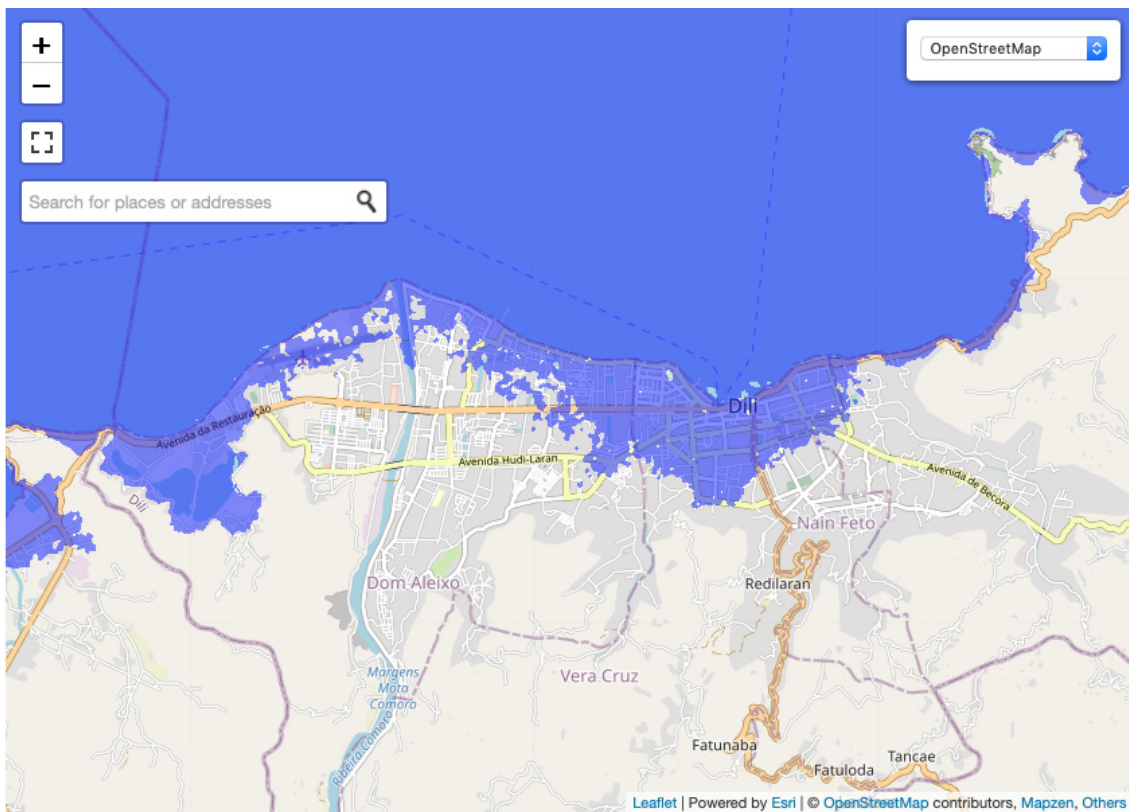
References

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Flood area shown in <https://www.floodmap.net/?gi=1645457>



Damaged bridge by flood in Dili (photographer, Atsushi Takahashi, Project Coordinator of Project for Capacity Development for Faculty of Engineering Science and Technology, the National University of Timor-Lorosa's Phase 2 (CADEFEST Phase 2))