



Regional Data for Treaty Monitoring

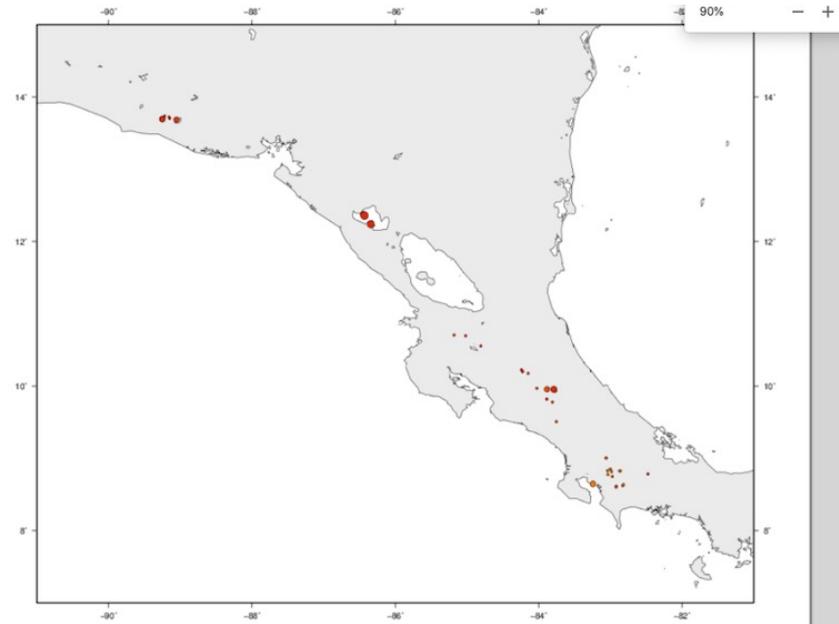
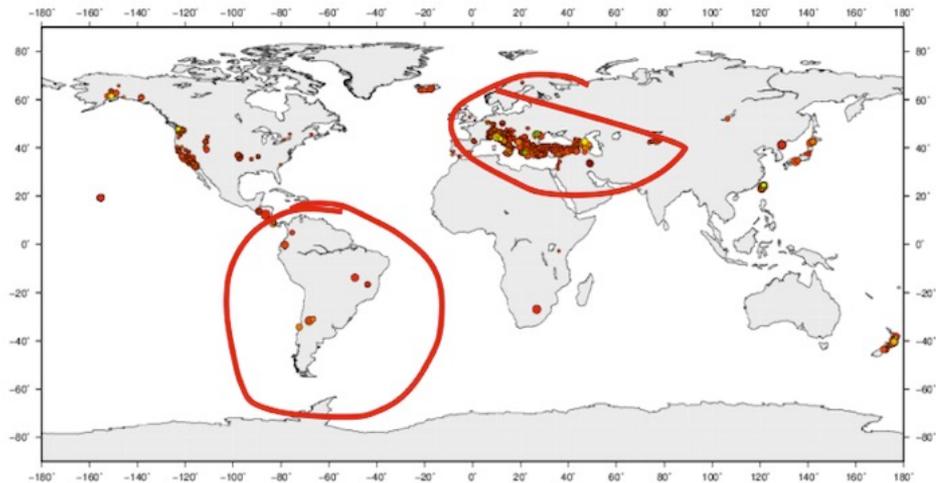
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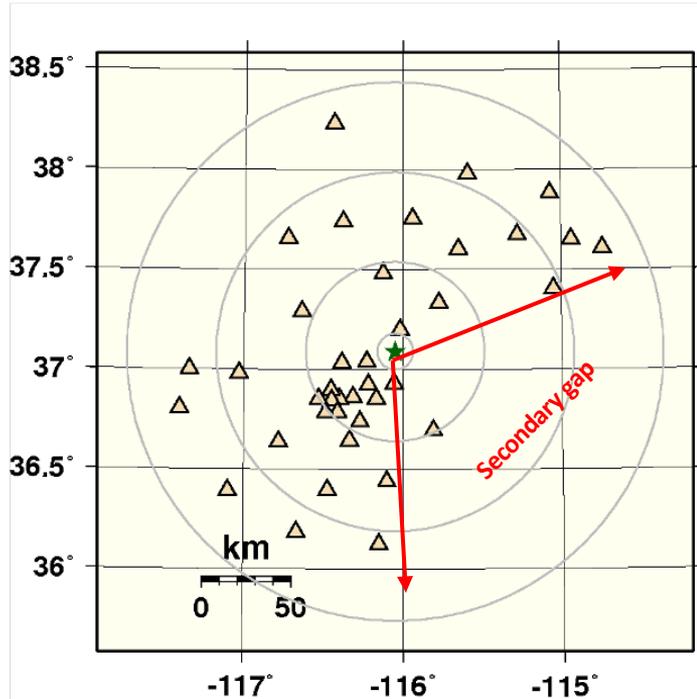


Event Map: Prime hypocentres



- **Ground Truth (GTx)**
 - **An event hypocentre with an accuracy known at a high (95%) confidence level; x stands for the GT accuracy**
- **GT events are needed to develop, test and validate**
 - **Travel-time predictions from 3D velocity models**
 - **New association and location algorithms**
- **Since 2008 the ISC hosts and maintains the GTDB**

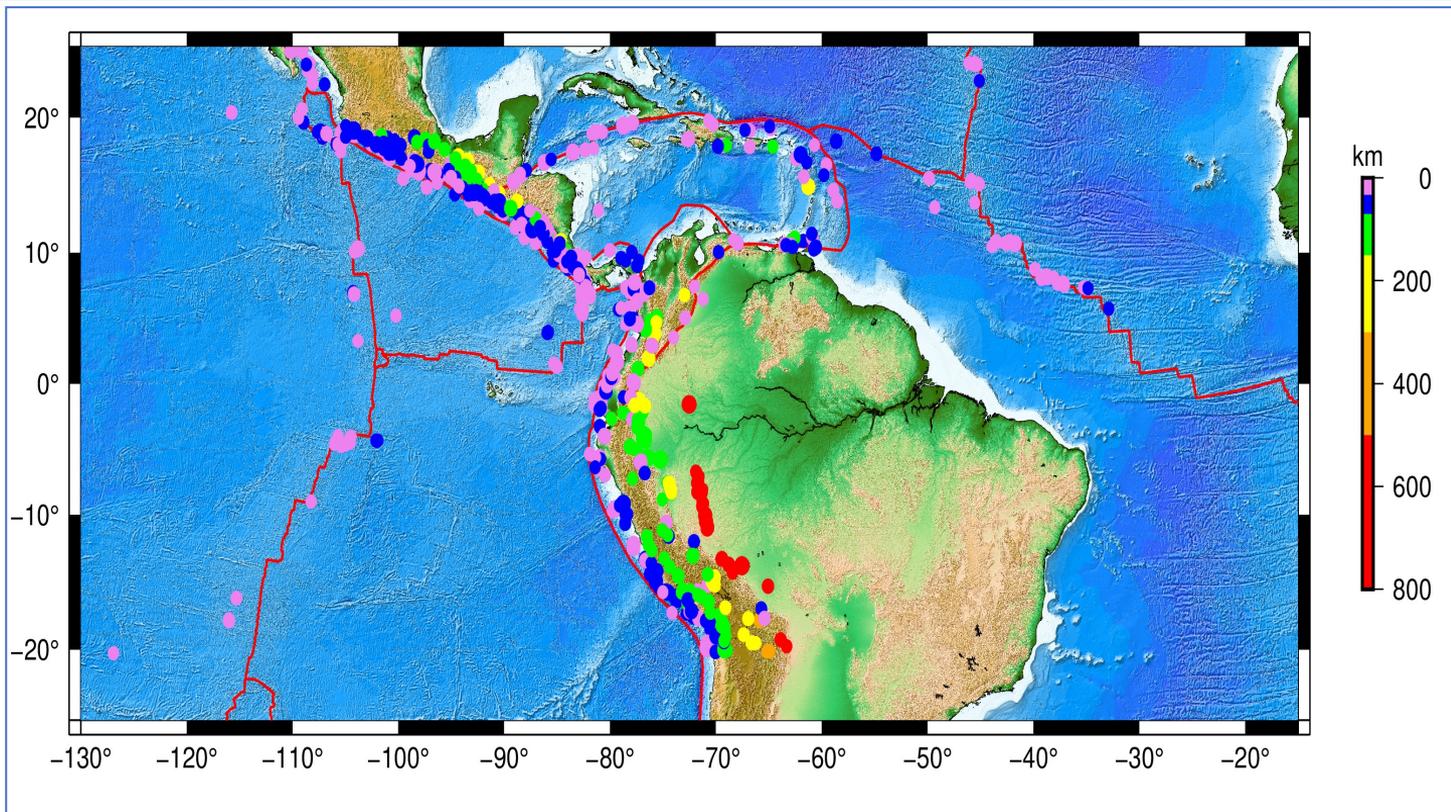
(Bondar 2015, RSTT workshop, San Jose, Costa Rica)



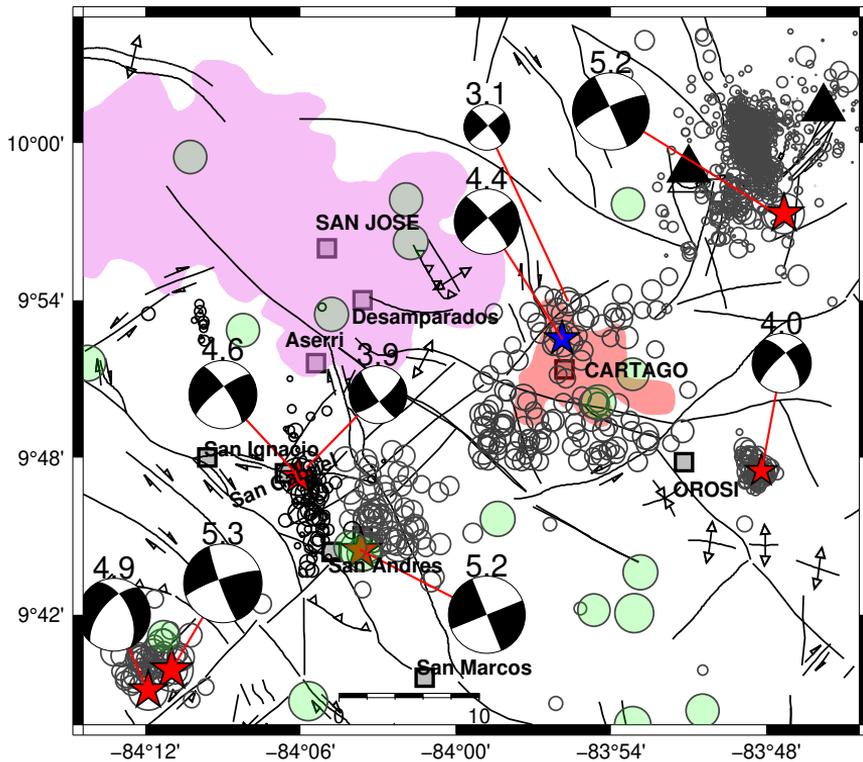
Bondár and McLaughlin (2009):

- stations within 150 km
- nsta ≥ 1 within 10 km
- sgap $\leq 160^\circ$

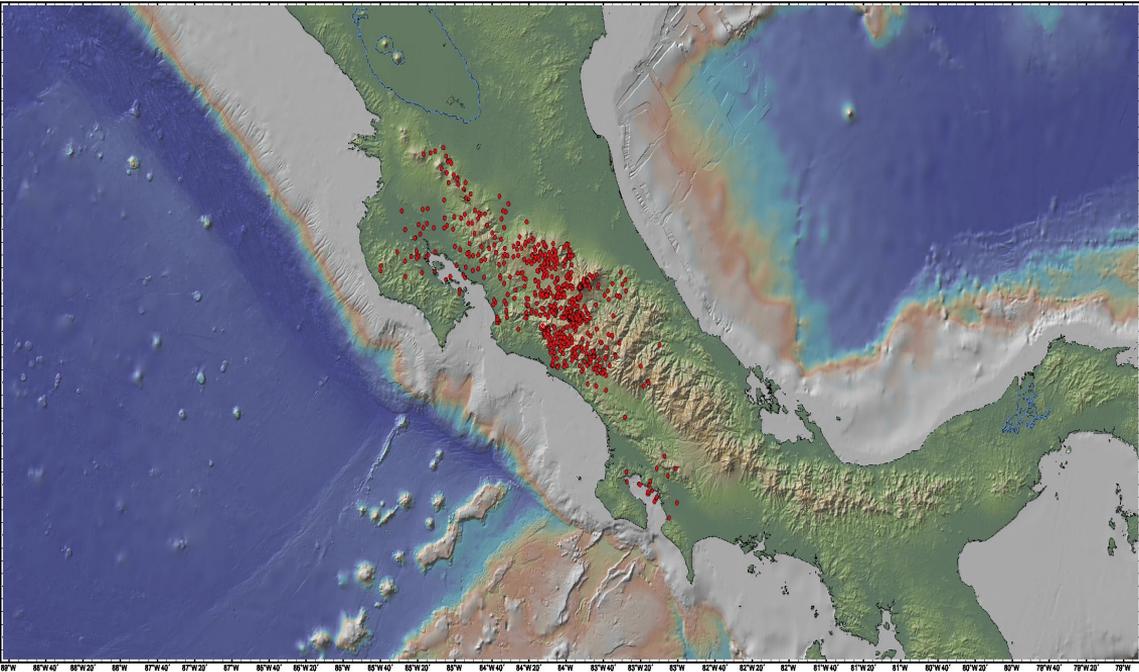
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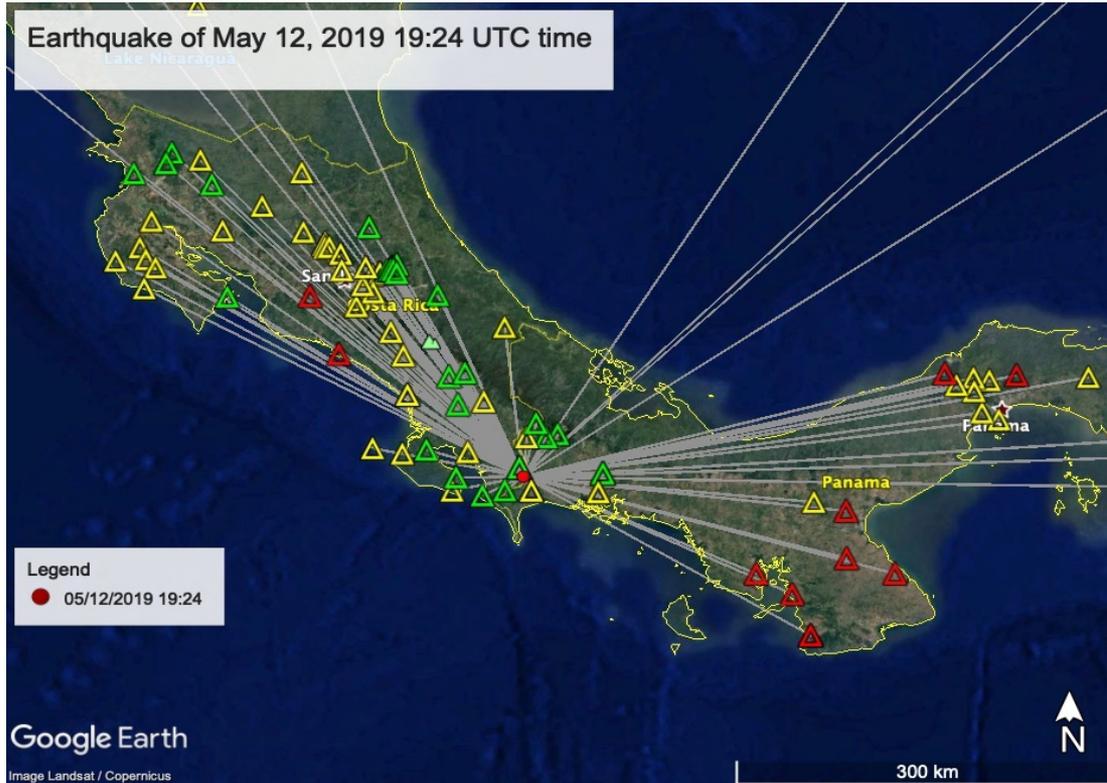
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Selection of possible candidates to GT5.0 seismic events from the OVSICORI-UNA seismic catalog from 2010 until 2019. The events had been located using GENLOC program. The selection criteria were: Minimum number of stations 20, Gap less than 110° , minimum number stations 15, number minimum of stations within 30 km greater than or equal one. In total 707 events were selected.



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The CTBTO and NDC-CR had played an important role to build capacity. Those capacity were used to characterized acoustic local source and improve earthquake location.



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Develop good relationship and collaborate over time with other NDCs members will allow to share data and contribute with regional data for treaty monitoring and validation of velocity models used for global earthquake location by CTBTO.

Communication between sub-regions help on sharing data and experiences.

Sharing data will increase the amount of GT5 events and help with IMS bulletins

