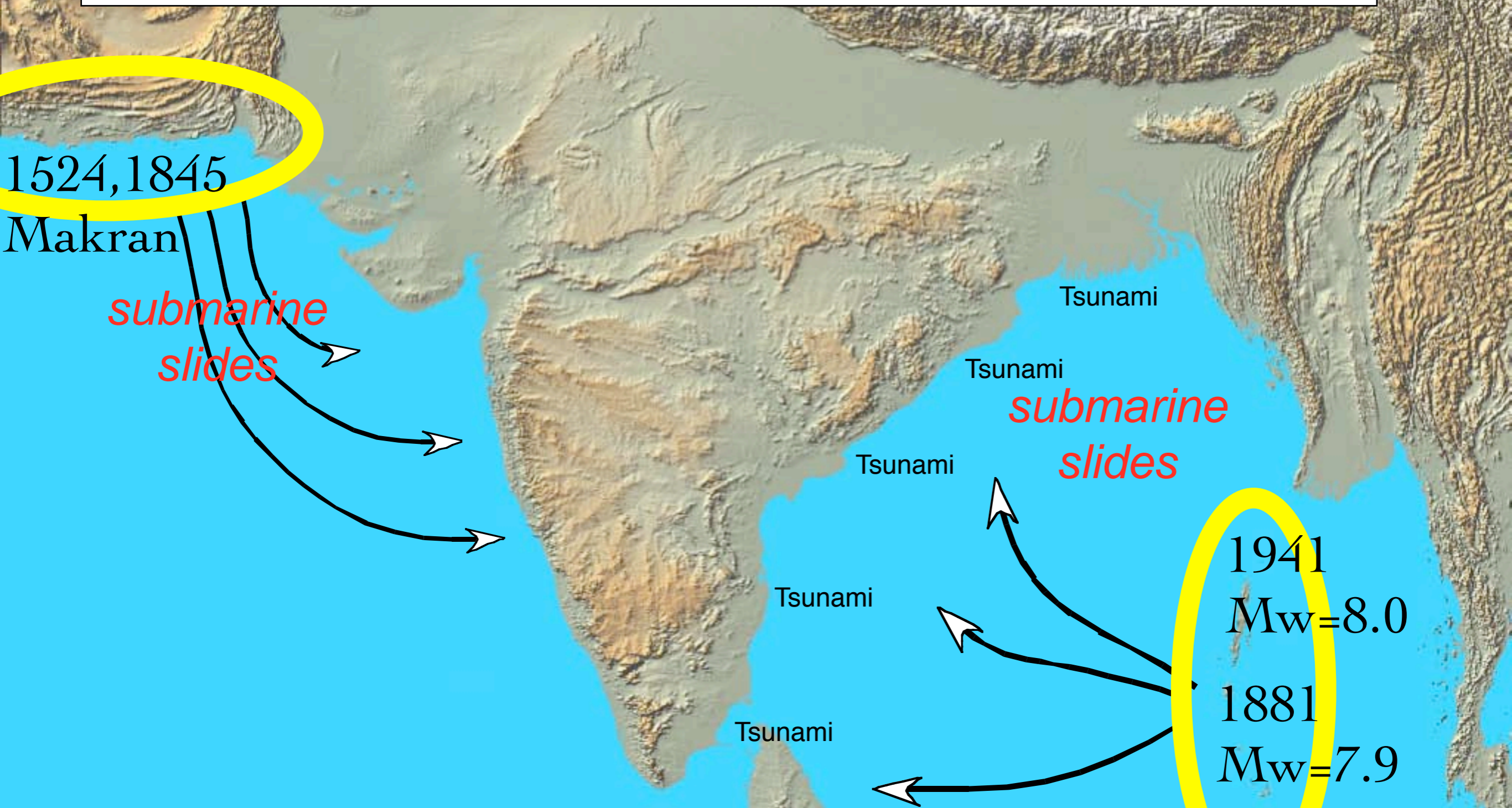


Quantifying tsunami risk

using SRTM digital elevation data and scenario earthquakes

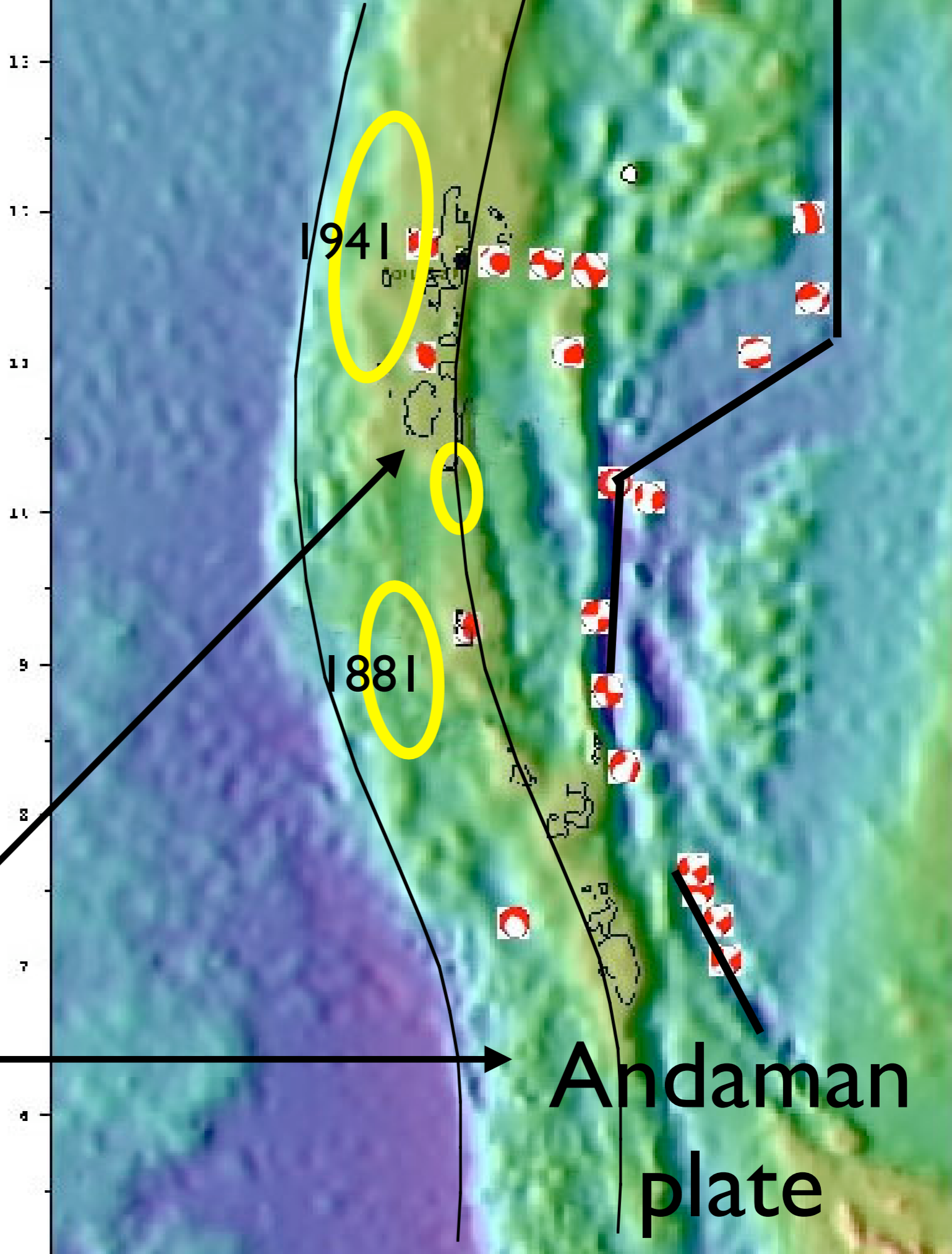
Partial text of a NASA sponsored talk given in Bangalore June 2004



W. coasts of
Andaman
&
Nicobar Islands
repeatedly uplift by
tsunamigenic
earthquakes

Next slide shows
SRTM evidence
for incremental uplift of
North Sentinel Island

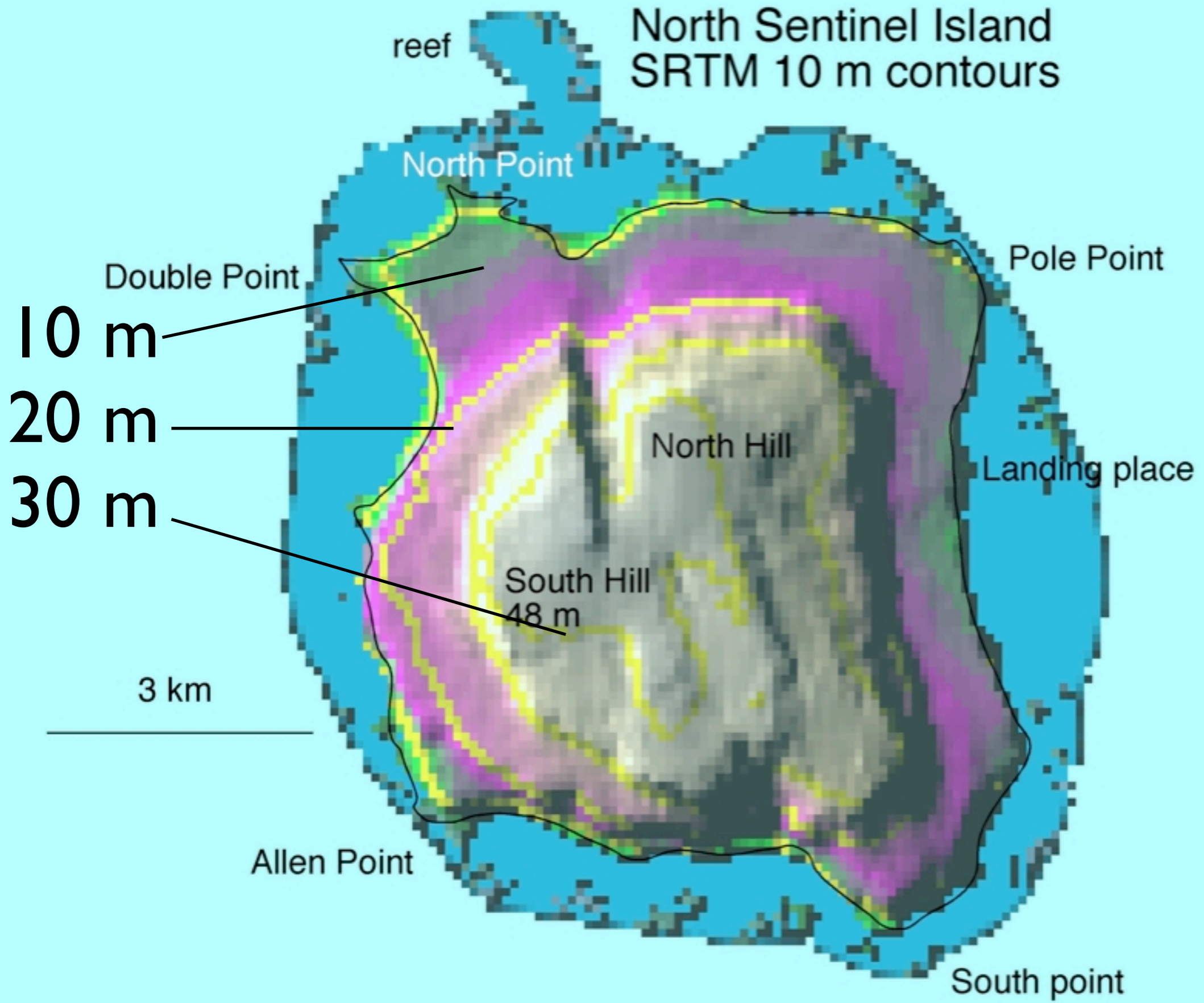
zone of coseismic uplift



Andaman
plate

Marine terraces suggest a history of great earthquakes

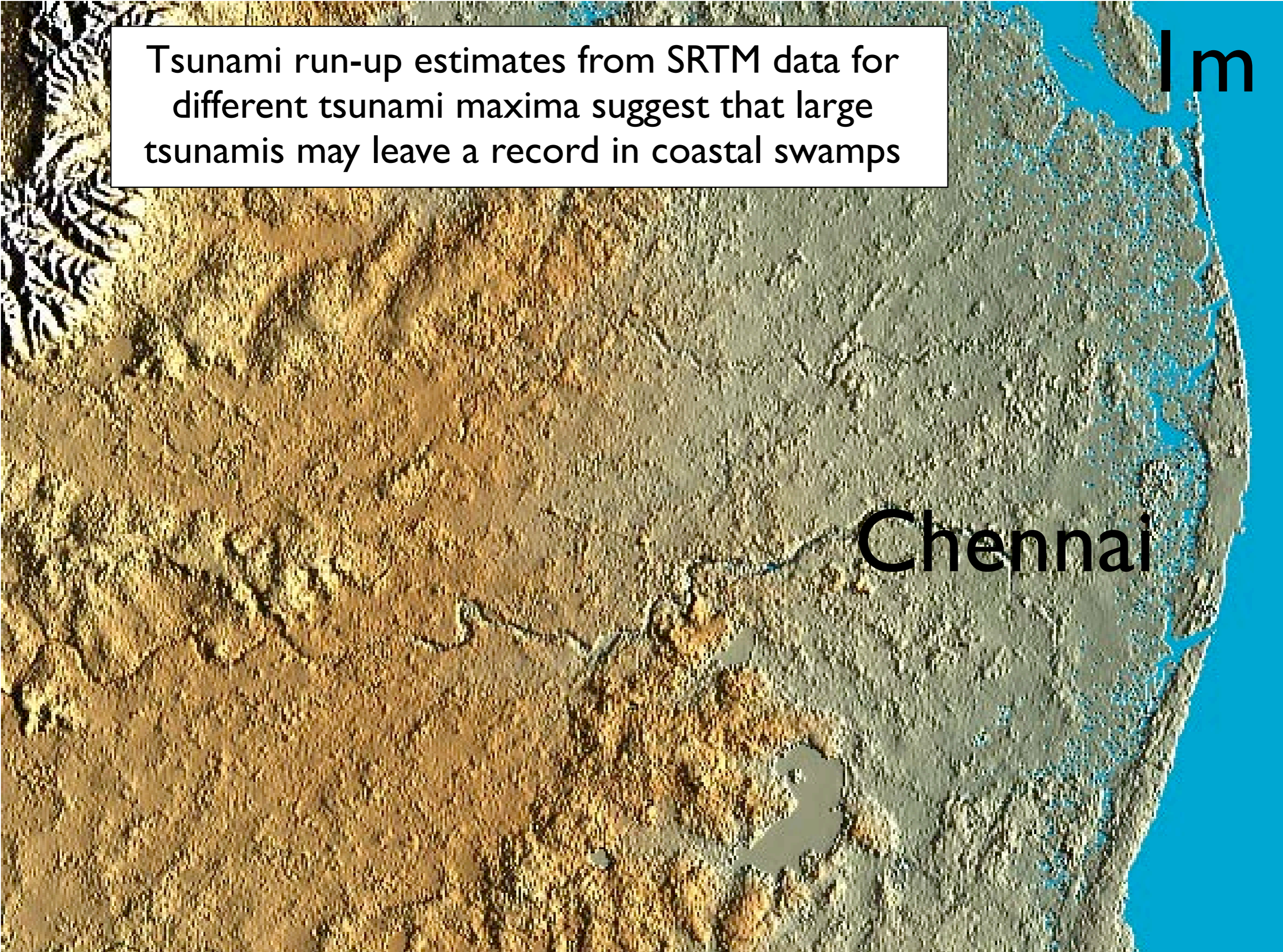
North Sentinel Island
SRTM 10 m contours



Tsunami run-up estimates from SRTM data for different tsunami maxima suggest that large tsunamis may leave a record in coastal swamps

1 m

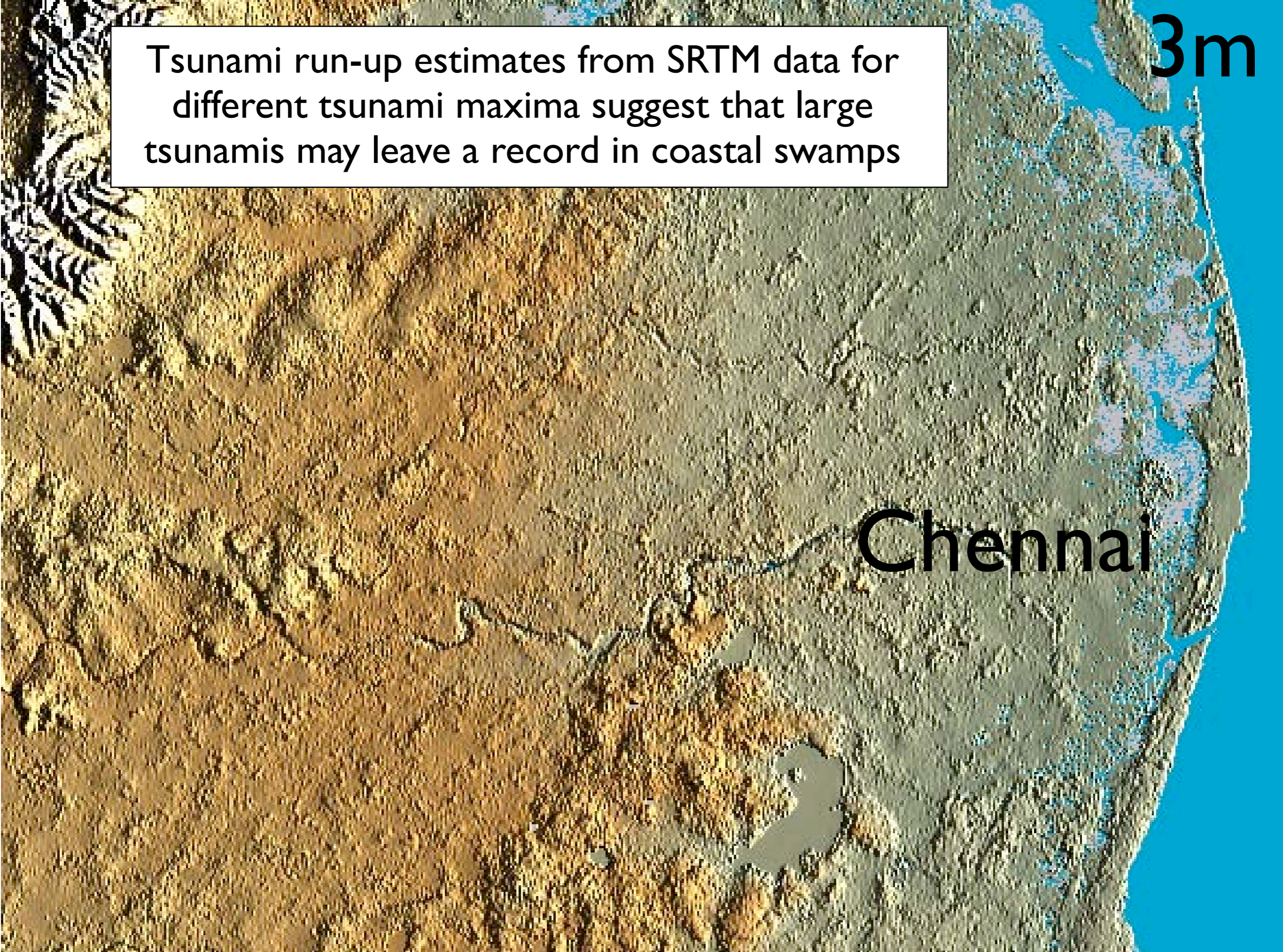
Chennai



Tsunami run-up estimates from SRTM data for different tsunami maxima suggest that large tsunamis may leave a record in coastal swamps

3m

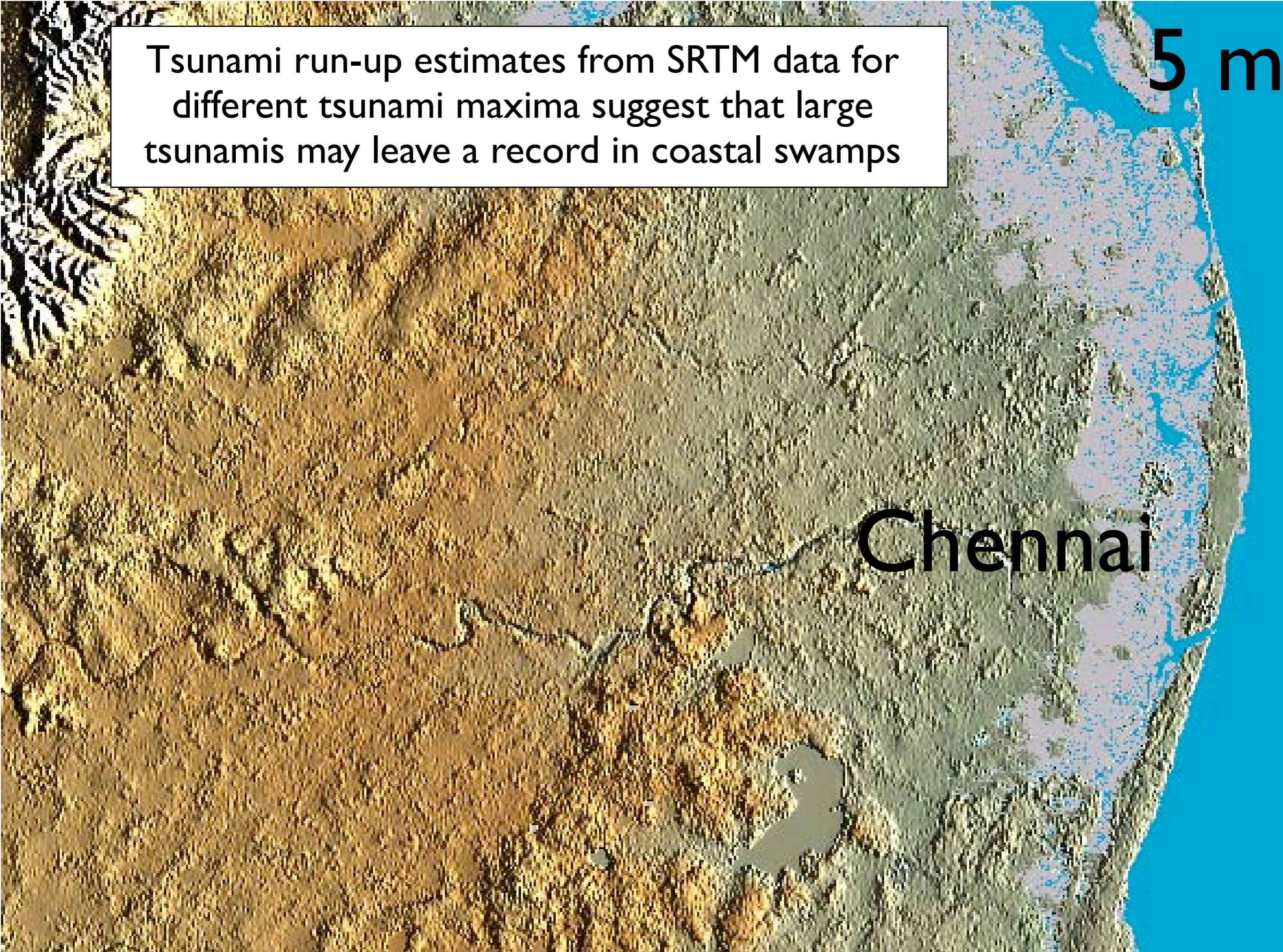
Chennai



Tsunami run-up estimates from SRTM data for different tsunami maxima suggest that large tsunamis may leave a record in coastal swamps

5 m

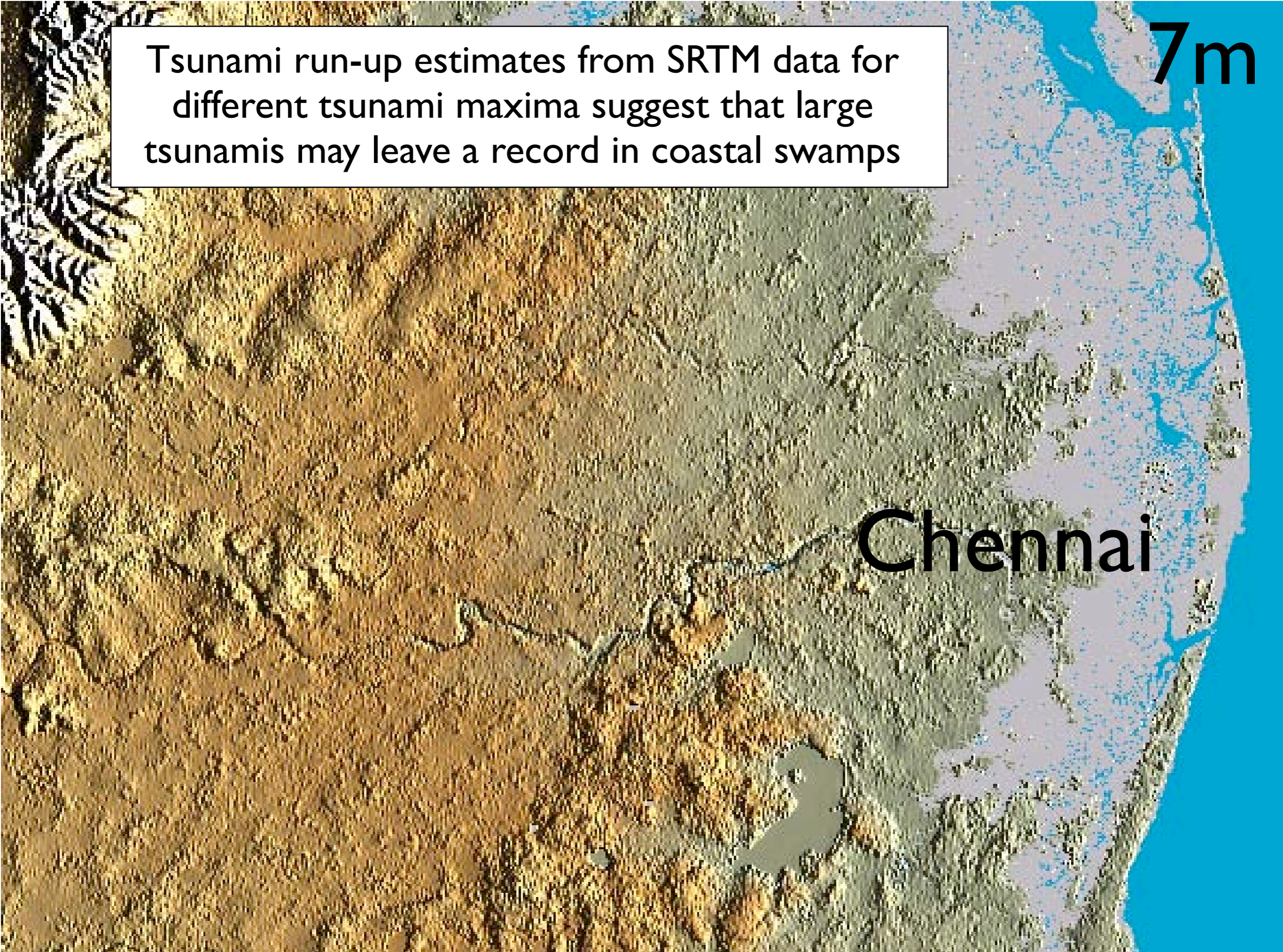
Chennai



Tsunami run-up estimates from SRTM data for different tsunami maxima suggest that large tsunamis may leave a record in coastal swamps

7m

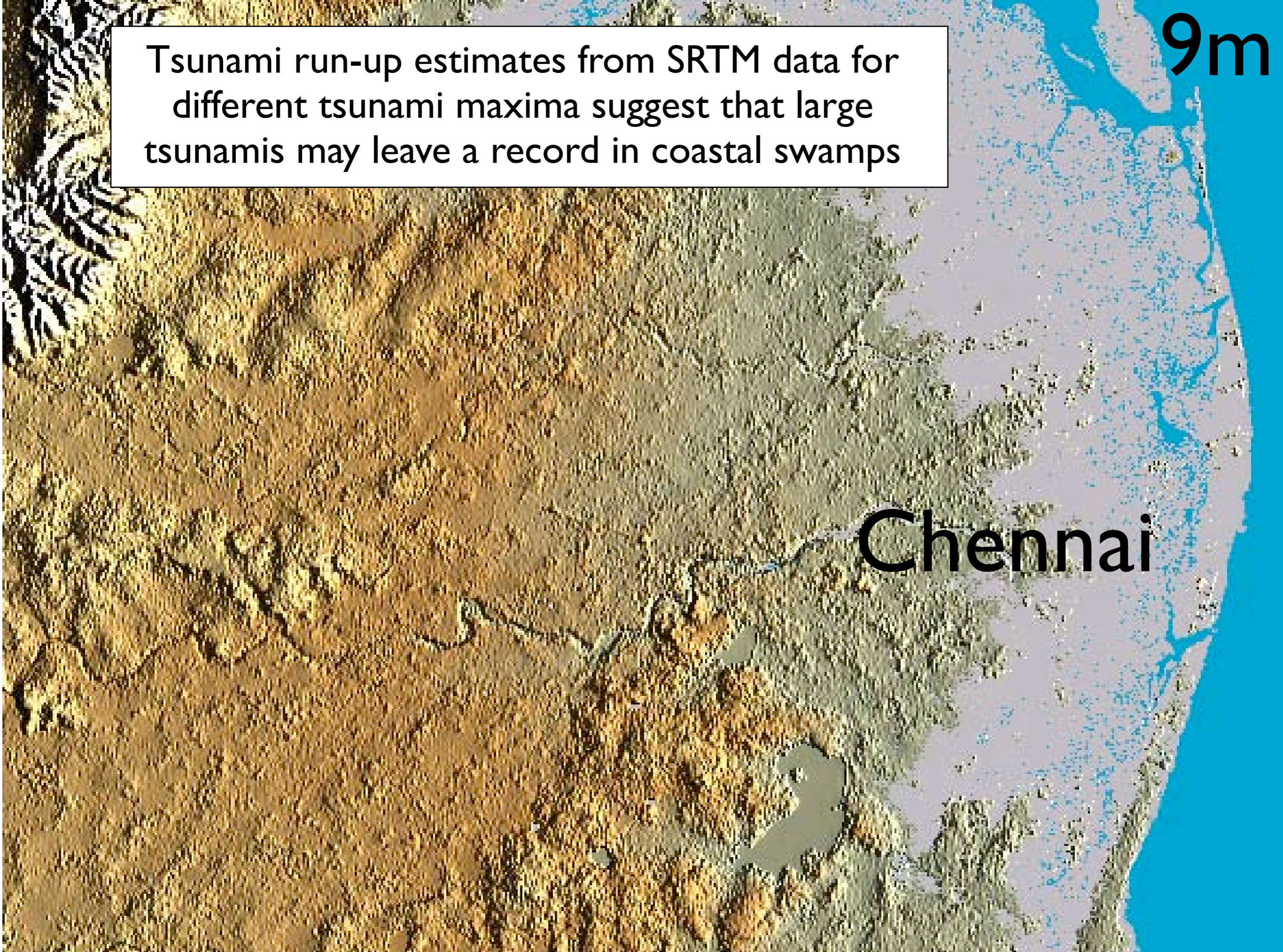
Chennai



Tsunami run-up estimates from SRTM data for different tsunami maxima suggest that large tsunamis may leave a record in coastal swamps

9m

Chennai



Summary: Remote sensing India's earthquakes

1. Monitoring mechanics of earthquakes
2. Quantifying India's earthquake history
3. Quantifying tsunami risk
4. Predicting earthquakes not possible but identifying damage within minutes of an earthquake an important application.

