

4. Post-tsunami survey of inundation area

Photo 1: Limit of major run-up (in Fig. 2)



Photo 2: Limit of minor run-up (in Fig. 2)



Possible factors to decrease run-up distance

- Seaward migration of the coastline (~ 1 km since Jogan ages)
- Breakwaters and coastal forests
- Growth of the sand dunes due to the planting of coastal forests
- Sendai East Expressway (worked partly as breakwater)
- Irrigation channels parallel to the coast (Photo 1; border of major run-up by the 2011 event)

Possible factors to increase run-up distance

- Character of wave source (fault parameters)
- Coseismic subsidence (observed after the 2011 event^[2], same as the 869 event?)
- Roads and channels with shore-normal angle (decrease surface friction)
- Less vegetation during winter season (Jogan event had took place during summer)