## **SATREPS**

# Lima TIME Tsunami Inundation Mapping Efforts

# Shunichi KOSHIMURA Tohoku University



JST/JICA SCIENCE AND TECHNOLOGY RESEARCH PARTNERSHIP FOR SUSTAINABLE DEVELOPMENT ENHANCEMENT OF EARTHQUAKE AND TSUNAMI DISASTER MITIGATION TECHNOLOGY IN PERU 1
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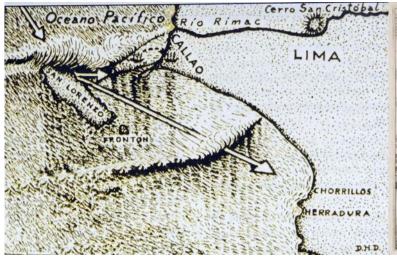




## The 1746 earthquake tsunami Callao, Lima

The 1746 earthquake tsunami attacking the coast of Callao, Lima

Port of Callao in 16th Century





© DHN



# Lima TIME Tsunami Inundation Mapping Efforts

- ✓ Understand tsunami
- ✓ Learn how to survive
- ✓ Increase awareness
- √ Take action



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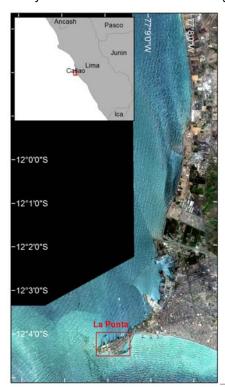
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# Lima TIME Tsunami Inundation Mapping Efforts Members

- Shunichi Koshimura (Tohoku University)
- Bruno Adriano & Erick Mas (Tohoku University, from CISMID/ UNI)
- Cesar Jimenez & Aste Evans Atilio (DHN)
- Miguel Estrada, Carlos Zavala & Rafael Salinas (CISMID/UNI)
- Alberto Bisbal (INDECI)

## Study area

Study area for the inundation modeling



#### La Punta district

- Inhabitants about 4,370.
- The buildings present are used as residence (771).
- Area = 0.75 km2



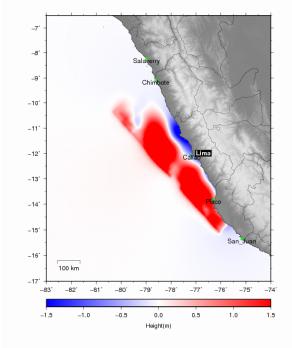
WorldView-2 satellite image, spatial resolution = 2 m



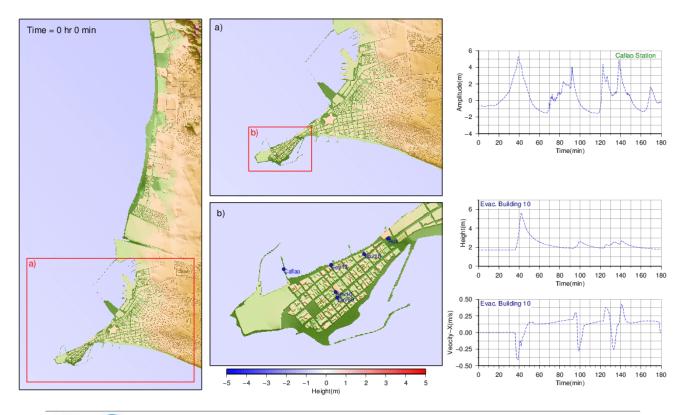
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### **TSUNAMI SOURCE (M8.9 earthquake)**

Source Model - Pulido 2011 1746 Peru Earthquake 0 min



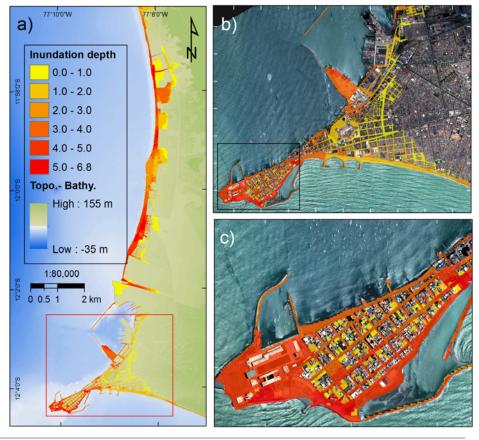
#### Tsunami risk assessment along the Peruvian coast . Mapping tsunami inundation in Callao





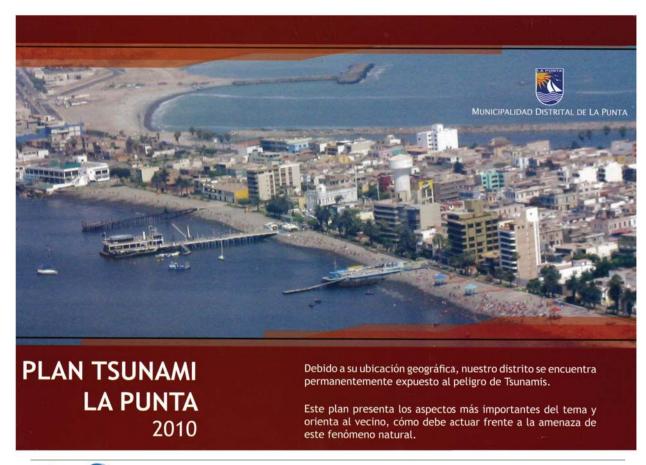
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#### **Inundation map**

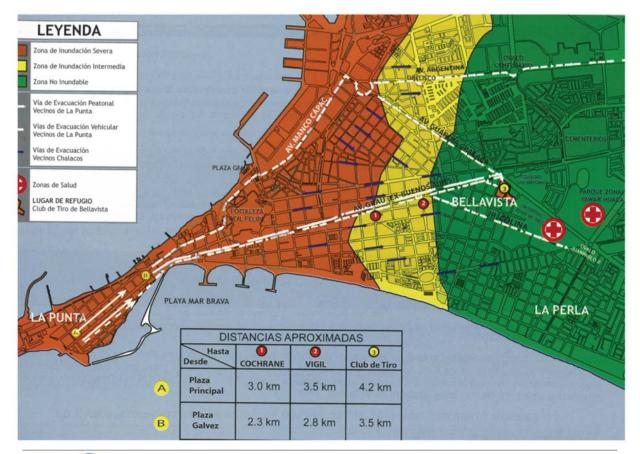








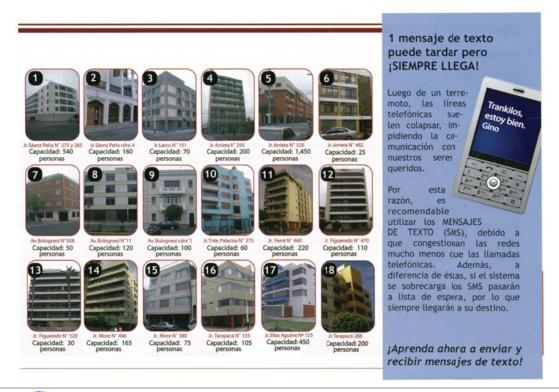






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## **Tsunami Evacuation Buildings**











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