



Enhancement of Earthquake and Tsunami Disaster Mitigation Technology in Peru

-A SATREPS project-

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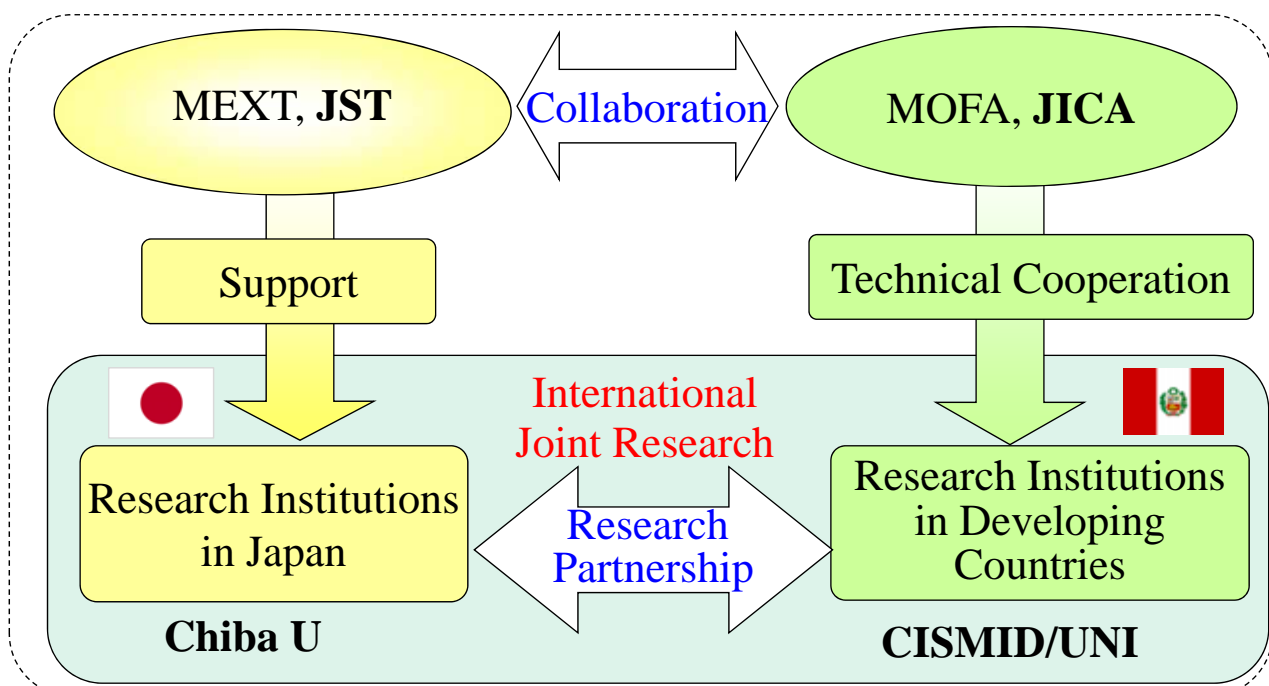
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Science and Technology Research Partnership for Sustainable Development : SATREPS

JST: Japan Science and Technology Agency

JICA: Japan International Cooperation Agency

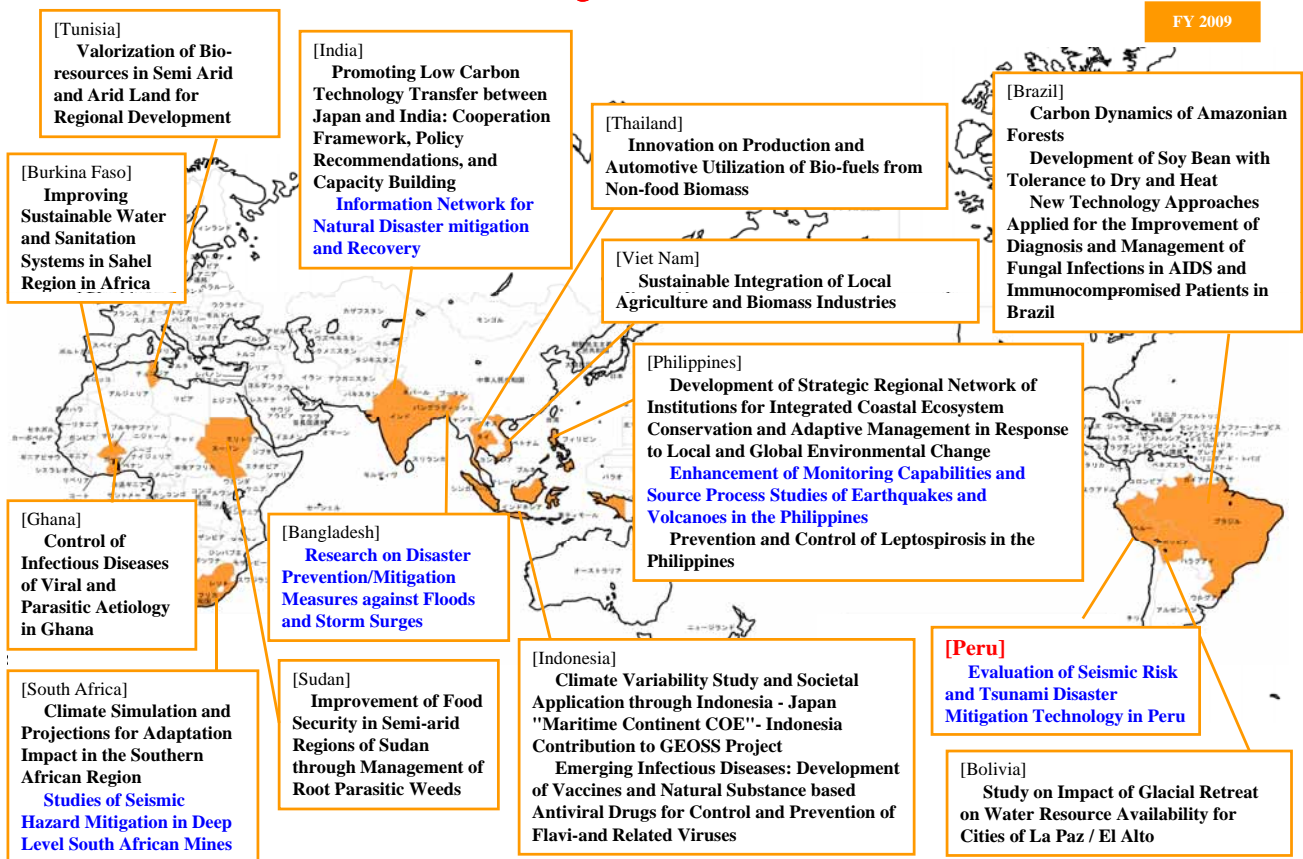
- 1) Environment and Energy,
- 2) Natural Disaster Prevention,
- 3) Infectious Diseases Control



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Selected Projects for FY2009

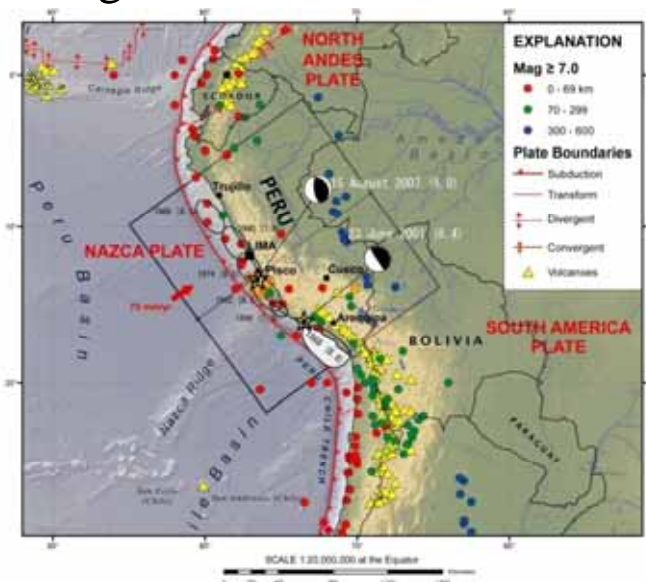
FY 2009



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Needs of EQ & T Disaster Mitigation in Peru (1)

- Peru locates in the **circum-Pacific seismic belt** with high seismic and tsunami risks.
- Large **inter-plate earthquakes** occurred in Atico (2001) and in Pisco (2007), and thus EQ & T disaster mitigation draws significant attention in Peru.



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Needs of EQ & T Disaster Mitigation in Peru (2)

- Peru has a long term **relationship with Japan** since 1873.
- **CISMID was established** within UNI in 1987 by the support of **Gov. of Japan**. CISMID became the **leading center** of earthquake engineering research **in South America**.
- CISMID has been in **collaboration** with Japanese research institutions (BRI, Chiba U etc.).



2008 APEC-Peru

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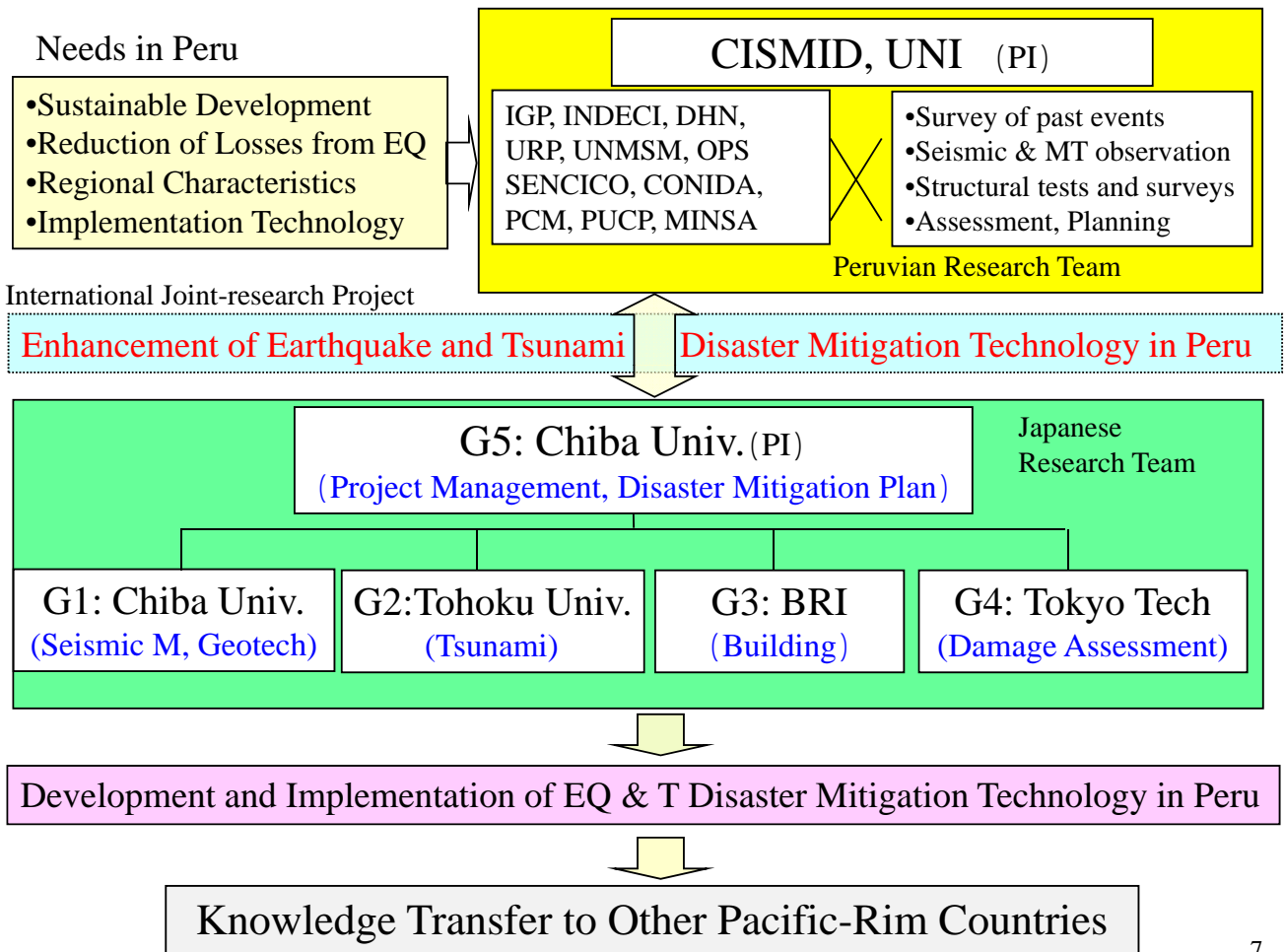
Significance of joint research between Peru and Japan

Both countries are located in a **similar seismic environment**, frequently hit by damaging EQ & T.

- **Contribution of Japanese S & T** to disaster mitigation in Peru
- **Merits to Japanese geoscience** since subduction-zone EQs are rare events
- **Tsunamis** caused by earthquakes in South America sometimes **hit Japan** (1960, 2010 Chile EQs). Thus the joint-research **contributes to international tele-tsunami study**.
- **Promotion of disaster mitigation** and **capacity building** through sharing the knowledge from the joint research

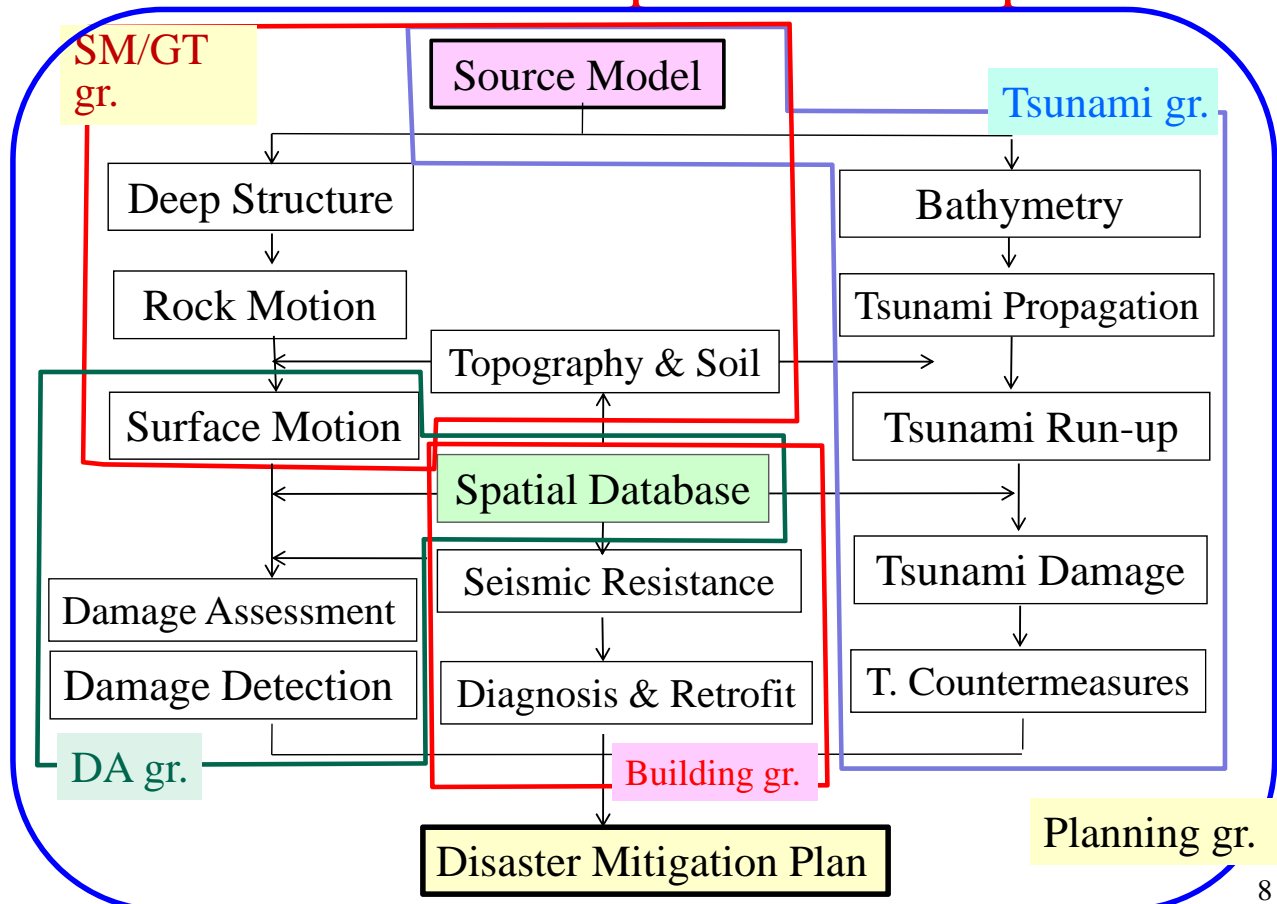


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Research Topics and Groups



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Research Plan

Project Management and Coordination

PI: F. Yamazaki (Chiba U), C. Zavala (CISMID/UNI)

- Project Management, International & domestic coordination
- Public relations, Information dissemination
- International workshops, Symposia

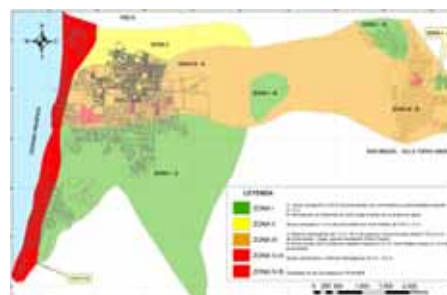
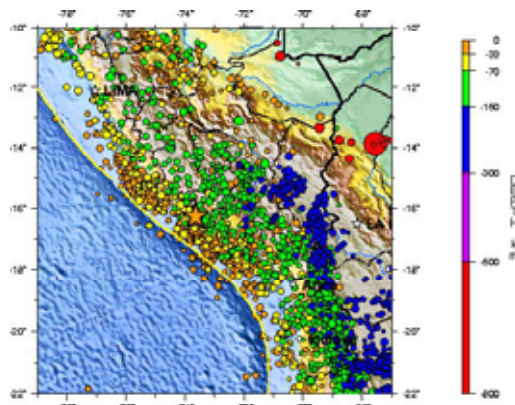


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G1: Seismic Motion and Geotechnical Issues

GL: S. Nakai (Chiba U), Z. Aguilar (UNI) & IGP

- Source Modeling and Simulation of Seismic Motion
- Microzonation based on EQ and MT observations
- Risk Assessment of Slope Failures

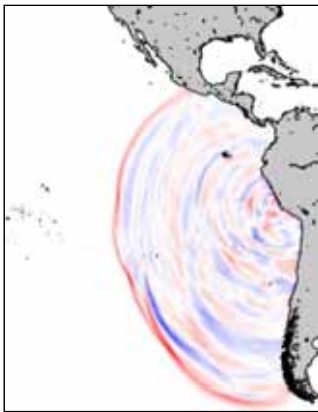


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G2: Tsunami Simulation and Damage Mitigation

GL : S. Koshimura (Tohoku U), IGP & DHN

- Tsunami Source, Propagation and Impacts
- Tsunami Hazard and Impacts Mapping
- Implementation of Tsunami Disaster Mitigation Technology



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G3: Seismic Resistance of Buildings

GL : T. Saito (BRI), C. Zavala (UNI)

- Develop Database of Structural Tests for Masonry Buildings
- Develop Seismic Diagnosis and Retrofit Technologies
- Assessment and Retrofit of Historical Buildings

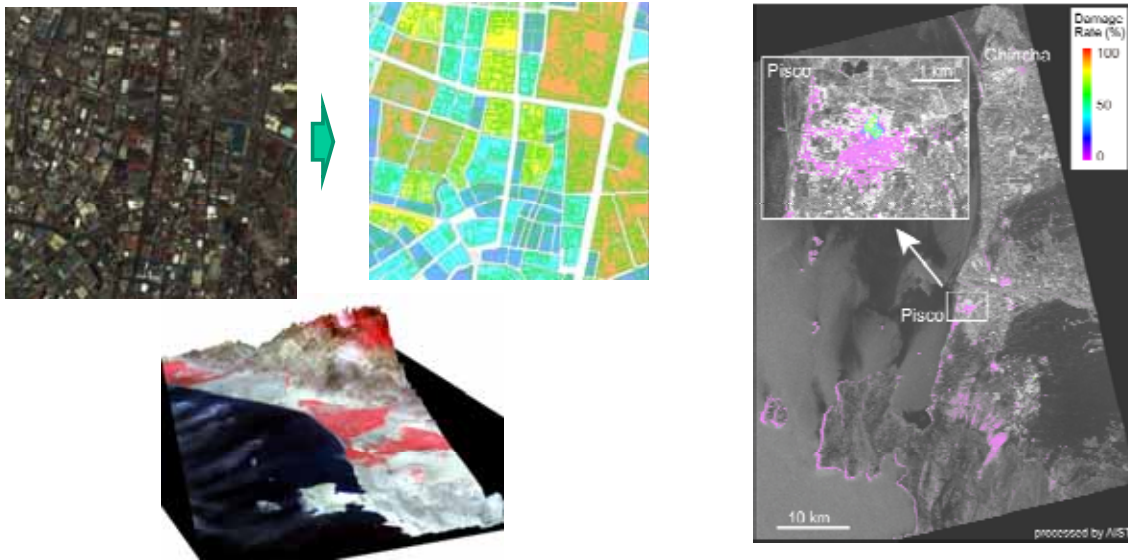


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G4: Geo-spatial Database and Damage Assessment

GL: S. Midorikawa (Tokyo Tech), M. Estrada (UNI)

- Development of Geo-spatial Database
- Damage Detection using Satellite Images
- Damage Assessment for Scenario Earthquakes

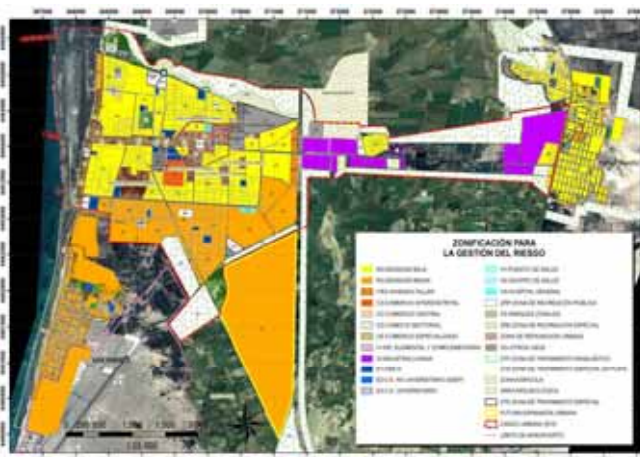


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G5: Development of Disaster Mitigation Plan

GL: F. Yamazaki (Chiba U), A. Bisbal (INDECI)

- Formulate Land-use Policies for Disaster Mitigation
- Develop Local Disaster Mitigation Plans for the Study Areas
- Awareness Raising and Dissemination Activities



Technical seminar (JICA-Peru, 2004)

Land-use plan after the 2007Pisco EQ (CISMID)

The project will continue from 2010 to 2014.

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Thank you very much!
Muchas Gracias!
ご清聴ありがとうございます。