

Preparedness of a manual for tsunami deposit research

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Tsunami risk assessment

$$\text{Tsunami risk} = \text{tsunami impact (wave force)} \times \text{vulnerability}$$

Paleotsunami research is undoubtedly useful to know the tsunami impact.

Paleotsunami research: Objective and questions

Objective

- Understanding nature of paleotsunami events.
- Using obtained information to the tsunami risk assessment.

Paleotsunami research questions:

- Q1. Preliminary area survey
- Q2. Efficient survey method
- Q3. Identification
- Q4. Correlation
- Q5. Sediment source
- Q6. Sedimentary structures
- Q7. Sedimentary process
- Q8. Recurrence interval
- Q9. Local tsunami size
- Q10. Tsunami source mechanism
- Q11. Risk assessment and education

Need establishing paleotsunami research scheme

Identification of paleotsunami deposit is a critical issue: How can we differentiate it from storm and flood deposits?

We need to learn more about features of tsunami deposits that was certainly formed by the tsunami.

Data of modern tsunami deposit is essential to improve paleotsunami research.

Difficulties of post-tsunami geological field survey

- Post-tsunami situation is always tough.
- Safety, foods, accommodation...
- Rescue and recovery activities are undoubtedly the first priority.
- There is not enough time to organize research team and make a plan.
- **But environment (tsunami deposit) changes so quickly.**
- Quick, efficient, and systematic post-tsunami survey is required.

ITST post-tsunami survey field guide

- Very useful tsunami survey manual that was prepared by ITST.
- Tsunami geology is briefly written in this manual.
- **Needs more specific information?**

Preparation of a manual for geologists

Emergency geological field survey is usually conducted to

1) understand the nature of the tsunami itself in order to contribute to future recovery and disaster prevention plans

2) **accumulate useful knowledge for the future development of paleotsunami research**

Considering future sharing data, it is better to collect survey data under the same standard. Then,

- Which kind of information should we collect?
- How can we collect such data (method, planning)?
- How should we summarize data and share?

In the manual, it is important to start explanation from current understanding and remaining issues of paleotsunami research.

Summary

In order to improve future paleotsunami researches...

- ◆ Preparation of IUGS post-tsunami geological field survey manual is under preparation.
- ◆ Need suggestion of tsunami geologists.
- ◆ **How do we publicize?**
- ◆ **Data sharing platform?**