

Submarine Geological Risks and Current Problems

KAWAMURA Kiichiro (Yamaguchi University)

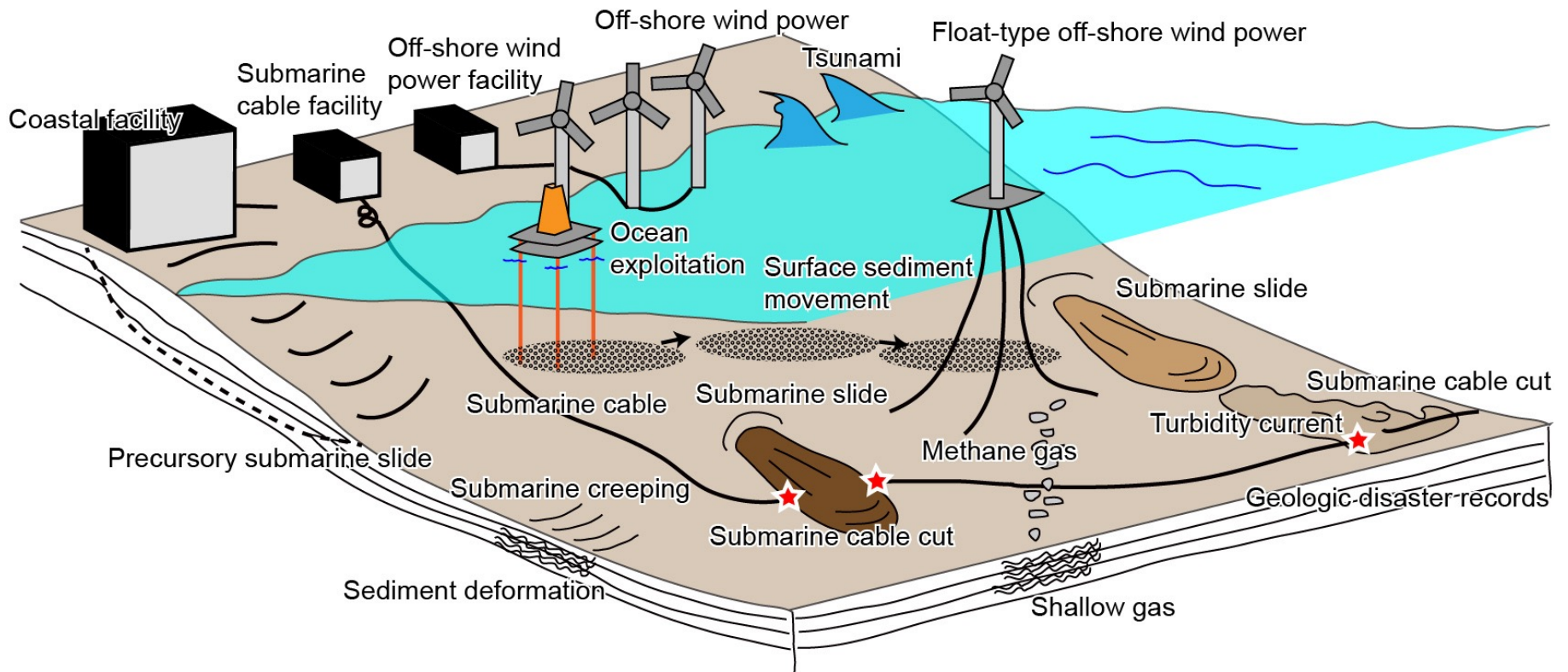
Social implementation 社会実装

- Japanese type Marine Geological Risks 日本型の海底地質リスク
- Mitigation of tsunami hazards to protect coastal facilities 沿岸構造物を守るための津波災害の軽減
- Selection of regions for off-shore wind power farms and maintenance of them 洋上風力発電のための地域選定とそれらの維持

Today's talk

- Why do you study submarine geological risks now?
its importance
- How can you resolve them? their problems and risk
minimization

Geologic phenomena affect various coastal facilities



Current problem for offshore wind farms in Japan

- Japan is located in an active margin, whereas European countries are in a passive margin.
- Active margins are relatively narrow continental margin, and there are many geohazards (e.g. active volcanoes, earthquakes, tsunamis and so on).
- We have Japanese type geological risks, and we need to make new guidelines for the risk mitigation to construct offshore wind farms along Japanese coastal areas by ourselves.

How can you resolve them? their problems and risk minimization

- Mapping of sediment distribution to understand the seabed characteristics
- Monitoring of present seabeds to understand the seabed stability
- Observation of fossil phenomena to understand their processes
- Experiments and Simulation in laboratory to understand their mechanisms