

Workshop Title

„Offshore Studies of the Andaman Sumatran Earthquakes“

Date of Workshop: May 22-24, 2006

Location of Workshop: Hanover, Germany

Proponents of this proposal

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Anticipated number of participants

We anticipate around fifty participants, coming from EU states (France, UK, Germany), Japan, Indonesia, India and the USA, and possibly from Canada

Request to InterMARGINS

We request that InterMARGINS provides support for the compilation of a “Bathymetric Chart offshore Sumatra”. To compile bathymetric data of the German research cruises, carried out with RV SONNE (SO186) and the Natsushima data set of 2005 has been agreed upon. The availability of the other bathymetric data sets are still a matter of discussion and will be addressed during the workshop. However, to begin with the German and Japanese data are supposed to be compiled and digitally merged as a first step. Negotiations are ongoing to access and include other data sets including those from Britain and France.

We request an amount of **5500 €** funding by InterMARGINS.

Schedule

A draft compilation of the German and Japanese bathymetric data sets are to be accomplished in time for the workshop. Depending on the outcome of the workshop and availability of bathymetric data sets of other working groups, these datasets will then be included in the compilation until end November 2006. A draft version of the combined map will be presented during the AGU Fall Meeting 2006. Thereafter the map compilation will be published and printed within approximately another six months.

Justification

The knowledge of the bathymetry offshore Sumatra is of great importance for the geohazard risk assessment, modelling of tsunami runup heights and development of tsunami early

warning systems as well as for the general understanding of plate boundary processes most notably earthquakes and tsunamis.

Publication of a bathymetric map offshore Sumatra also will demonstrate the contribution made by geoscientists to the understanding of tsunami hazard that has a direct and recognizable societal impact.

Background

The Mw 9.3 December 26, 2004 Sumatra-Andaman Islands subduction zone earthquake was the second largest earthquake recorded and generated a tsunami by elastic rebound of the forearc, causing devastation throughout the Indian Ocean. Since the earthquake a number of marine expeditions, funded by Canada, France, Germany, India, Indonesia, Japan, United Kingdom and the United States have acquired a comprehensive data set over the southern part of the earthquake rupture zone. The data now acquired includes multibeam bathymetry, single and multi- channel seismic, Ocean Bottom Seismographs, wide angle seismic refraction and sea bed images from Remotely Operated Vehicle.

The marine database (see Table 1) for the area now intensively surveyed was previously limited and a major contribution to the Indonesian and international science community is to produce a compilation of the various new multibeam survey data acquired since the tsunami. There are French, German, Japanese and British data sets potentially available from an area that stretches from southern Sumatra to the Indian-Indonesian boundary. At present there is no agreement or mechanism for this data to be compiled into a common format for publication. It is the subject of this proposal to apply for funds from Intermargins to support this initiative.

Year	Country	Vessel	Area	Remarks
1997	Germany	SONNE	Southern Sumatra + Sunda Strait	SO137-139 Partial coverage
2001	Japan	Yukosuka	Southern Sumatra + Sunda Strait	Fore-arc; slope
2005	United Kingdom	HMS Scott	N- Sumatra, 2004 southern rupture zone	
2005	Japan	Natsushima	N- Sumatra, 2004 southern rupture zone	
2005	France	Marion Dufresne	N- Sumatra, 2004 southern rupture zone	
2005	International	Perfomer	N- Sumatra, 2004 southern rupture zone	
2005	Germany	Sonne	Whole Sumatra trench and slope	Near complete coverage of trench (SO186-1)
2006	Germany	Sonne	N- Sumatra, 2004 southern rupture zone	Overlap with HMS Scott and Natshushima
2006	Germany	Sonne	Fore-Arc basins (Aceh, Simeulue, Siberut)	Scheduled for August

Table 1 : Bathymetric surveys carried out offshore Sumatra

Stefan Ladage

Attachment:
Workshop First circular