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NEAREST ANNUAL MEETING

SCIENTIFIC ADVISOR REPORT

NEAREST project has established very ambitious and demanding scientific goals to research potential methods and technologies for early tsunami warning system in Europe. The vast scope of the project demands substantial resources and multiple teams working together with common general goal. I was impressed with the quality of the research presented during the annual meeting, with the progress made in all areas and with the level of frank and active discussions during the meeting. My experience in developing tsunami forecast system for the U.S. coastlines and successes in its test forecasts to date make me believe that the approach taken by NEAREST will lead to an efficient early warning system for European coastlines. The combination of earthquake source studies with tsunami measurement and modeling studies provide necessary data for the early warning system analysis. Neither of these components alone could achieve the goal. But combining the results of earthquake source analysis, tsunami data analysis, real time tsunami measurements and modeling techniques in one system could lead to an efficient early warning.

Presentations during the annual meeting demonstrated impressive progress in several research areas. Here is my impression of the research results to date:

> The tectonic, morphological and seismic data analyses of the potential tsunami sources of the Atlantic coast of Europe are impressive and necessary. The uncertainty of the 1755 Lisbon tsunami source demonstrates the need of more studies in this area. Work Packages (WP) 1-3 demonstrated excellent results. *My impression is that the tsunami source research will benefit from more interaction with tsunami modeling package WP7.*

> Tsunami data analysis of WP 4-6 provides comprehensive research of tsunami data processing for warning system and data for historical tsunamis in the area. These research groups have already identified previously unknown tsunami data that would be extremely useful for the analysis of the future early warning system.

The tsunami modeling research of WP7 is very impressive and is world class. The modeling results for the several historical tsunamis and their coastal impact are worthy publication right now and are valuable contribution to the research of the early tsunami warning system. The modeling is one of critical components of this project, since tsunami simulations are necessary part of any future early warning system.

WP7 addresses, arguably, the most formidable challenge of the project -- developing and testing prototype detection system. The difficulties highlighted in the annual meeting are typical for the early stages of the developing the robust system. The main challenge here is the short time span of the project that provides limited opportunity for inevitable trial-and-error development. *Considering the short time for the development, I would recommend to use as much as possible the experience of developing similar systems by other projects, especially via UNESCO/IOC working groups for different regions. In particular, the Indian Ocean Tsunami Warning System development via ICG/IOTWS Working Group 2 has established International Tsunameter Partnership to consider tsunami detection standards and challenges of tsunami detection. Participation in this Partnership may be beneficial for this project.*

Annual meeting was well organized and was structured so that everyone in the project would obtain relevant information on every working package. Scientific quality of the presentations was high. The scope of the research in NEAREST is so vast that I would suggest to have more than 2 day meeting for the annual gathering. It may give more time for the discussions that need to be an essential part of the annual meeting. *My suggestion for the next meeting is to allocate time for special discussion session at the end of each day, with a chair to summarize the discussion points for future report. It may simplify the manager's task for meeting report and would help participants to summarize the main results and problems.*

Management approach of NEAREST appears to be adequate. The large scope of the project presents formidable challenge for managing different parts of planned research. The meeting showed that related Working Packages are coordinating well with each other. The annual meeting itself provided opportunity for all participants to see the progress in all areas of the project and provided good opportunity for joint discussions. The most important resource, in my mind, for managing a project of such diversity is the Internet. I am very impressed and satisfied with the quality and live content of the NEAREST project web site (http://nearest.bo.ismar.cnr.it/). The web portal is simple, functional and informative for both, participants and the general audience. It provides a real management instrument for managers and participants; it also provides ample information for the general public. *The only general suggestion is to keep the web page more up to date with latest development and have more frequent updates on the progress of the project.*

In general, I have very favorable impression about the goals and the progress of NEAREST project. I am looking forward seeing future results of this ambitious undertaking, which would be useful for developing the global tsunami warning network.