



Gruppo Nazionale per la Difesa dai Terremoti

Valutazione delle proposte di ricerca relative al Programma 2000-2002
Bando di gara 2002

Tema 1

Proposta Gasperini

REVISIONE DEI FONDAMENTI TEORICI E SPERIMENTALI DELLE STIME DI
HAZARD A SCALA NAZIONALE

Referee 1

Comments on the proposal

This is not really a project, but a patchwork of different actions, rarely connected to each other. which, if considered altogether, should be associated with projects run by national Institutes responsible for observations in Italy: according to what is told in the text, no agreement has been concluded for coordination with Amato's project.

Only some of these actions might be considered for possible funding:

- Task 6C (Intensity tomography and site effects).
- Task 1 (Update of the historical seismic catalog for the period 1964-1992). Although I am afraid this will produce only marginal changes in the catalog.

Weak points to be dropped:

- Task 7 Focal mechanisms, + Task 2 Instrumental seismic catalog : should be done by Italian observatories, or funded by academic research resources.
- Task 9A :Geodetic measurements. Despite the definite interest of GPS permanent stations, I do not think a University team from northern Italia is the right place to manage a permanent network in central and southern Italy, especially where there already exists dedicated geophysical observatories.

Comments on the proponent team

A single group (Uni Bologna), who apparently considers itself competent in all fields, but could not convince other groups in Italy to cooperate with them...

Comments on the budget

The total budget is very expensive (270 k€). For the two tasks that might be worth being funded

- Task 6C (Intensity tomography) : 44 k€ sounds reasonable.
- Task 1 (Historical seismic catalog for the period 1964-1992) : within the sum of 60 k€, 30 k€ are planned for SGA, and 15 k€ for contracts and fellowships. This looks rather expensive for marginal changes.

Evaluation : C for the whole, up to B for Task 6C, down to D for Task9A

[A= Highest ; B = High ; C = Fair ; D = Not satisfactory]

| | A | B | C | D |
|--|---|---|---|---|
| 1. Quality of the project | | | | |
| a) Scientific quality | | x | | |
| b) Importance of the project with respect to the indicated themes of the GNDT programme | | x | | |
| c) Clarity and feasibility of the objectives in the indicated times | | x | | |
| d) Knowledge of the state of the art | | | x | |
| e) Innovative contribution of the project | | | x | |
| f) Adequacy and completeness of the techniques proposed with respect to the objective to be achieved | x | | | |
| g) Can the project be completed according to the proposed schedule ? | | x | | |
| 2. Reliability of the proposing group | | x | | |
| a) Competence and leadership ability of the scientific coordinator | | x | x | |
| b) Technical and scientific competence of each Research Unit | | x | x | |
| 3. Adequacy of the requested funds | | x | x | |
| Overall grading of the project | | x | x | |

Referee 2

Si tratta di una proposta di prolungamento di un precedente progetto finanziato solo per un anno e quindi riformulato per il restante biennio.

Il progetto presentato è formulato in maniera tale da includere vari argomenti di ricerca con priorità (secondo il proponente) differente.

Al primo livello di priorità sono riferite le ricerche macrosismiche, al secondo studi su argomenti differenti già avviati nell'anno di ricerca relazionati, al terzo studi ancora da iniziare e comunque da subordinare alla stretta collaborazione con il progetto Amato.

Si ritiene opportuno, fruttuoso e allineato con le indicazioni del progetto triennale, proporre per il finanziamento le attività relative al Catalogo Sismico Storico (task 1) II e III anno, lo studio sulla Statistica delle Sorgenti Sismiche e Completezza dei Cataloghi (task 5) II e III anno, la preparazione di un Catalogo Sismico Strumentale (task 2) II e III anno.

Referee 4

This is a proposal issued of the discussions that the evaluation committee of the GNDT project had with the different project leaders and participants last February in Rome.

The proposal contains basically three parts (called priorities) of different levels of interest.

The first follows entirely our advice, that is to develop a sound basis for estimating seismic hazard in Italy from macroseismic data. The author of the proposal and his group in Bologna are experts on this subject and publish regularly in the best journals of seismology. The list of publications enclosed in the proposal is a good proof of their excellent productivity. I was particularly impressed by the work presented during our meeting in February in exploiting the variation of intensity with respect to distance and azimuth from the source. The tomographic inversion of the attenuation of seismic intensities was really interesting. I encourage the authors to continue with this kind of work and to extend the usability of ancient seismic data.

The second part concerns GPS. In the introduction as well as the description the proposers insist that the project by Anzidei and collaborators is different from that of Amato. I find this an even stronger reason for not supporting this part of the project. Drs. Anzidei and Amato work in the same institution, they should be collaborating rather than developing two different

sets of instruments and observations. It is also curious that the references cited in the proposal do not include any publication in geodesy by Anzidei, Baldi or their coworkers. This is clearly a convenience package that distracts from the main goal of the proposal.

The third priority concerns the development of an instrumental seismic catalog, a work that will be done mainly by the researchers in Bologna. As the authors themselves recognize this part of the research is already cited by Amato, but has not progressed much because someone has not done the job she was supposed to do. This kind of argument is not receivable. The experts of GNDT had clearly stated two years ago that the group should not support activities that were the standard job of observatories and organisms like the Servizio Sismico Nazionale. If for some reason the estimation of magnitudes is in error it is not a research project like GNDT that can change this erroneous practice.

In conclusion, I strongly recommend that GNDT supports the Priority 1 of the project and leaves the other two to either the Amato project or to standard practice of Servizio Sismico Nazionale.

I propose a budget of:

60.000 Euros for the first year

60.000 Euros for the second year.

This is a sizable budget that should enable the Bologna group to make progres in their research.