



**MINISTERIO DE EDUCACIÓN Y CIENCIA**  
**Secretaría de Estado de Universidades e Investigación**  
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**Dirección General de Investigación**

## **CONSOLIDER-INGENIO 2010 PROGRAMME** **2006 Call for Applications**

### **First year follow-up report**

*(This activity report refers to the period October 2006 - December 2007)*

<b>PROGRAMME REFERENCE: CSD2006 - 00041</b>
<b>Coordinator: Josep Gallart Muset</b>
<b>Programme Title: Geosciences in Iberia: Integrated studies of topography and 4-D evolution. 'Topo-Iberia'</b>
<b>Managing Institution<sup>1</sup>: Institute of Earth Sciences - CSIC</b>
<b>Programme Start Date: October 16<sup>th</sup>, 2006</b>
<b>Programme End Date: October 15<sup>th</sup> 2011</b>

Date: April 10<sup>th</sup>, 2008

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<sup>1</sup> Entidad Gestora

## ***1. Summary of key activities initiated by the programme from the start of the funding period (one page)***

Few days after the official start of the project on October 16<sup>th</sup>, 2006, the Scientific Committee (PIs of the 10 participant Groups) meet and established the distribution of main activities into eight Subprogrammes or Workpackages, each with one scientific responsible and a working group composed by a representative of the different institutions involved. A scheme of main tasks, expected deliverables and annual distribution for each workpackage was also defined and is available in website <http://wija.ija.csic.es/gt/rc/HTML/PRJ/indexTOPOIBERIA.html>

WP1 deals with compilation of existing geological and geophysical data, to establish corresponding databases. A specific high performance server system was selected for this purpose, which received additional funding support from the responsible institution of this WP (IGME). The system was delivered and tested end of 2007, being fully operational since March 2008. In parallel, different groups have been compiling their existing data and transferring them to state-of-the-art formats.

WP2, 3 and 4 deal with acquisition of new high quality geophysical datasets (Seismic, GPS and MT, respectively) from a new instrumental platform, IberArray. In 2007, most efforts of Topo-Iberia have been devoted to select, acquire and test the appropriate equipment, and to start the field deployments.

The new portable seismic array acquired is composed by 40 broad band stations, and is complemented by 12 stations of ICTJA-CSIC. During the year, this array has been deployed in the southern sector with a node spacing of 60 km. Since the end of 2007, 31 stations in the Betics area and 21 in North Africa are recording in continuous mode. Data recovering and maintenance tasks, distributed among the working group, are accomplished through periodic visits every 2-3 months. The raw data are converted to appropriate formats and stored in a single server at the ICTJA. All the station parameters, state of health, and event examples are reported in the website <http://xeon.ija.csic.es/IberArray/>

The new GPS array (28 instruments, 3 of them spare) has also been acquired in 2007, tested and distributed among the groups. The data quality and availability of existing GPS stations has also been checked, the 25 new sites (four of them in Morocco) were located and monumentation tasks initiated. Field deployment of the array has begun early 2008. Equipment for the 3<sup>rd</sup> IberArray component, the Magnetotelluric one, has also been fixed and acquired in 2007. It is composed of two types of instruments, 5 Broad Band and 10 Long-Period MT stations. One of the field transects proposed (crustal profile Alcludia) could already be acquired using existing equipment.

Acquisition of new geological data (WP5) has also been initiated in selected areas of Iberia and North Africa. Field measurements of paleotemperatures, paleoseismology, geomorphological indexes, sampling for thermochronology (fission tracks and cosmogenic isotopes), active tectonics, structural geology, etc. have been conducted at sites in External Betics, Internal Betic complexes, Rif, Anti-Atlas, Moroccan Meseta, Iberian, Pyrenean and Cantabrian chains and folerand basins.

The last three WP are focused in establishing structural models by integration of geophysical and geological data, numerical/analogue modelling of tectono-sedimentary processes and relief evolution, and inter-relation of surface and deep processes by integrating all observables and models. They have initiated contacts and activities, especially in the development of modelling techniques, but they will increase their strength in the project in the coming years.

**II. Degree of Programme objective achievements measured according to the indicators listed in Section 8 of the Implementation Agreement (four pages)**

The Table hereafter summarizes the objective achievements according to the ones declared in the Indicators specified in the Implementation Agreement.

<b>Indicators (Section 8 of Implementation Agreement)</b>	<b>Declared</b>	<b>Achieved</b>
	(on average)	(2007)
<b>1. Scientific Production</b>		
1.1. Papers in indexed, peer reviewed journals	50	90
1.2. Other publications and technical docs.	100	77
1.3. Presentations to Congresses (International and Nat.)	200 (70%Int.)	163 (90% Int.)
<b>2. Formation</b>		
2.1. On-going PhDs	30	32
2.2. PhD defenced in the whole period of the project	30	9
2.3. PostDoctoral contracts	12	24
<b>3. Scientific Infrastructure (equipment)</b>		
3.1. IberArray platform: Seismic, GPS and MT arrays	3 Arrays	3 Arrays
3.2. Technicians devoted to the project	6	3
<b>4. Research Projects</b>	15	72
<b>5. Conection with Companies, Agreements, Contracts</b>	30	27
<b>6. Dissemination</b>		
6.1. Organization of Congresses, Symposia, Lectures,..		15
6.2. Conferences, Seminars, Media Interviews,...		>30

A remarkable degree of objective achievements can be inferred from an overall valorisation of these Indicators, especially taking into account that they concern the first year of project activities.

The first block of parameters, the Scientific Production, is particularly marked by this fact, as most of the contributions may correspond to topics related to the project that where somehow on-going prior or in parallel to its starting. In detail, the score of the most relevant parameter is to be remarked. Up to 90 first-order publications (papers published in high-ranked journals or in peer-reviewed books) are reported in 2007, and even go over 100 if the 13 ones appeared end of 2006 -when the project had already started- are included, which practically doubles the declared compromise of 50 papers per year on average. On the other hand, the number of other publications and technical reports compiled from the groups adds up to 77, which is below the 100 declared. This may be due to some missing information as of report' day, or may reflect the widespread tendency in our community to prioritize the indexed publications.

Up to 163 contributions to Congresses, 90% of them in International events are compiled, with respect to the 200 declared (70% International). This number may also be affected by the difficulty of getting in due time a complete list of such contributions from more than 100 participants, and in any case it will probably increase in the coming years as the project goes-on and new results are coming. The very high percentage of International contributions is also remarkable, even if this may be affected by specific venues in a single year (for instance, the Spanish Geological Congress which takes place every 4 years, is now scheduled for 2008, and hence the percentage of national contributions will most likely increase in 2008).

The indicators concerning the Formation are also positive, and in agreement with he expected ones. Up to 32 PhD Thesis were on-going in 2007, and 9 were successfully accomplished in this period, which suggests that the compromise of 30 PhD Thesis for the whole period of the project will certainly be achieved. The PostDoctoral contracts within the groups reached 24, 7 of them being Ramon y Cajal and 2 Juan de la Cierva, which doubles the 12 ones indicated for this matter in the Agreement.

Next topic in the Indicators concern the Scientific Infrastructure (equipment). This has to be considered a crucial parameter for this first year' project. A great effort has been devoted to this, and the achievements can be considered fully satisfactory, as all the relevant equipment has been acquired and tested, and it is operational by the end of 2007 or beginning 2008. The implementation of an observational platform, IberArray, composed by three instrumental pools, Seismic, GPS and Magnetotelluric is considered a major aim of this project and its further development, in order to collect new geophysical data with unprecedented density and resolution to constrain key geodynamic problems on the Iberian plate and its tectonic boundaries. The expected technicians that should take care specifically of these arrays have been progressively engaged, once the equipment has become available.

The new portable seismic array acquired is composed by 40 stations Taurus equipped with broad-band geophones Trillium-120s, both from Nanometrics (Canada). This array is completed with 12 additional stations of the same type belonging to the managing institution (ICTJA-CSIC). As planned in the proposal, starting February 07 this array has been deployed in the southern sector with a node spacing of 60 km. At present, 31 stations in the Betics area and 21 in North Africa are recording in continuous mode with a high sampling rate of 100 c/s. This implies a huge amount of data to be stored and processed (about 1.5 GBytes per station per month). Such a regional array,

complemented by ~30 permanent seismic stations existing in the area, and another 10 portable BB stations from Univ. Granada constitute the most numerous, dense and homogeneous seismic array ever deployed in the Euro-Mediterranean area for deep structural and geodynamic purposes. Data recovering and maintenance tasks are distributed among the working group (including a Moroccan institution) and are accomplished through periodic visits onsite every 2-3 months. The data are then transferred to ICTJA where they are converted to an appropriate format (MiniSEED) and stored in a single server implemented from own ICTJA resources. This database is accessible to all participants for subsequent scientific analyses. A complete information of the state-of-the-art of the seismic network, including a summary of data availability, examples of significant teleseismic events recorded in the array, and details of installation, maintenance, state of health and quality of recordings for each of the 52 portable stations deployed in the field are constantly updated and reported in the website <http://xeon.ija.csic.es/IberArray/>

The GPS new array (28 instruments, 3 of them spare, NETRS model from TRIMBLE, with Dorne-Margolin antennas and choke rings) has also been acquired in 2007, tested and distributed among the 7 groups that take care of the site management, under the supervision of three of them with more expertise. During the year, the data quality and availability of existing permanent GPS stations has been checked, the appropriate 25 new sites (four of them in Morocco) have been prospected and located, and monumentation tasks initiated. Field deployment of the array has begun early 2008.

Equipment for the 3<sup>rd</sup> IberArray component, the Magnetotelluric, has also been fixed and acquired in 2007. It is composed of two types of instruments, 5 Broad Band MT stations (Metronics, from Germany) for crustal studies and 10 Long-Period MT ones (from Ukraina) for deeper, lithospheric scales. For logistic reasons, the acquisition has been splitted in two stages, first one achieved in December 07 and the second in March 08. One of the planned crustal profiles, Alcudia in Central-Iberian zone, has already been acquired in 2007 after two field operations using the existing instrumentation in the groups. Furthermore, other campaigns from on-going projects sampled some specific areas of the Betics range.

On the other hand, a specific high-performance server system has been acquired, as planned in the proposal, to manage the establishment of new and existing geological and geophysical databases. The most suitable system identified for this purpose is composed by a computer HP PRLN DL360G5 with a C4 backup Cabin. The system received additional funding support from the responsible institution of this WP (IGME). The server was delivered and tested end of 2007, being fully operational since March 2008. During 2007 different groups have also been compiling their existing data and transferring them to state-of-the-art formats

Fourth item in the Indicators list is the number of research projects that the participant groups will develop in parallel with Topo-Iberia. The capacity of its members to obtain competitive funding (European, national or autonomic calls) is well illustrated by the 72 projects reported to be active in 2007, much ahead of the 15 projects declared on average in the Implementation Agreement.

The Indicator of external connections with companies, public institutions, etc., by means of agreements, contracts, advising tasks, etc. shows up to 27 actions of this type in 2007, which is more concordant with the 30 expected ones. Comparison between the two latter indicators illustrate also the tendency of the participants in this Topo-Iberia programme of basic research to achieve support through academic agencies, although the amount of

funding from external resources is also relevant. Another aspect to be mentioned concerning external connections is the relationships undertaken with international groups and research programmes with similar interests. Cooperation strategies have been examined with different groups from Portugal, France and Morocco in order to expand the IberArray observatory platform to these neighbouring countries. Also, the TOPO-EUROPE programme, an ESF-EUROCORE that shares objectives of Topo-Iberia at an European scale, had its open calls during 2007, and different groups of Topo-Iberia had been integrated and participated in several proposals. Resolution of the projects that will be funded is still pending.

Finally, the dissemination indicator, concerning the social diffusion of scientific knowledge, shows that there has been a significant amount of organization tasks in symposia, congresses, lectures, etc. in relevant events such as the European Union of Geosciences (EGU) or the American Geophysical Union (AGU). Moreover, Topo-Iberia participants have been required to provide more than 30 Conferences, Seminars or Interviews in audio-visual media. An official Web site is under construction (<http://www.igme.es>) to be implemented at the main server that will coordinate and compile the databases and which has not been operational until March 08. A preliminary web site has been launched since the beginning of the project at the managing institution (ICTJA-CSIC), to provide updated information on the project (<http://www.topo-iberia.org/> and <http://xeon.ija.csic.es/IberArray/>), either in overall or specifically dedicated to the IberArray platform. This latter website shows, for instance, all the relevant parameters for each one of the 52 field stations of the seismic array, state of health, and some event examples.

### ***III. Description of the Programme's scientific and administrative management activities (one page)***

Soon after the official starting date of the project (October 16<sup>th</sup>, 2006) the PIs of the 10 participant groups/institutions had a meeting in November 8<sup>th</sup>, 2006 at the managing institution (ICTJA-CSIC) in Barcelona. In this meeting they achieved a number of scientific and administrative agreements, which came into practice during 2007, namely:

- establish the Scientific Committee of the project, composed by the PIs of the 10 groups, that will meet when necessary, at least once a year.
- fix the budget distribution of the project. The economic component of each main topic of the proposal was agreed upon, as well as its distribution per participant institutions and per annuity.
- define the 8 Subprograms or Working Packages the project is organized into, specifying the person/institution responsible of each of them and the corresponding working group (one responsible per institution involved in each). These WP-coordinators get a mandate to impulse the group activities, fix the agenda, etc. During the year, practically all WPs have had at least one group meeting, besides continued e-mailing contacts, providing in each case a detailed report to the project Coordinator.
- compose an Addenda to the initial Cooperation Agreement signed by the 10 participant groups. This Addenda establishes that the managing institution will be responsible of the acquisition procedure for all the instrumentation belonging to the IberArray platform (seismic, GPS and Magnetotelluric stations). Furthermore, during the development of the project the institutions represented by the Scientific Committee will prepare a consortium or similar feature to ensure the appropriate usage of these scientific equipment pools among the participant institutions once the project has ended, till they became obsolete.

As aforementioned, the 8 Workpackages had at least one meeting during 2007 (except the last one, that deals with the integration of all data and models, that had only preliminary contacts by e-mail), fixing activities, strategies, etc. Of particular relevance are the actions developed by the WPs 2 and 3 related to the seismic and GPS networks. The tasks of prospecting the appropriate field sites, deploy the instruments and take care of maintenance have been distributed between the participants according to their expertise and logistic capabilities. The seismic network has been completely deployed in 2007, consisting of 31 stations in southern Spain and 21 in northern Africa. For the latter, a specific Cooperation Agreement has been signed with the Institut Scientifique of the Rabat University, Morocco, to ensure the deployment and maintenance logistics there. Moroccan scientists had already a close cooperation with some of the Topo-Iberia institutions. Data retrieval is currently underway from the different groups, and storage is centralized at the ICTJA-CSIC. All the sites for GPS network have been prospected in 2007, and deployment started early 2008, with a similar scheme as for seismics.

The managing institution (ICTJA-CSIC) has taken care of the budget distribution among the participant groups (first and second annuity already) by establishing and signing a specific Agreement between CSIC and the 10 groups. Moreover, it has coordinated the annual economic report by collecting the corresponding information from each group/institution.

The next meeting of the Scientific Committee, foreseen by the end 2007, was finally scheduled for agenda conveniences in January 24, 2008. It reviewed thoroughly the state-of-the-art of the 8 WorkProgrammes, discuss the subsequent activities, relationships with external projects/groups, the dissemination actions, preparation of annual report, etc.

#### ***IV. Description of budget expenditures according to programme objectives and activities, including a distribution of partners' budgets (one page)***

The funds obtained from the MEC-Consolider Programme, 4.5M€ and the additional 20% (0.9 M€) provided by the Managing Institution (CSIC) were first distributed according to the activities planned in the proposal. Then, they were distributed among the 10 groups according to their degree of involvement in each activity, and finally, distributed per annuities per groups according to the MEC deliver sequence. Economic Tables reflecting each scenario have been prepared and distributed among the groups.

A specific Agreement has been established and signed between CSIC and the 10 participant groups concerning the budget distribution between the managing institution (ICTJA-CSIC) and the groups. After reception of funds from the MEC, first and second annuities have been distributed during 2007-early 2008.

Basic items considered in the budget are the Personnel Costs, that include contracts for technical support in the activities involving new data acquisition, for a total amount (whole project duration) of 930K€ and the Execution Costs. Main items of the latter (overheads included) are: Infrastructure costs: 2075K€, Consumables: 375K€, Travel and per-diem: 1.625K€ and Other Divers expenses: 395K€

In 2007, major expenditures assumed by the project concern the acquisition of most of the infrastructure. As agreed by the Scientific Committee, the acquisition of all the instrumentation of the IberArray platform, that is seismic, GPS and Magnetotelluric equipments, has been attributed to the managing institution, ICTJA-CSIC. Total expenses reported in this matter by this group: 1.377K€ The acquisition of the server needed for the databases of the project was responsibility of the IGME group, who reported an expense of 46K€

The amount of all remaining expenses in 2007 is clearly influenced by the fact that the instrumentation became available in different phases, some of them in late periods of the year. A few contracts have been established during 2007, because the groups will engage personnel progressively. Groups reporting expenses in this matter are: ICTJA: 21.850€, Univ. Oviedo: 17.496€, Univ. Barcelona: 12.662€, Univ. Cádiz: 2.027€, Univ. Granada: 2.635€

Travel and per-diem expenses are mostly devoted to the field operations related to the deployment of instrumental arrays of seismics and GPS (site reconnaissance, deployment and maintenance tasks). Most of the 10 participant groups are involved in these tasks in different degrees. The total expenses reported in 2007 in this matter are: 42.331€

It has to be pointed out that a number of expenses of the type Travel and per diem have been reported in the Item Divers Expenses, because they correspond to personnel belonging to some of the groups. They are in many cases staff technicians that are not included in the scientific participants list. Total Divers expenses: 41.669€

The Consumable expenses correspond basically to the items related and needed to the field deployment of equipments. Total Consumable expenses: 20.316€

The Total Direct Costs expenses reported for the project in 2007 amount to 1.600.000 €

***V. Brief description of the Research Activity Plan to be accomplished between January 1, 2008 and December 31, 2008, as stated in Section 7 of the Implementation Agreement (two pages)***

As explained before, the Research Activities of Topo-Iberia have been structured into 8 Subprogrammes or WorkPackages (WP1-8). Their activities foreseen for 2008 are briefly summarized in the following:

In the first trimester of 2008, the WP1 (Databases) will have the data storage server system fully operational at the IGME. A meeting of the working group will be held in April, to fix the strategies to incorporate to this server data from the different groups, and particularly the new data generated by the 3 IberArray observatory platforms. A website compiling the activities, news etc. of the whole project will be also operational at this server. A technician funded by the project will be fully engaged since January 2008 at the IGME to manage the data server.

The new portable seismic network (WP2) deployed in the southern sector since end 2007 (31 stations in the Betics, 21 in North Africa) will keep operating there in continuous mode during 2008. A few more stations can be available in two groups, to be deployed to expand the array coverage. Maintenance, data retrieval and first checking is distributed and afforded within the working group members. Compilation, storage in Mini-SEED format and first processing will be done at ICTJA, with a data copy transferred to IGME server. A specific meeting will be held in Granada in April, to review convenient software packages for data processing and access like SEISAN, and to establish a distribution of tasks such as picking arrivals of seismic phases for later analyses. Group members will also attend an ORFEUS meeting in May focused on data management strategies for European seismic networks. Research tasks using the new data set (event re-localizations, teleseismic analyses, etc) will be initiated by the groups. Two technicians funded by the project will be dedicated to this array, one in Granada the other in ICTJA, the latter providing also some help on managing tasks.

The new GPS network (WP3) will be installed in the first half of the year at the field sites already selected, 21 in Spain and 4 in Morocco, 3 of them in Atlas domains. Deploying and maintenance tasks (stations have a GSM/GPRS modem system to allow checking and data recovery) are distributed between the 7 participant groups, supervised by the 3 ones with more expertise (ROA, Univ. Barcelona and Jaén). A specific cooperation agreement will be fixed between ROA (WP coordinator) and the Institut Scientifique, Rabat University to ensure the operations in Morocco. A group meeting will be held to discuss data processing strategies, review convenient software for data analysis such as GAMIT GLOBK package, and to evaluate the quality of the existing permanent GPS sites in order to be useful for the project network. A technician contracted in the Univ. Barcelona since July 07 will continue to help in the GPS operations.

The new Magnetotelluric array (WP4) will be fully operational in April, as the two types of instrumentation, broad band and long period stations have been acquired and delivered in two stages (December 07 and March 08). Field acquisition of MT transects will be carried out mostly in the period June-September 08. Three crustal and lithospheric profiles are scheduled for this period, that will sample respectively the northern area of Morocco, the Galicia domain and a transect from the Sierra de la Demanda to the Basque-Cantabrian Zone. The working group will meet during this period to fix common strategies for data processing and interpretation.

The formation and evolution of relief since Miocene times in key areas of Iberia and North Africa will be investigated within WP5 by collecting new geologic, geomorphologic and geochronologic data. The Betics-Rif cordillera, for instance, will focus attention of many groups and teams participant in the project, some of them extending activities to the Anti-Atlas region in relation with uplift and basin deformations. Field campaigns are scheduled during 2008 to carry out: paleoseismic studies in selected trenches along

Carboneras fault (Eastern Betics); sampling for measurements of geochronology from cosmogenic isotopes and/or thermochronology from fission tracks and U-Th/He in sites of the Pyrenees and Cantabrian ranges, Duero basin, Betics-Rif cordillera or Anti-Atlas; measurements to obtain geomorphological indexes that may help to evaluate land slide hazards, considering for instance LIDAR applications; paleoclimatic and paleogeographic studies in southern Iberia; studies of active tectonics in the Betics, seismotectonics, tectono-metamorphic structure and evolution of basement in the Pyrenees, etc. Two technicians will be incorporated since early 08 at the Universities of Barcelona and Cadiz, to work in the geochronological measurements and analyses.

The WG6 focuses in establishing consistent models of internal structure and seismotectonics that integrate all available geological and geophysical data. In 2008 members of this WG will work mainly in developing modelling tools that may allow later on the data integration. In particular, concerning the present structure of crust and mantle, they will incorporate mantle petrophysic and mineralogical parameters to the 1D and 2D models, Vp and Vs calculations to be compared with seismic tomography, melting in 1D models and consider integrated crust-mantle models in 3D. As for lithospheric deformation models, they will develop extension models with viscoelastic rheology to be applied in continental margins, and delamination models that incorporate melting or surface processes (erosion/sedimentation), to be considered also in subduction/extension models. Other tasks to be mentioned are the coherency analysis to obtain elastic thicknesses in order to characterize mechanically the Iberian and North African lithospheres, the compilation of data from potential methods (gravity and magnetism) to contribute to crust-mantle structural models, or the seismotectonic analyses by characterizing active fault systems, relocating earthquakes, etc.

Analysis and modelling of tectonosedimentary and relief evolution processes is the topic of WG7. In 2008 members of this group will develop studies on the interaction between tectonics, erosion-sedimentation and environmental impact, and on the influence of relief variation on the surface tectonic deformation, by looking at relief uplift rates and paleoclimatic changes at sedimentary data from Tortonian to present. They will work also on the evolution of river systems and drainage networks, and on establishing denudation and uplift models of the main orogenic systems. Particular emphasis will be devoted to development of analogue models in cooperation with the Amsterdam University, to be compared with numerical models. Another activity to be remarked, led by the coordinator of this group, is the organization of the 4th International TOPO-EUROPE Workshop, promoted by the International Lithosphere Program, that will be held in October 08 at El Escorial. In this 3-day workshop a full session will be devoted to the Topo-Iberia project, including detailed reports and presentations of the different WPs.

Finally, the WP8 focuses on the interrelation between surface and deep processes. The structure and 4D evolution of Iberia will be highlighted from the integration of all physical observables gathered and analog and numerical models developed in the project. The group members will meet and fix interaction strategies with the other on-going Subprogrammes.

## ***VI. National and International activities carried out in order to increase the visibility of the Programme (one page)***

One of the most relevant activities related to the visibility of the Topo-Iberia project has been the extensive participation in the different stages of the TOPO-EUROPE, an ESF-EUROCORE that has similar objectives but on an European scale. The Topo-Iberia managing Institution and Coordinator were one of the groups that promoted this TOPO-EUROPE programme, successfully retained and which launched Outline and Full proposals during 2007.

Several teams of the Topo-Iberia groups participated in different Topo-Europe Outline proposals, which involved in some cases other Spanish groups not included in Topo-Iberia. At this stage, a close interaction was established between all these Spanish teams. Up to three proposals including Topo-Iberia members were retained and went to Full proposals, the final resolution of which is still pending.

The managing Institution and Coordinator have also participated in a proposal at the Marie Curie Initial Training Network (ITN) Actions of the FP7, called 'ELITE' (Euroarray Lithosphere Imaging Team). The proposal, with many similarities with the IberArray component of Topo-Iberia involved 10 Participant Institutions and a basic aim was to allow funding for PostDoc and PhD works in a transversal manner. Although highly ranked, it was not finally retained, with a recommendation to be resubmitted in 2008.

A presentation of the Topo-Iberia programme has been requested to the Coordinator at three relevant international forums:

- European Geosciences Union 4<sup>th</sup> General Assembly, Wien, Austria, April 2007
- International Lithosphere Programme Meeting "New Frontiers in Integrated Solid Earth Sciences". ILP Conference at GFZ Potsdam, Germany, 12/13 June 2007.
- DGP-IS and EERWEM Consortium Meeting. Rabat (Marruecos). 15-17 Nov 2007.

Different members of the Topo-Iberia Groups have attended and presented several contributions in another two relevant venues directly related to the project:

- 3<sup>rd</sup> International TOPO-EUROPE Workshop Accademia Nazionale dei Lincei, Roma, Mayo, (2007)
- The Geology of Vertical Movements: Uplift and Subsidence, Mountains and Basins". 3rd meeting of the ILP Task Force on Sedimentary Basins, Marrakech, Morocco, October 28-31, 2007

Finally, another aspect to be mentioned regarding external connections is the relationships initiated with international research teams with close interests in some aspects, as for instance in the IberArray observatory platform. Cooperation strategies have been examined during 2007 with different groups from Portugal, France and Morocco in order to expand the IberArray networks to these neighbouring countries, and they will be substantiated in 2008.

## ***VII. Detected problems and suggestions (one page)***

There has been no relevant problems to be highlighted. A couple of aspects worth to be mentioned are:

- The project has benefited from complementary contributions provided by the participant groups from their own resources, at no extra cost for the project. As examples, the IGME has assumed about half of the acquisition cost of the general database server system; the ICTJA has furnished another very similar server that centralizes the new seismic datasets, and all groups have contributed with much field and laboratory support from their technical staff. This setup assures data safety.
- At an early stage of the project, by the end of 2006, up to 9 Subprogrammes or Workpackages had been defined, one of them (former WP8) focused on the structure and tectono-sedimentary evolution of Iberian margins. However, during 2007, it became clear that the corresponding tasks were somehow redundant with those of other WPs. There were no acquisition of new data along the margins foreseen in the project, compilation of the existing data was already a task defined in WP1, and modeling of structure and evolution were also tasks to be achieved within WP6 and 7. Furthermore, in the Topo-Europe call, a proposal named 'Topo-Med' deals specifically with the South-Iberian margin. Many Topo-Iberia teams participate also in this proposal, which has been successfully evaluated and it is expected to be funded soon. Considering all these facts, the Scientific Committee decided not to maintain a WP dedicated explicitly to the margins, their main objectives and tasks being ensured within the other WPs.