



Project number 226160 – BS-ERA.NET

BS - ERA.NET

Networking on Science and Technology in the Black Sea Region

Instrument: Coordination and Support Actions (Coordinating type)

Annex 1: Input for the Deliverable 1.4

Benchmarking and Identification of Good Practice

Start date of project: 1 January 2009

Duration: 3 years

Lead beneficiary for this deliverable: GNSF – Georgian National Science Foundation

Project co-funded by the European Commission within the Seven Framework Programme (2007-2013)

Dissemination Level: PU

PU = Public

PP = Restricted to other programme participants (including the Commission Services).

RE = Restricted to a group specified by the consortium (including the Commission Services).

CO = Confidential, only for members of the consortium (including the Commission Services).

Benchmarking and Identification of Good Practice

This report represents results of benchmarking of the 69 programmes provided by the Programme Owners (POs) basically from the countries consortium members of BS_ERA.NET project.

Benchmarking of the programmes submitted in the form of Fact Sheets (FS) was made in accordance with: (i) objectives of the Task 1.6 - Benchmarking and dissemination of good practice, (ii) agreed selection criteria (see below) and (iii) the outcomes of discussions with BS_ERA.NET project participants, mainly with the experts involved in implementation of Work Package1 (WP1), both by exchanging e-mails and participating in the events such as Exchange Conference in Bucharest (8-9 December 2009), Executive Board meeting in Athens (19-20 October 2009), meetings with POs in Germany, France, Italy and Turkey (in November 2009) organised in the frame of Task 1.3 "Short-term exchanges of programme managers for information and best practice identification".

Results of benchmarking are summarized in the form of excel file attached to this report (please see the Annex).

At the first stage 69 programmes were classified in following 3 categories (given in separate sheets of the excel file in the Annex):

- A. So called Initiation programmes with main focus on initiation and support of cooperation that comprise one or more of the following components: mobility, feasibility study, pilot research (with focus on joint research projects supposed to be implemented in FP7 and other European/international programmes), exchange of experience/information by means of joint events (workshops, seminars, etc.).

Thirty-nine programmes of this category were identified.

- B. So called Research supporting programmes (hereinafter Research programmes) with focus on full-scale cooperative research projects that apart from mobility, workshops and other activities includes such components as: purchase of equipment, personnel costs, etc.

Twenty-nine programmes of this category were identified.

- C. The programmes aim at creation and long-term support of networks of research organizations/labs (hereinafter Networks programmes) that will benefit from sustainable partnership, free access to each others research infrastructure, etc.

One programme of this category was identified.

At the second stage: in categories A and B “homogeneous” programmes were identified (taking into consideration similarity of their principal characteristics) and separated in several groups. In particular, the following groups were created.

In category A: (i) Selected bilateral programmes of Italy, (ii) Multi/bilateral programmes of Romania, Bulgaria, Ukraine; (iii) Bilateral programmes of Germany; (iv) Programmes of SNRS based on PICS; (v) Programmes of SNRS focused on seminars; (vi) Exchange programmes of SNRS; (vii) Bilateral programmes of CNRS with South Caucasian countries; (viii) Fellowship programmes; (ix) Other programmes (including detailed FS prepared after Exchange Visits in the frame of Task 1.3).

In category B: (i) Research-industry cooperation programmes; (ii) Bilateral programmes of TUBITAK; (iii) Programmes supporting research in (private) companies; (iii) Programmes supporting economic cooperation; (iv) Other programmes.

At the third stage: (i) From some groups one (maximum two) programme was selected as “representative” of the whole group and these programmes were given status of good practice programme. Besides, some characteristics (say funding instrument, selection criteria) of other programmes were also picked out as good practice characteristics since they have their own meaning for being used as supplementary of good practice programmes.

(ii) Other groups comprising specific programmes (e.g. programmes focused solely on fellowships or support of research within companies) seem to be hardly applicable for development of the BS joint call and BSRP. Anyway, some characteristics of these programmes were identified as good practice characteristics since their content can add value to good practice programmes.

Basically the following general selection criteria were taken into account for identification of good practice programmes and characteristics:

1. Programme objectives
2. Funding schemes
3. Selection criteria
4. Evaluation procedures
5. Sustainability/potential for follow-up activities
6. Practical application/research-industry cooperation.

Brief description of good practice programmes and characteristics as well as justification for their selection are given below.

Description and justification of selected good practice*

Chapter I: Initiation programmes

On the basis of analysis of 39 programmes of **category A: “Initiation programmes”** submitted in the form of Fact Sheets the following 5 programmes can be considered as a good practice and respectively quite a few characteristics may be taken into consideration for preparation of terms and conditions of BS joint call (as well as for developing BSRP).

A1. First executive programme Italy-Turkey

Why has been selected: The programme has proven flexibility of used funding scheme and well balanced/justified distribution of responsibilities between funding parties. Selection criteria are quite comprehensive while evaluation procedure clear and precise. Duration of granted projects seems optimal. IPR issues and supporting measures (e.g. health insurance of participating researchers) are well defined. In particular:

**) Hereinafter: 1) In the Report all 3 categories of programmes are given numbers in accordance with the excel table of the Annex; 2) Apart from main 6 criteria given above, in some cases IPR issues and Other (e.g. duration of granted projects, reporting, health insurance) are also taken into consideration.*

Funding scheme. The costs of the exchange of experts and scientists resulting from the Executive Programme, unless mutually agreed. Besides the financial support towards the exchange of project researchers mentioned below, the Parties may provide additional research funds to their respective project teams whenever they consider it appropriate. It is desirable but not essential to fund the two sides equally. (The Italian Party may consider the possibility of appropriating additional funding on an annual basis for research projects of particular relevance).

- The sending Party meets the cost of international travel to the place where the joint work is carried out.
- The receiving Party meet board and lodging by means of the current daily allowances listed below. These allowances can be modified by mutual agreement of the Parties.
- Financial indicators are following. In Turkey: Free accommodation in a university guest house or equivalent. Daily allowance Short visits (10- 20 days) 20 Euro per day. Longer visits (20 days- 1 month) 500 Euro per month. In Italy: Short Visits (up to 10 days) 93 Euro per day. Longer Visits (full month= 30 days) 1300 Euro per month. Annually one visit in each direction is financed per project and the duration of a visit has not to exceed one month.

Selection criteria.

- Scientific relevance of the project;
- Impact on the bilateral scientific and technological relations;
- Intensity of the collaboration with the foreign partner(s);
- Technology transfer and human resources development;
- Potentialities for creating research and development;
- Potentialities for social and economic impact.

Evaluation procedure. Project proposals must provide detailed information on the objectives and justification of the planned joint research work, the methodology to be followed, the composition of each research team and the expected timetable.

Proposals should be prepared in English using the dedicated “Project Proposal Forms”. Proposals submitted to only one Party are not considered.

Proposals are independently evaluated and approved by each of the Parties, following their own rules and regulations and only those proposals that are approved by both Parties are supported under the Executive Programme.

IPR issues. Scientific and technological results and any other information derived from the co-operation activities under the Programme are announced, published or

commercially exploited with the consent of both cooperating partners and in accordance with international provisions concerning intellectual and industrial property rights.

Other (duration, responsibilities). The execution period of granted joint research project is three years. The receiving Party shall provide emergency illness insurance of the scientists, including medical care, on the basis of the rules in force in each country.

A2. Executive programme of S&T cooperation of Italy-Hellenic Republic

Why has been selected: The programme has proven flexibility of used funding scheme and well balanced/justified distribution of responsibilities between funding parties. Evaluation procedure differs from Programme A2, still is clear and precise. Programme intends to build the basis for follow-up activities and encourages research-industry cooperation. IPR issues and supporting measures (e.g. health insurance of participating researchers) are well defined. In particular:

Funding scheme. Some proposals have been selected and funded only by the Italian side as “Significant Bilateral Projects”. These projects were not submitted to the Greek side, which has not any financial obligation and responsibility for them. For each project, either 1 short-term stay (up to 10 days) or 1 long-term stay (1 / 2 or 3 months) is financed yearly.

The international travel expenses between the two cooperating partner institutions are borne by the sending party, while the receiving party bears the expenses of lodging and boarding by means of an all-inclusive cash allowance.

Evaluation procedure. Joint Committee examines and approves common proposals related to the exchange of scientists participating in joint projects and concerning organizational and financial issues related to their travels and stays in the place of their mission.

Basis for follow-up activities. Programme encourages partnership to allow institutions of the two Countries jointly participate in multilateral research programmes, particularly within the Framework Programme of the European Union.

Research-industry cooperation. Programme aims at strengthening the cooperation between universities, research centres and the private companies.

Other (responsibilities). The two Countries agree that accident and sickness insurance coverage (with the exception of existing and chronic diseases and denture) for the researchers traveling in the framework of the joint projects are provided by the hosting Party.

A9. Cooperation of Germany in S&T and innovation with CA and SC countries, Moldova and Belarus

Why has been selected: The programme has proven flexibility of used funding scheme. Selection criteria encourage initiation of full-scale research. Programme intends to build the basis for follow-up activities and encourages practical application of research outcomes. (Other features are quite similar to those from Programme A1-2). In particular:

Funding scheme. In well founded exceptions, expenses for further material costs and grants towards personnel costs can also be covered.

Selection criteria. Profitability/efficiency of the measures for: (i) the preparation and initiation of project-related or institutional collaborations and (ii) the initiation and planning of projects and collaborations whose funding is to be applied for under a BMBF specialist programme or an EU programme.

Basis for follow-up activities. Programme aims at preparing the ground for further submissions under current BMBF funding programmes, thematic priorities of the European Union's 7th Research Framework Programme and other EU programmes that are relevant to research.

Practical application. Preference is given to application-oriented projects and projects that include the participation of industry partners (particularly small and medium-sized businesses).

A11. Cooperation of Germany and Ukraine in S&T and innovation

Why has been selected: The programme has proven flexibility of used funding scheme. Selection criteria are quite comprehensive, yet in some extend differs from programme A1. Programme intends to build the basis for follow-up activities and provides periodical reporting procedure. (Other features are quite similar to those from Programme A1-3). In particular:

Funding scheme. In well-founded exceptional cases, expenses for further material costs (e.g. the cost of events, special small-scale equipment for feasibility studies that are not part of the laboratory's basic equipment) and grants towards personnel costs can also be covered.

Selection criteria. Applications will be considered on the basis of the following criteria, among others:

- Inclusion of new cooperation partners
- Qualification of the involved institutions
- Added value compared with cooperation to date, synergies
- Applicability of the expected results/industry participation (particularly from SMEs)

Basis for follow-up activities. Programme supports preparatory fact-finding visits, project-related scientific exchanges, expert meetings and subject-specific project planning workshops.

Other (reporting). In the first step, the maximum duration of the projects is 18 months. At the end of each calendar year, the German project leaders will be asked to submit a report on the progress of the project and an updated project plan for the subsequent calendar year.

A15. Cooperation programme of CNRS with National Academy of Sciences of Ukraine (PICS)

Why has been selected: Cooperation is implemented in the frame of programme PICS (International Cooperation in Science) used by CNRS for bilateral S&T cooperation with foreign partners. Detailed information on PICS was collected during the visit in CNRS organized in the frame of Task 1.3.

Being in operation for about 40 years PICS has proven its validity especially for facilitation sustainable cooperation. PICS is opened for all countries as well as for co-funding (especially for joint calls) and covers both basic and applied research in all

priority areas. Four calls since 2006 have been launched; 10 projects currently funded.

The programme has proven flexibility of used funding scheme. Selection criteria differs from programme A1 and A11 and seems quite interesting (requires existence of cooperation). Evaluation procedure also differs from programme A1 and A11 (consists of 2-sages). In particular:

Selection criteria. Applicants should have experience of consolidating and ongoing collaboration that has already been expressed in joint publications; Research teams should well complement each other; Participation of young scientists is welcomed.

Evaluation procedure. consists of 2-sages. First stage is in the hands of institutes while the second stage selection is a decision of POs.

IPR issues. In case of joint call, final decision is made by joint committee and IPR rules are agreed (e.g. nondisclosure agreement should be signed by individual researchers).

Other programmes analysed in category of A: “Initiation programmes”

Analysis of the rest 24 programmes (out of 39 submitted under category A: “Initiation programmes“) have some characteristics that can be considered as a good practice and taken into consideration as complementary to selected 5 programmes (see above). Among other, attention is paid to different scale of funding in order to show some indicative figures for the budget of forthcoming BS joint call.

Funding scheme

- International travel expenses between the two cooperating partner institutions are borne by the sending party, while the receiving party bears the expenses of lodging and boarding by means of an all-inclusive allowance (Programme A3).
- In justified cases funding of personnel and grants for young researchers involved in the project can be provided (Programme A7).
- Physical resources (e.g. consumables for pilot studies) can be funded. The grant for each project may amount to a maximum of 50, 000 euros. As a rule, at least two further institutions must be involved in addition to the German applicant, at least one of which must be from a CEE/SEE country (Programme A10).
- Projects duration is 12 months, with a budget of up to 35, 000 euros each, shared

between Germany - approximately 25, 000 Euro and Moldova - approximately 10, 000 Euro (Programme A12).

- In special cases (e.g. expendables for feasibility or pilot studies, contracts for work and services) additional research funds can be provided (Programme A13).
- Bilateral programme funds both: a) preparatory visits (up to three weeks) or consultative visits (up to three months) at the respective partner's institute. In justified cases maintenance and international travel for participants from other countries can be funded (Programme A14).
- Funding is provided for organisation of scientific seminars for duration of 3 days, with additional visits to institutes of the scientific domain concerned. (Programme A18).
- Funding can not exceed 20 000 euros per year/per project. Eligible costs are: (i) Travel costs: _sending party paying model; receiving party paying model; (ii) Personnel Costs: scholarships for young researchers (up to 35 years); PhD scholarships; grants for researchers at post doctoral level. (iii) Conferences, (iv) Exhibitions (Programme A29).

Selection criteria

- Priority is given to proposals with proven co-financing by national, regional, international and/or European programs (Programme A8).
- Each project must combine at least two French labs and two labs from two different Eastern European countries (Programme A30).

Evaluation procedure

- Applications will be examined and evaluated by an Evaluation Committee consisting of representatives of all participating countries, with the assistance of external assessors and of the Joint Technical Secretariat. Partner from other countries can participate based on own funds (Programme A5).
- Romanian directors have the possibility to invite researchers from different countries to join meeting of the progress review and in this situation, ANCS support for a short period their expenses such as: accommodation and meals (Programme A6).
- Separate Evaluation procedure conducted by experts of the Ministry and independent researchers (Programme A29).

- Evaluation procedure consists of two stages. In the first stage, a draft proposal is submitted and reviewed. Draft proposals may be submitted at any time. Based on the review, the DFG Head Office advises applicants on whether they should move to the second stage and submit a full proposal. Full proposals may be also submitted at any time, following successful review of the draft proposal. Applications are reviewed during a site visit to the proposed host institution. The reviewers form their judgment on the basis of the written information contained in the proposal and the on-site presentation by the Research Training Group (Programme A31).

Other (duration, responsibilities)

- For each project, 1 short-term stay (up to 10 days) and 1 long-term stay (1 full month=30 days) is financed yearly (Programme A3).
- German university is expected to provide the necessary core support including appropriately equipped office and laboratory space, while the foreign partner institution should ensure basic funding for its doctoral researchers, their research, and visits to the German partner institution. The maximum funding period is nine years (two 4.5-year funding periods). The proposal for the first 4.5 years is written jointly by the principal investigators who participate on both sides (Programme A31).

Some instruments of other programmes are practically similar to instruments already selected as a good practice, others are not of particular interest for BS joint programme (see also Annex, Excel file sheet 1).

Chapter II: Research programmes

On the basis of analysis of 29 programmes of **category B: “Research programmes”** submitted in the form of Fact Sheets the following 4 programmes can be considered as a good practice and respectively number of their characteristics may be taken into consideration for preparation of terms and conditions of BS joint call (as well as for development of BSRP).

The following criteria are taken into consideration: Funding scheme, Selection criteria of granted projects, Evaluation procedure, Sustainability/potential for follow-up activities, Research-industry cooperation/Practical application, IPR issues, Other (duration of granted projects, reporting, health insurance, etc.).

B1. Zentrales Innovationsprogramm Mittelstand (Programme Line: ZIM-KOOP)

Why has been selected: Cooperation with industry (SMEs in particular) is a priority of FP7 and national S&T programmes of practically all European states. Still, lack of such cooperation is a weak point of most of BS countries and therefore consideration of ZIM-KOOP programme (or at least some of its elements) for preparation of terms and conditions of BS joint call (as well as for development of BSRP) seems reasonable. The programme is open for participation of all countries and uses well-developed instruments and covers all priorities. In particular:

Funding scheme. Alongside with travel costs and consumables covers personnel costs, purchase of equipment, and wide modality of dissemination (including organization of exhibitions). The funding for companies is limited to 350.000 Euro, for research institutions to 175.00 Euro and the total sum of a joint R&D project is limited to 2 Mio Euro.

Evaluation procedure. Application is possible at any time; application forms can be obtained at www.zim-bmwi.de and have to be handed in at AiF. It is possible to hand in a draft concept for a first feedback or consult AiF before the application.

Research-industry cooperation. comprises support of full scale research projects with focus on market oriented R&D and innovation, transfer of research results into market relevant innovation and at strengthening R&D cooperation of SMEs with public and private non-profit research institutions. Among other, ZIM-KOOP provides fund for joint projects of company/companies and research institution(s).

B2. German –Turkish R&D Projects Involving Science and Industry (2+2 projects)

Why has been selected: The programme alike the ZIM-KOOP (B1) supports cooperation of research with industry, still some of its instruments differ from ZIM-KOOP and worth to be considered. In particular:

Funding scheme. Funding is provided in the form of non-repayable grants amounting to 150,000 (Euro 450,000 per project and country). The duration of the projects generally will be up to three years. However, after the second year the project will be evaluated and funding for the third year approved. The university and company should have equal shares of the overall funding. An allocation of 35-65 % for the university (or company) is acceptable. The Projects may also use additional funds from external sources.

Evaluation procedure. The partners of the selected projects have to submit a cooperation agreement between the partners prior to the conclusion of the funding contract.

Selection criteria. Long-term strategy of the partnership. Commercial exploitability of the expected results; Prospects for success (assessment based on availability of human resources and infrastructure, quality of project management and work plan).

Research-industry cooperation. Projects implemented in the frame of this programme should involve at least one research center and once company from each country and aims to lay foundation for lasting R&D partnership.

B3. Programme for Joint Research Projects of TUBITAK and Academy of Sciences of Bulgaria

Why has been selected: The program is an example of cooperation of 2 BS countries having relatively advanced R&D in the region. It supports scientific and technological cooperation between the two countries and uses some instruments different from compared to programmes B1 and B2. In particular:

Funding scheme. Projects can be up to three years and can receive a maximum amount of approx. 56.000 Euro per year. Mobility, as well as the research expenses of the researcher (equipment, consumables) is covered. Turkish Researchers from universities, public and private sector should apply as project coordinators.

Evaluation procedure. Applications should be submitted to TUBITAK and BAS through a joint English application form agreed by both sides. Proposals are evaluated independently by both sides through their own procedures (through peer review composed by independent researchers, in case of TUBITAK). Following the evaluation process, both sides share their views on the applications and only the projects that are agreed by both sides are selected for implementation.

B14. NATO Science for Peace and Security (funding line “Science for Peace”)

Why has been selected: Science for Peace (SfP) supports full scale research project (covering expenses for acquisition of research equipment). SfP programme seems quite comprehensive and well-developed and has some distinguishable characteristics. In particular:

Funding scheme. Funds are provided to cover the cost of **scientific equipment**, computers, software, travel, training of project personnel, and project-specific consumables. In addition, up to a maximum of 10% of the grant will be available as stipends to key young scientists working on the project. Projects may be up to three years' duration.

Although there are no formal upper and lower limits to the level of funds which may be requested from NATO for individual projects, the average amount awarded in the past has been between 250,000 and 300,000 Euro per project, of which no more than 50,000 Euro has been awarded to the NATO country participants.

Selection criteria (among other) are following:

- Ability to promote collaboration among scientists and end-users (The entity which will be using the results of the project. Say, in the case of projects industrial nature the end-user will generally be a private company).
- Good prospects for promoting the integration of the country's scientists into the international R&D community.

Evaluation procedure Project Proposals (max. 6 pages + CV's) can be submitted at all times and are evaluated by an Advisory Panel of independent experts.

Applicants of proposals recommended for further development by the Advisory Panel will be invited to prepare a detailed "Project Plan". A "planning grant" will be made available by NATO for meetings of participants in order to prepare this Project Plan.

The Project Plan should describe in detail the purpose and objectives of the project, its management and organisation and the responsibilities of key personnel, and must also include a detailed work plan and budget.

The Project Co-Directors (NPD and PPD) will then personally present their Project Plans to the Advisory Panel and, if accepted, full project support will begin. The approved Project Plan will become the basis of a contract between the Project Co-Directors and NATO.

IPR issues As a condition of final approval of a project a written agreement, where appropriate, on the ownership of the intellectual property which may result from the project, must be drawn up and signed by all principal participants.

Other programmes analysed in category of B: "Research programmes"

Analysis of the rest 25 programmes (out of 29 submitted under category B: "Research programmes") have shown some characteristics that can be considered as a good practice and taken into consideration as complementary to selected 4 programmes (see above).

Programmes B15-B17 support research activities within companies and seem to have relatively low significance for DS joint call. Still worth to be noted some funding indicators: (i) Programme B15 provides funding for the period of two years, up to maximum amount of 50 000 Euro for each partner; (ii) In programme B16 average funding of a project is 150 000 Euro for France (provided by Oseo) and 100 000 Euro for Russia (provided by FASIE); (iii) In programme B17 for big scale firms the support ratio is between 50% and 60%, for SMEs the support ratio is 75 % of the eligible R&D expenses. Programmes B18- B22 are of economic nature and R&D element here is inessential.

Still, some characteristics may be taken into account. In particular: (i) Grants of programme B18 do not exceed 80% of the total eligible costs with the other 20% covered by the project partners; (ii) Programme B19 welcomes involvement of a many BSEC countries as possible. (iii) Programme B22 (PETROMAX) provides grants for researchers and PhD students' participants of ongoing big projects those which are not initiated and/or funded by PETROMAX and are implemented by companies.

Programmes B23-B29 (under subtitle "Other" in Annex) are quite alike. Some characteristics are already noted as a good practice, others have low meaning for BS joint call and BSRP.

As to programmes B4-B12, as well as programme B13 (bilateral S&T cooperation between Turkey and Greece) are practically similar to B3 - "representative" programme of the group titled as "Bilateral programmes of TUBITAK " already selected s good practice.

Chapter III: Networks Programmes

Only one programme can be referred to category with focus on creation and long-term support of networks of research organizations/labs that will benefit from sustainable partnership, free access to each others research infrastructure, etc. In particular programme Intensified Cooperation (IntenC) - Promotion of German Turkish Higher Education Research programme can be considered as an attempt to create sustainable network of labs of the two countries for full-scale R&D cooperation.

The funding is granted for a period of three years, up to a maximum amount of 110,000 Euro for each partner. Programme supports innovative approaches in areas that are currently of high technological interest or relevance.

The approaches must open up concrete prospects for future cooperation, build up networks and create a foundation for a lasting partnership that exceeds the period of funding. More specifically, the targeted promotion of German-Turkish higher education collaborations in innovative fields of research has the aim of giving new impetus to this sector, which is expected to lead to a new level of R&D relations between higher education partners, particularly for the benefit of young researchers.