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BS - ERA.NET

**Networking on Science and Technology
in the Black Sea Region**

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formulation of recommendations for mutual synergic mechanisms***

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1. INTRODUCTION

The Black Sea region¹, a distinct geographical area rich in natural resources and strategically located at the junction of Europe, Central Asia and the Middle East, has always been of great concern to the EU. When, Bulgaria and Romania, two Black Sea littoral states, joined the European Union on January 1st, 2007 this concern regarding the prosperity, stability and security of nations around the Black Sea has been actively reconfirmed.

The Black Sea region faces a range of opportunities and challenges for its citizens. The region is an expanding market with great development potential and an important hub for energy and transport flows. It is, however, also a region with unresolved frozen conflicts, with many environmental problems and insufficient border controls thus encouraging illegal migration and organised crime. The European Union has already made major efforts to stimulate democratic and economic reforms, to project stability and to support development in the Black Sea area through wide ranging cooperation programmes. EU policies such as the pre-accession process in the case of Turkey, the European Neighbourhood Policy (with five eastern ENP partners also being active in Black Sea cooperation) and the Strategic Partnership with the Russian Federation are relevant in this context. Additionally, there are significant opportunities and challenges in the Black Sea area that require coordinated action at the regional level. These include key sectors such as energy, transport, environment, and security. The EU, through the Commission's Communication **"Black Sea synergy - A new regional cooperation initiative"** COM (2007) 160, Brussels, 11.04.2007 has further defined cooperation priorities and mechanisms at the regional level. The primary task of Black Sea Synergy would be the development of cooperation within the Black Sea region and also between the region as a whole and the European Union.

¹ The Black Sea region (See Map in Annex II) includes Greece, Bulgaria, Romania and Moldova in the west, Ukraine and Russia in the north, Georgia, Armenia and Azerbaijan in the east and Turkey in the south. Though Armenia, Azerbaijan, Moldova and Greece are not littoral states, history, proximity and close ties make them natural regional actors.

The scope of actions could extend beyond the region itself, since many activities remain strongly linked to neighbouring regions, notably to the Caspian Sea, to Central Asia and to South-Eastern Europe. There would be a close link between the Black Sea approach and an EU Strategy for Central Asia. Black Sea cooperation would thus include substantial interregional elements and should also take account of other regional cooperation programmes supported by international organisations and third countries.

Therefore, Black Sea Synergy should focus on issues and cooperation sectors reflecting common priorities, where EU presence and support is already significant. Thus, among others, **Science and Technology (S&T)** emerges as an important cooperation sector and the Commission has declared its intention to promote capacity-building and S&T policy dialogue with the Black Sea countries, in particular through the instruments available under the current 7th Research Framework Programme (FP7).

The first efforts to consolidate the potential of the Black Sea countries and to establish stronger links with the scientific community of the EU were spearheaded by the **INCO Programme** of the 6th Framework Programme for Science, Technology and Development (2002-2006). This programme was aimed at Bulgaria, Romania and Turkey as well as eastern ENP partners. The Framework Programme included additional and substantial cooperation with the latter, particularly through the INTAS Programme which focused on cooperation between the EU and Eastern Europe and Central Asia. In September 2005, the Ministers of countries that belong to BSEC² adopted a '**BSEC Action Plan on cooperation in science and technology**' which was developed for a 4 years period. It aimed at enhancing S&T cooperation among the Black Sea countries as well as between BSEC and the EU and in that context, the European Commission is entitled to participate in all S&T Working Group meetings.

The implementation of the EU co-funded project '**Research Potential of the Black Sea countries (BS-ResPot)**³ was the first systematic and comparative

² The Black Sea Economic Cooperation (BSEC) is an international organisation currently including 12 Member States around the Black Sea and in the Balkan Peninsula, namely: the Republic of Albania, the Republic of Armenia, the Republic of Azerbaijan, the Republic of Bulgaria, Georgia, the Hellenic Republic, the Republic of Moldova, Romania, the Russian Federation, Serbia, the Republic of Turkey, and Ukraine. For more information visit the BSEC website (www.bsec-organization.org).

³ For more information on the project 'Research Potential of the Black Sea countries' please visit the ICBSS

investigation of the research landscape in the Black Sea region. The study provided an in-depth description of the research systems on a country-by-country basis, as well as a comparative analysis across the countries using several S&T Indicators such as the number of researchers, scientific publications or patents, national expenditures for RTD, etc. The International Centre for Black Sea Studies (ICBSS) was the coordinator of the aforementioned project co-funded by the European Commission (EC) under the 6th EU Framework Programme for RTD (FP6). Following the successful completion of the project, the ICBSS proposed to the EC follow-up actions that would build on the previous achievements and would open new prospects for cooperation among the BSEC countries and create more favourable conditions for an enhanced participation of researchers from the region in the new 7th EU Framework Programme (FP7). Thus, the Commission ensured the inclusion of an ERA.NET call concerning the Networking on Science and Technology in the Black Sea Region in FP7 Work Programmes, to promote synergies between EU and the Black Sea region.

2. THE BLACK SEA ERA-NET PROJECT

The objective of the BS-ERA.NET project is to develop and strengthen the coordination of public research programmes conducted at national and regional level, which target a group of countries from the extended Black Sea region. The project is providing a framework to network and mutually open national and regional research programmes. Furthermore, it complements the IncoNet EECA (S&T International Cooperation Network for Eastern European and Central Asian Countries), which started in January 2008 and is also in progress.

The main goal of the BS-ERA.NET is to provide a key-turn ready **Black Sea Research Programme (BSRP)**. As the BSRP will be a complex instrument, it is necessary to develop common strategic activities such as the identification of mutual complementarities between the national programmes of the partners; the identification and analysis on the interaction between the national programmes and those of the intergovernmental structures; the identification and analysis of practical and concrete networking activities and mutual opening mechanisms that can be included in the

BSRP; the identification and analysis of barriers that hinder transnational cooperation activities (administrative and legal barriers); the design of common evaluation systems. The BSRP will represent the strongest form of networking and will consist of funding and implementing a joint programme of two-year transnational research projects and actions, foreseen to launch a Call tailored to specific needs in 2010.

In the context of Work Package 1 (WP1) *“Systematic Information Exchange on National and Multilateral initiatives in the Black Sea Region”*, substantial information on the existing national and regional RTDI programmes was collected and analysed. In Work Package 2 (WP2) *“Definition and preparation of common strategic activities between coordinated RTDI programmes in the BSR”*, the input from WP1 input has been used to prepare the foundation of the future Black Sea Region RTDI Programme. T2.2 *“Performing of a SWOT analysis on the practical and concrete networking activities and formulation of recommendations for mutual synergic mechanisms”* is a central task of WP2. In order to prepare the SWOT analysis, previous surveys⁴, input from T2.1 as well as WP1 deliverables were taken into account. The following SWOT analysis is based on updated information provided by the partners in WP1, and also relies on the response of several programme owners to a specially designed questionnaire also disseminated and analysed in WP1. This SWOT analysis is expected to give a significant input to T2.3 *“Elaboration and acceptance of the Black Sea Research Programme by the BS-ERA.NET consortium”* and will serve as the basis for implementing WP3 *“Defining the BS Research Programme (BSRP)”* and WP4 *“The preparation and launching of the first Joint Call under the BSRP for the year 2011”*.

Chart SWOT (to be added)

⁴ mainly the BS-Respot country reports (www.icbss.org section: ResPot)

3. STRENGTHS

3.1 Broad Thematic fields

Every BS country has its own priority domains for research, according to its national development targets, human research potential and material infrastructure, the requirements of the private sector, and other specific conditions and needs.

There are, however, several areas of science, including fundamental research, where some countries of the region have an acknowledged comparative advantage that can justify a joint regional effort since they are apt to respond to the main challenges of sustainable and equitable development in each individual country and in the region as a whole. These areas include such fields as Environmental research, Black Sea and Seismological studies, Energy and Transportation, Agriculture and Food safety, Information and Communication Technologies, etc.

According to the work carried out within the context of BS ResPot and the BS ERANET WP1, the spectrum of scientific disciplines where a critical scientific mass has been active throughout all this difficult transition period is broad. Besides the above mentioned disciplines, these include Engineering, Geosciences; Materials sciences and Chemistry; Mathematics, Physics and Astrophysics.

The preferences of the BS-ERANET partners with regard to International S&T Cooperation concentrate on Environment, Energy, ICT, Biotechnology/Life Sciences, Health, Nanosciences, Food, Agriculture and Fisheries, Biotechnology, Humanities and Social Sciences. In some of these scientific fields (i.e. Health subtopics such as Genetics and molecular biology; Neurosciences; Immunology) the BS countries are still lagging behind but both their policy makers and their scientific community seem to exhibit a strong will to catch up.

3.2 Extensive Bilateral-Multilateral Cooperation

Among the partners of the BS ERANET, there is already a plethora of programmes targeting and/or including the Black Sea region. In France, Germany, Greece, Italy, bilateral S&T agreements mainly with Russia, Ukraine, Romania, Bulgaria and Turkey, have been functioning for years now and are regularly activated. In Romania and Bulgaria, besides bilateral programmes, there are additional

initiatives focusing on the Black Sea region (i.e. OP regional development; programmes for territorial cooperation in Bulgaria, **BLACKSEAFOR** (Black Sea Naval Co-operation Task Group) - Bulgaria, Romania, Georgia, Turkey, Ukraine, Russia and Black Sea Cross Border Cooperation Programme in Romania). The same applies for the BS countries Armenia, Azerbaijan and Moldova [**Black Sea Basin Joint Operational Programme - BS JOP** and **NATO Science for Peace and Security (SPS)**, an International Programme with a special target to the BS region through the Euro-Atlantic Partnership Council (EAPC)]. It is important that nine out of the thirteen states represented in the BS-ERA.NET consortium are full members of the **Black Sea Economic Cooperation (BSEC)**, namely Armenia, Azerbaijan, Bulgaria, Georgia, Greece, Moldova, Romania, Turkey and Ukraine. In that sense, within the context of BSEC, they are active members of the Working Group on Cooperation in Science and Technology whose Action Plan undertakes specific initiatives and tools to provide tangible results. A main priority of the **new Action Plan (2010-2014)** which is under elaboration right now seems to be the opening up of the already existing bilateral cooperations and the enhancement of the researchers' mobility.

3.3 European Union Projects targeting the region

Significant initiatives have been and/or are being implemented right now aiming at enhancing cooperation among the countries of the wider Black Sea region with EU Member States in the field of S&T. Ongoing projects such as the EU funded "S&T International Cooperation Network for Eastern European and Central Asian Countries" (**IncoNet EECA**, ending at 2011) and "Networking on Science and Technology in the Black Sea region" (**BS-ERANET**, ending at 2011) provide the context for sustainable S&T cooperation of mutual interest, the development of synergies and the building of the right mentality among policy makers, research administrators but also researchers. The vast majority of the **BS-ERANET** partners also participates in, **ERA.NET Rus** (ending at 2012), **WBC INCO NET** (ending at 2011) and **SEE-ERA NET PLUS** (ending at 2012) and as previously mentioned, EU projects, such as **BS ResPot** and **SESAME** (www.sesame-ip.eu), have already been completed with great success setting the background for convergence of the S&T

systems between the countries of the wider Black Sea region and the EU Member States.

3.4 BSEC - Political commitment for reforms and cooperation

Science and Technology has been identified as a very important field of activities since the establishment of the BSEC fifteen years ago. The impact of Science and Technology on the sustainable economic development and prosperity is widely recognized among the BSEC Member States. As a consequence, a Working Group on Cooperation in Science and Technology (WG S&T) has been created as a formal organ within the BSEC structure. The WG S&T consists of representatives from all the BSEC Member States, usually at the rank of high level officials from the Ministries responsible for Research. Currently, the WG S&T is probably the most active Working Group among those operating within BSEC.

The preparation and adoption of the **‘BSEC Action Plan on cooperation in Science and Technology’** is the main political initiative in the field of S&T within BSEC. The active involvement of several countries in the process indicates their political commitment and the adoption of the Action Plan should therefore be seen as a clearly multilateral effort proving the necessity and timeliness for common goals and enhanced cooperation in S&T. Actually, the present 2nd Action Plan **renews the commitment** of the BSEC Member States to cooperate in the development of S&T and **reconfirms the policy orientations** for such cooperation, taking into consideration the developments in the policy landscape in the BSEC, but also building on the achievements of the Action Plan 2005 – 2009⁵. Furthermore, the 2nd Action Plan in addition to the reconfirmation of broader policy orientations proposes and highlights a number of more **specific initiatives and tools** the use of which will provide tangible results, increasing at the same time the visibility of its interventions in the eyes of the wider community.

It is worth while mentioning that in line with the BSEC activities and in the context of the EU’s strategy and initiatives towards the Black Sea region, successive reforms which affected S&T priorities, organizational changes as well as changes in

⁵ ‘BSEC Action Plan on Cooperation in Science and Technology’ Adopted in Athens (27 September 2005) by the Ministers responsible for Research in the BSEC Member States (Annex IV to BS/STM/R(2005)1).

the higher education system have taken place or are in process in a lot of Black Sea countries.

4. WEAKNESSES

4.1 Governance of RTD system

The research systems of the Black Sea countries present diverse modes of organisational set-ups, ranging from typical European/OECD type RTD systems to research systems of the New Independent States, characterised by a structural change process that resulted in research systems quite different from both the OECD countries and the former Soviet R&D System. This diversity in the organisational set-ups, which derives from the historical record of the countries, is an obstacle in terms of coordination and opening up to multilateral programmes. To a certain degree, systemic reforms affecting S&T priority setting but also division of labour among the dominant RTD facilities and the higher education system have been attempted in some countries. However, the reform processes still remain far from being complete. In the course of the BS-ResPot work programme, several aspects of critical importance for the further enhancement of the BS countries research systems were initially identified. Very recently, these were reconfirmed within the scope of WP1 of the BS-ERANET, according to which there is a great diversity concerning the governance of the S&T systems and the funding mechanisms within the Black Sea region.

In the majority of the countries of the region besides Ministries, mainly the Ministry of Education and Science, Academies of Sciences are also actively involved in policy/decision making. In particular, in Bulgaria and Romania, the only countries of the Black Sea region being also EU member states, there are several public entities/authorities involved in decision making, the Parliament included in Bulgaria. Only Turkey, an EU associated state, has a centralized mechanism through The Scientific and Technological Research Council of Turkey- TUBITAK which is at the same time the only decision maker and also programme owner. This is also the case in Moldova but through the Academy of Sciences of Moldova, which allows through its

governing bodies the participation of the scientific community in the decision making processes.

A strong vertical segregation of teaching (universities), fundamental research at the academies of sciences, and applied research in industrial R&D institutes is still observed in most of the BS countries. This raises a demand for stronger integration of actors of the research systems. Some countries generated ideas to reform their National Academy of Sciences or Councils. Behind the political motives for these re-organisations, there were the interests of stakeholders who were not in favour of the usual functional triangle of administration, science and business. Other reform processes were launched in order to overcome poor financing and lack of interaction between education and science.

While the reform processes still remain incomplete, the great diversity concerning the governance of the S&T systems and the funding mechanisms within the Black Sea region along with budget, legal and access to information problems could inhibit the optimum implementation of networking activities. Moreover, the lack of experience and training of policy makers and research administrators in a series of aspects concerning international S&T cooperation constitutes an additional problem hindering active involvement of the BS countries in the international S&T landscape.

4.2 Ranking of S&T in the political agenda

Overall research funding remains limited and Science and Technology policy is not at the top of the political agenda of most national governments in the Black Sea region. This is the main obstacle in the opening up to multilateral programmes and internationalisation of research. While reform initiatives towards this direction have been undertaken by new member states of the European Union and despite the synergies with EU funding mechanisms, the situation has not changed considerably.

4.3 Brain Drain - Ageing of RTD personnel

The research capacity of a country depends heavily on the availability of qualified R&D personnel. Unfortunately, the majority of the BSEC countries do not provide official statistics for human resources in science and technology equating to

the OECD Frascati Manual and the concept of Full Time Equivalents (FTE)⁶. As human resources for RTD suffered enormously during the transition period, brain-drain and ageing of RTD personnel is a situation characterising human potential in most BS countries. According to BS ResPot documents, in Armenia, Azerbaijan, Georgia, Moldova and Ukraine the number of the research personnel has considerably declined in the last fifteen years. In Romania the employees from R&D per 1000 civil employed persons, decreased from 64.8 in 1998 to 46.1 in 2002, still it increased in private and private-majority R&D companies. Bulgaria also experienced a decline of R&D staff and scientists within the same period. Only, Turkey has experienced an average annual growth rate (1998-2000) of the FTE of researchers in the R&D system of 10.4 percent.

The above described situation has not been improved considerably ever since. It is probably getting better for the EU MS/AC Black Sea countries due to the perspective provided through their participation in the EU Framework Programmes. Overall, brain drain in the RTD sector, in the BS region, should be seen as a two-fold problem: emigration of researchers to other countries and also re-allocation of researchers to non-research and technology related activities in the private and public sectors due to higher income opportunities. Ageing of RTD personnel has also been identified as a core problem. The fact that all BS countries use the participation of young researchers as an important evaluation criterium for the projects requiring funding reflects the gravity of this issue.

4.4 Basic research versus Applied research

In most BS countries, the majority of RTD activities concerns basic research which also emerges as the leading priority in the design of bilateral, multilateral and international cooperation programmes. This probably reflects the scientific culture in those countries which still have a pool of well educated, competent scientists but do not have an easy access to recent R&D infrastructures and developments. In line with the fact technology development (applied research) and innovation are not main

⁶ Researchers are professionals engaged in the conception or creation of new knowledge, products, processes, methods and systems and in the management of the projects concerned.

priorities, enterprises cannot be beneficiaries of S&T cooperation projects in most BS countries.

4.5 Enterprise sector under-represented in RTD

The enterprise sector in most BS countries is still under-represented in RTD performance and there are only limited joint RTD initiatives undertaken between the public and the private sectors. Unfortunately, to date, international RTD collaborations with Western countries are also limited.

According to the analytical work performed within WP1, in most cases enterprises, which could be a critical factor in the Black Sea Research Programme (BSRP) design, have not been integrated as beneficiaries in the vast majority of the BS programme owners, with the exception of Turkey and the EU member-states. Besides TUBITAK, Turkey and ANCS, Romania, no programme owner coming from the Black Sea region allows enterprises to benefit of international S&T cooperation and S&T agreements.

4.6 Lack of Innovation culture

Innovation issues in S&T policy are developed and implemented to a rather limited extent despite the fact that some countries have taken important steps in this direction. Brain drain also affects the innovation climate negatively.

The business community, both local and international, is in a state of hesitancy regarding innovation and the possibility of exploiting RTD results from research institutions. There are also many cultural blockages to public – private partnerships for innovation. There is a general impression of a weak demand from industry for RTD results produced in the publicly supported research institutions. In many cases, industry is not in a position to give much importance to innovation, which is a long-term endeavour.

In some countries, e.g., Georgia, an effort has been made to integrate specific items in the project evaluation criteria addressing the anticipated commercial use of the results. This is seen as a first step in introducing more awareness in the scientific community of the exploitation of results beyond scientific discovery. In Moldova a 50% public 50% private funding scheme for RTD projects is in operation since 2004. Funding is provided only if the private partner ensures 50% of budget. The

programme focuses on the key industries, such as electronics, pharmaceuticals, food/agriculture e.t.c. In Romania links to industry and participation of SMEs serve as important optional evaluation criteria. However, intermediary structures coping with the co-ordination of the several actors of the national innovation system are still a deficient element in the analysed innovation systems.

4.7 Identified Problems for Establishment of Multilateral programmes – International S&T Cooperation

There is a series of obstacles in supporting multilateral and consequently international S&T cooperation in the Black Sea region. Budget and Legal problems accompanied by Lack of information are the predominant ones affecting all countries of the region, Russia included. Low budgets seem to be a major common issue while legal problems and lack of information become less severe when it comes to EU/AC countries. The lack of experience and training of policy makers and research administrators in a series of aspects concerning international S&T cooperation constitutes an additional problem hindering the active involvement of the BS countries in the international S&T landscape.

4.8 Evaluation/Assessment procedures for projects, programmes and institutions

Peer reviewing procedures have been implemented in most of the Black Sea countries. Evaluations are effected by specifically instituted panels or, in some cases, by means of remote evaluations. The involvement of foreign experts is desirable for the evaluation, especially in the smaller countries where the research community is limited, and has already been introduced in several countries. In most of the countries, the monitoring of the funded projects is under the responsibility of the funding institutions. It involves regular reporting linked to instalments. The continuation of the project should be interrupted if the preliminary results are not satisfactory or the work does not comply with the specifications contained in the applications accepted for funding. There is however a feeling that only in few cases, if any, is such a procedure applied.

In most cases, ex-post evaluation of the impacts of the projects is not carried out and the same applies for the assessment of programmes which is important in

order to judge the pertinence of their rationale, the effectiveness of the funding bodies, their implementation procedures and their strategic impact.

Evaluation procedures for research organisations is not a common practice, either. In some countries they have been implemented, however, their outcome has hardly ever been linked to specific measures.

5. OPPORTUNITIES

5.1 Human Resources

As mentioned above, the research capacity of a country depends heavily on the availability of qualified R&D personnel and unfortunately brain-drain and ageing of RTD personnel is a situation characterising human potential in most BS countries. Although the situation has not been improved considerably for the last fifteen years, the scientists still working in the BS countries are committed to work under very difficult circumstances and possess a rich scientific background covering a broad range of thematic fields. Moreover, emigrating researchers could be seen as a bridging factor to enhance/foster international and inter-sector co-operation, provided that the right incentives/framework are established rewarding high quality results in research and giving science and scientists a more prominent role. The EU MS/AC Black Sea countries, due to the perspective provided through their participation in the EU Framework Programmes, could play a leading role towards this direction.

5.2 EU Involvement in Black Sea S&T Regional Cooperation

As already mentioned, the EU has previously taken part in initiating and funding a number of regional cooperation initiatives connected to the Black Sea Region. The so called **“Black Sea Synergy”** focuses on issues and cooperation sectors reflecting common priorities, where EU presence and support is already significant. Thus, among others, **Science and Technology (S&T)** emerges as an important cooperation sector and the Commission has declared its intention to promote capacity-building and S&T policy dialogue with the Black Sea countries, in particular through the instruments available under the current 7th Research Framework Programme (FP7).

The implementation of the EU co-funded project ‘Research Potential of the Black Sea countries (**BS-ResPot**)’⁷ was the first systematic and comparative investigation of the research landscape in the Black Sea region. Currently, besides the BS ERANET, two EU funded projects, ‘S&T International Cooperation Network for Eastern European and Central Asian Countries’ (**IncoNet EECA**) and “Linking Russia to ERA” (**ERANET RUS**) are ongoing. In this respect, the **BS ERANET** consortium should promote the development of synergies between their own activities and the ones foreseen in the aforementioned projects, including the formulation of proposals for mutually beneficial joint actions.

5.3 The Black Sea Economic Cooperation (BSEC)

Since BSEC has been formed and developed by the Black Sea states themselves and includes all states around the Black Sea, it enjoys a high degree of political legitimacy. In the context of the BSEC Working Group on Cooperation in S&T and the implementation of its 2nd Action Plan (2010-2014), specific initiatives for synergies between the 2nd Action Plan and the FP7 and other EU instruments will be undertaken.

Concerning financial instruments, the **BSEC-Hellenic Development Fund (BSEC-HDF)** and the **Project Development Fund (PDF)** could provide support to multilateral R&D projects through a BS ERANET Joint Call. **BSEC-HDF** aims at supporting the efforts of the BSEC to strengthen regional cooperation among its Member States and to enhance its project-oriented approach, set up as a voluntary contribution from the Hellenic Republic. The grants provided by BSEC-HDF are considered to be BSEC grants. Any legal entity registered and operating in the territory of a BSEC Member State from the public or the private sector, as well as international organizations (governmental or non-governmental) is eligible to benefit from the BSEC-HDF. The **PDF** provides financial support to eligible proposals that are able to lead to specifically targeted projects whose full scale implementation will contribute in enhancing regional cooperation and economic development in the BSEC region. The PDF operates on the principle of voluntary contributions from the BSEC

⁷ For more information on the project ‘Research Potential of the Black Sea countries’ please visit the ICBSS website (www.icbss.org section: ResPot).

Member States, BSEC Related Bodies, BSEC Observers and Third Party donors including States, International Institutions and Organizations as well as the private sector. Only entities from the Member States who made their voluntary contributions can benefit from the Fund. For those entities from the Member States that did not yet contribute, the issue is solved on a case-by-case basis.

5.4 Central European Initiative (CEI) programme on Cooperation activities

The Central European Initiative (CEI) was established in 1989 as the first forum promoting regional cooperation among the countries of Central and Eastern Europe. Since its inception, the CEI has represented a platform for intensified multilateral cooperation activities.

The programme objective is to strengthen cooperation among CEI member states (Albania, Austria, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Hungary, Italy, FYR of Macedonia, Moldova, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia and Ukraine) in Culture, Science and Technology. There is a joint fund established in order to implement the programme. CEI foreign ministers determine the fund during their annual meetings. The contribution is annual. It is established a co-funding of 80-100 of CEI cooperation activities for about 1Mln Euro. The proposals are collected continuously, with two deadlines per year.

The programme has similarities with BSEC, established sustainability and includes countries which are either BSEC M-S (Albania, Bulgaria, Romania, Serbia, Ukraine) or BS ERANET consortium partners (Bulgaria, Romania, Ukraine, Italy, Moldova). Thus, the BS ERANET consortium should elaborate ways and suggestions to promote synergies between BSEC and CEI.

5.5 The role of Russia

The ERA.Net RUS "Linking Russia to the ERA: Coordination of MS/AC S&T programmes towards and with Russia" aims at intensifying and strengthening S&T cooperation between Russia and Europe. The project is funded under the 7th EU Research Framework Programme and runs from February 2009 until January 2012, in parallel with the BS-ERA.NET project. There are four countries, France, Germany,

Greece and Turkey, participating in both projects. Partners coming from the above mentioned countries should serve as a bridge to enhance synergies between the two projects and encourage Russia's participation in a series of initiatives regarding the Black Sea Region. Russia is a very important factor in the BS region and its involvement in regional initiatives is critical to their success.

5.6 Ongoing Bilateral/Multilateral cooperation within the BS-ERA.NET consortium

According to the analytical work performed in the context of WP1 recently, which confirmed the mapping and the findings of BS-Respot, there are various bilateral agreements between the EU member states and the Black Sea countries of the BS ERANET consortium. There are also some multilateral programmes which along with the existing bilateral ones could provide a sufficient background frame for the design and the sustainable development of the Black Sea Research Programme (BSRP).

Besides the plethora of bilateral programmes mentioned in detail in the WP1 Fact Sheets and Country Reports, the most promising programmes are highlighted below :

➤ **The French Ministry of foreign and european affairs (Ministère des affaires étrangères et européennes, MAEE)** runs two kinds of programmes towards the Black Sea region countries:

➡ **On a bilateral level**, France has established partnerships (Hubert Curien partnerships) aiming at supporting 2 years research projects involving teams from France and the partner country. These programmes allows researchers mobility and the development of excellent scientific exchanges, on the basis of co-funding and it concerns Bulgaria, Romania, Turkey, Ukraine.

➡ **On a regional level**, the **ECO-NET Programme**,

(<http://www.egide.asso.fr/jahia/Jahia/accueil/appels/econet>)

is conceived to offer support for multilateral scientific collaborations between France and partners from central, oriental and baltic european countries, as well as new independent countries. It aims at integrating these countries into the european research networks. Projects proposals must involve at least 2 organisms from the 2 lists of eligible countries and one french organism. **Zone A** is Bulgaria, Croatia, Estonia, Hungary, Lettonia, Lituania, Macedonia (FYROM), Monténégro, Poland, Czech Republic, Romania, Russia, Serbia, Slovakia, Slovenia, Ukraine. **Zone B** : Albania, Bosnia-Herzégovina, Armenia, Azerbaïdjan, Belarus, Georgia, Kazakhstan, Kirghizstan, Moldavia, Ouzbékistan, Tadjikistan, Turkmenistan. To be eligible, Applications must involve at least one country from zone A, and one country from zone B (plus France). Actions supported by this programme are Research and technological development projects and Actions aiming at networking and coordinating research activities.

➤ **Initiation and Intensification on Bilateral Cooperation of the German Research Foundation (DFG), West European Countries**

The programme funds both: i) preparatory visits (up to three weeks) or consultative visits (up to three months) at the respective partner's institute. b) bilateral events, which serve to facilitate collaboration between researchers and to expand scientific contact (ii) Though the programme is bilateral, in fact it can be opened for wider participation (in justified cases maintenance and international travel for participants from other countries can be funded.). Thus it may be used for reinforcement of BS regional cooperation.

➤ **Bi-lateral S&T agreements of the republic of Italy, Ministry of Foreign Affairs, with all BS-countries (including Russia)**

The programme includes the following interesting selection procedure/criteria: a) Research infrastructure adequacy; b) availability of additional financial resources from the proponents or from other organisations (e.g., research institutes, public and private organisations); c) Involvement in other multilateral and European programmes, in particular in the 7th FP of the EC.

➤ **The Programme for Joint Research Projects within the Framework of the Agreement between TUBITAK and Bulgarian Academy of Sciences (BAS)**

The proposals are evaluated **independently** by both sides through their own procedures (through peer review composed by independent researchers); Projects can last up to **three years** and can receive a maximum amount of 56.000 Euros per year. Mobility, as well as the research expenses of the researcher (**equipment, consumables**) is covered. Support for infrastructure is not provided. What is important is that the same instrument is successfully used by TUBITAK in cooperation with CNRS and several BS countries (**Bulgaria, Greece, Romania, Russia and Ukraine**).

➤ **International Projects for Scientific Cooperation – PICS of CNRS**

The interest of the programme lies in the following parameters:

(i) Selection procedures/criteria: a) availability of consolidating and ongoing collaboration of partner organisations that has already produced joint publications. b) selection procedure is of 2-stage and first stage is in the hands of institutes while the second stage is fulfilled by PO.

(ii) Being permanent around 40 years PICS has proven its **usefulness** especially for facilitation sustainable and **complementary** cooperation.

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

In conclusion, there seems to be an important background for enhancing interaction/collaboration. The BS-ERA.NET should not only proceed in close collaboration with the BSEC and ERANET Rus activities, but also study good practices, emphasize on horizontal interactions and coordination of all activities targeting the BS region in all the above mentioned projects and programmes and eventually develop synergies.

6. THREATS

6.1 Stability and Conflict Issues

The Black Sea region faces a range of opportunities and challenges being an expanding market with great development potential and an important hub for energy and transport flows. It is, however, also a region with unresolved frozen conflicts, with many environmental problems and insufficient border controls thus encouraging illegal migration and organised crime. In spite of significant positive developments in the last years, differences still remain in the pace of economic reforms and the quality of governance among the different countries of the region.

The states of the Wider Black Sea Region continue to face persistent security challenges dating back to the collapse of the USSR, most dramatically in the form of unresolved territorial armed conflicts. The situation in these conflict zones is far from stable, as frustration with the lack of progress in resolution processes makes a relapse into armed conflict a distinct possibility.

6.2 Global Recession

In view of the ongoing financial crisis in Europe which influences priority setting, the BS ERANET consortium might meet with serious difficulties in securing an adequate budget to fund the Pilot Joint Call and develop a sustainable Black Sea Research Programme.

7. METHODOLOGY

The sources used for the synthesis of this SWOT analysis were EU and BS-ResPot documents as well as the documents and the deliverables produced through the analytical work carried out in the context of the Black Sea ERANET Work Package 1: Systematic Information Exchange on National and Multilateral initiatives in the Black Sea Region (mainly the Fact Sheets and the Questionnaires A and B analyses).

The main References and Web sites are listed below.

8. REFERENCES

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