



Policy Brief #4

July 2007

Science and Technology in the BSEC region: Proposals for enhanced cooperation

By George Bonas and Dimitrios Filippidis*

1. Background

The Organization of the Black Sea Economic Cooperation (BSEC) currently includes twelve Member States situated around the Black Sea and in Southeast Europe.¹ It was established in 1992 as a regional initiative and developed into a fully fledged international organization with the signing of the *Charter of the Organization of the Black Sea Economic Cooperation* by the Heads of States in Yalta, 5 June 1998 and its entry into force on 1 May 1999. The BSEC covers a wide range of areas of cooperation including, trade and economic development, banking and finance, institutional renewal and good governance, science and technology, education, environmental protection, energy, agriculture and agro-industry etc. Among those areas, Science and Technology (S&T) has always had a prominent role due to the considerable research potential in the countries of the region and its undeniable contribution to sustainable development and economic growth. This fact is highlighted in the 'BSEC Economic Agenda for the Future' (adopted in Moscow on 27 April 2001) which includes a specific section on S&T.

Recent developments from the European Union (EU) are also of major importance. In the recently published communication of the European Commission that sets out the framework for an enhanced cooperation between the EU and the Black Sea region S&T features prominently as one of the key fields that need to be addressed.²

2. Science and Technology landscape in the BSEC

The BSEC Working Group on Cooperation in Science and Technology

The BSEC organisational structure provides for sectoral Working Groups covering every important field of activity. The Working Group on Cooperation in Science and Technology (WG S&T) is the main BSEC subsidiary body in charge of all issues

* George Bonas is the S&T advisor of the ICBSS.

Dimitrios Filippidis is Project Manager at the ICBSS.

¹ Albania, Armenia, Azerbaijan, Bulgaria, Georgia, Greece, Moldova, Romania, Russian Federation, Serbia, Turkey, and Ukraine. For further information on the BSEC, see: <http://www.bsec-organization.org>

² Commission of the European Communities (2007), *Black Sea Synergy – A New Regional Cooperation Initiative*, [COM (2007) 160 final], Brussels, 11 April 2007.



concerning cooperation in this field. The WG S&T consists of representatives of all Member States and meets on average once a year.

It operates under the guidance of a Country coordinator, appointed for a two-year term, and the general supervision of the rotating Chairmanship-in-Office of the Organization. According to established practice, the BSEC related bodies³ as well as the BSEC Permanent International Secretariat (BSEC PERMIS) systematically take part in the WG S&T meetings.

The WG S&T can be considered as a permanent forum for policy dialogue. It has the capacity to instigate initiatives in its field of competence and make the necessary link between any ad-hoc initiative and the national authorities in terms of information exchange and political support.

BSEC Action Plan on Cooperation in Science and Technology

The *BSEC Action Plan on Cooperation in Science and Technology* (adopted by the Ministers responsible for Research of the BSEC Member States in Athens on 28 September 2005) is by definition the main political document for the coordination of RTD policies in BSEC. It sets the framework for cooperation among the BSEC countries and with the EU, and proposes a series of activities identified as high priorities.

The idea for the preparation and adoption of a BSEC Action Plan concerning the field of S&T was introduced by the Hellenic Republic during its Chairmanship-in-Office, at the WG S&T meeting held at the BSEC PERMIS headquarters in Istanbul (9-10 March 2005). However, almost all of the adoption phase took place under the Moldovan Chairmanship-in-Office while the initiation of the implementation work (i.e. the adoption of the Workprogramme as specified in the Action Plan) took place under the Romanian Chairmanship-in-Office. The active involvement of all BSEC Member States in the process on the one hand proves that the time was ripe for such an initiative and on the other constitutes the best guarantee for a successful implementation of the Action Plan.

The International Centre for Black Sea Studies (ICBSS) played a key role in the whole process. In its capacity as a BSEC related body and acknowledged think tank of the Organization, the ICBSS prepared the first draft of the Action Plan, based on relevant background documents on S&T issues. The first draft was distributed to the BSEC Member States for consideration prior to the first High-Level Official preparatory meeting. At the same time, the ICBSS secured the financial support of the European Commission for the whole process through the implementation of the 'ActionPlan-Black Sea' project which was co-funded under the 6th Framework Programme of the EU (FP6). In addition, representatives of the European Commission participated actively in the deliberations of the preparatory meetings and the Ministerial Conference.

³ Namely, the Parliamentary Assembly of the BSEC, the BSEC Business Council, the Black Sea Trade and Development Bank, the International Centre for Black Sea Studies.



The importance of the BSEC Action Plan is manifold. To begin with, it identifies a number of key areas that should be seen as main priorities for cooperation in S&T among the BSEC Member States but also between BSEC and the EU.

These are:

- *Human resources;*
- *Capacity building;*
- *Research infrastructure;*
- *Innovation;*
- *Priority domains for research.*

The identified actions and specific activities focussing on *Human resources*, *Capacity building* and *Innovation* are almost exclusively of a 'horizontal' character and include orientations for policy setting (e.g. 'Creating an attractive environment and proper incentives for young talent to pursue careers in scientific research and technological development'),⁴ as well as concrete measures such as the 'Development of a regional system of national contact points...'⁵ The proposed measures can be implemented at national level (e.g. through the 'Harmonization of existing standards...'),⁶ while others are of a clearly multilateral character (e.g. 'Networking of innovation units...').⁷

In terms of *Research infrastructures*, the Action Plan highlights the need for 'considerable upgrading' and proposes the elaboration of 'multinational projects' to be addressed to national or international funding authorities. It also stresses the importance of the electronic networking and in particular the connection to the European e-infrastructures.

Finally, in terms of *Priority domains for research*, it has proven difficult to reach a consensus in the identification of specific scientific fields to be addressed in priority in BSEC, and only a reference to the relatively broad domains mentioned in the BSEC Economic Agenda for the Future is included in the Action Plan. There is however reference to 'an acknowledged comparative advantage' that some countries may demonstrate and 'can justify a joint regional effort'.⁸

While indicating the important areas where action could and should be taken, the BSEC Action Plan also makes reference to potential sources of funding for such actions, highlighting the need for '...national authorities in the BSEC Member States to provide adequate information, training and advisory services for the proper preparation and presentation of project proposals by research centers, institutes, teams or individual scholars...'.⁹ Furthermore, the BSEC Action Plan provides for specific mechanisms for the monitoring of its implementation (the main responsibility lying with the WG S&T), and follow-up activities.

⁴BSEC (2005), BSEC Action Plan on Cooperation in Science and Technology, Part 1, Section B, article iii.

⁵ Ibid, Part 1, Section B, article vi.

⁶ Ibid, Part 1, Section B, article viii.

⁷ Ibid, Part 1, Section D, article v.

⁸ Ibid, Part 1, Section E, paragraph 2.

⁹ Ibid, Part 1, Section B, article i.



It is worth mentioning that as part of the follow-up activities envisaged in the Action Plan a (first) Workprogramme has already been adopted at the meeting of the WG S&T in Athens, 21-22 March 2006, i.e. six months after the adoption of the Action Plan. This Workprogramme is based on the information provided by the BSEC Member States and compiled by the ICBSS. It includes as an Annex an impressive list of more than 300 S&T related activities, mainly of a bilateral character but also – and this is of particular importance – some of a multilateral character involving several BSEC Member States.¹⁰ All these activities address the five aforementioned priority objectives of the Action Plan and constitute undeniable evidence of the willingness of the BSEC countries to work together for their fulfilment.

Of particular importance is the provision made in the Action Plan for the organisation of a Mid-term Ministerial Conference to review the progress made towards its implementation. This Conference is going to be held under the Turkish Chairmanship-in-Office in Istanbul on 31 October 2007, and will provide the opportunity to the national authorities of the BSEC Member States to reaffirm their commitment to an enhanced cooperation in S&T.

Research Potential of the Black Sea Countries

The project 'Research Potential of the Black Sea countries – BS-ResPot' was prepared by the ICBSS and submitted for funding to the European Commission (6th Framework Programme) in September 2003. It was successfully evaluated and co-funded for a two-year period (May 2004 – May 2006).

The aim of BS-ResPot has been to provide a broad overview of the research systems, specialization patterns and capabilities of all the BSEC Member States, with particular emphasis on their strengths, in order to identify the most promising fields for joint activities and to contribute thereby to the transformation of the political will for cooperation into concrete actions. That is why, in addition to the aforementioned study of the research landscape in the BSEC countries, the BS-ResPot project included a specific focus on main initiatives that animated discussions within the BSEC, including the role and potential of the National Academies of Sciences (NAS), the role the Council of Presidents of the NAS (CoPNAS) and the potential establishment of a Black Sea Innovation Centre.

More specifically, the BS-ResPot project focused on:

- Mapping of RTD systems and institutions;
- Evaluation of RTD potential (including identification of specialisation patterns, RTD capabilities, and fields most promising for collaboration);
- Enhancing the cooperation of the National Academies of Sciences (NAS) and the role of the CoPNAS;

¹⁰ The Workprogramme and its three Annexes are available for downloading through the ICBSS' website <http://www.icbss.org>, section Action Plan.



- The possibility of establishing a Black Sea Innovation Centre (BSIC), and related innovation issues;
- Recommendations for RTD policy;
- Investigation of sources of funding for cooperative activities;

The methodological approach of the project included desk research and, in particular, use of international databases on S&T Indicators; field trips in every country, that included individual and group interviews with key players in the research system; specific questionnaires addressed to the contact persons and to the NAS, etc. Most importantly, a network of contact persons (one per country) was established in order to ensure accurate and up-to-date information concerning the research environment in the targeted countries and to assist with the implementation of the project.

The results of the project are available to the public and provide a broad overview of the S&T landscape on a country by country basis ('vertical'), but also across the countries ('horizontal') using specific S&T indicators.¹¹

The Conferences of the National Academies of Sciences of the BSEC Member States and the establishment of the Council of Presidents of the NAS

In most of the BSEC Member States, the National Academies of Sciences (NAS) represent one of the major research organisations in terms of researchers employed, scientific output, research infrastructure, etc. The combination of historic reasons and their current research potential constitute the NAS as key stakeholders in S&T policy setting in their respective countries. It is therefore evident that the NAS can also play a role in the strengthening of the cooperation in S&T at the BSEC level.

The 1st Conference of the National Academies of Sciences of the BSEC Member States held in Athens (15-17 April 2002), constitutes a landmark in S&T cooperation within the BSEC. This conference took place at a period when the operation of the WG S&T was at a standstill, and may be considered as the origin of the revitalization of the S&T cooperation process within the BSEC.

The 2nd Conference of the NAS took place in Antalya, on 6-7 April 2006, in the context of the 'BS-ResPot' project. The conference was dedicated to the presentation of the results of this project. At the same time, the conference provided the opportunity to reaffirm the important role the NAS are playing in S&T cooperation within the BSEC.

Following a decision taken at the 1st Conference of the NAS, the Council of the Presidents of the National Academies of Sciences (CoPNAS) was established and its first meeting was held in Kyiv (9-10 December 2002). The CoPNAS may be seen as an attempt to ensure continuity in the cooperation among the NAS at a time when there was a lack of activity at the level of the WG S&T.

¹¹ To download the results of the BS-ResPot please visit <http://www.icbss.org> section 'BS-ResPot'.



However, the revitalization of the WG S&T and other activities that took place during the same period (e.g. the adoption of the 'BSEC Action Plan' and the implementation of the 'BS-ResPot' project), combined with the limitation of available funds, have rendered the proper functioning of CoPNAS unnecessary. Nevertheless, the NAS are supporting this structure and are looking forward to its strengthening: A second formal meeting of the Council, organised by the Turkish Academy of Sciences, is scheduled to take place at the end of September 2007.

Other activities

- *The Project Development Fund (PDF):*¹² The BSEC Project Development Fund was established upon the resolution of the Seventh Council of Ministers of Foreign Affairs (Tirana, 25 October 2002) for the purpose of facilitating the elaboration and promotion of projects with high regional cooperation and development impact in the BSEC region, at the early stage of their conception and under the guidance of the relevant BSEC Working Groups.

The establishment of the PDF can be seen as a key development within the BSEC since for the first time the BSEC Member States are creating a common 'pool of resources' to be used for the financial support of projects selected on merit. The PDF promotes regional cooperation in various fields corresponding to those covered by the BSEC Working Groups, including of course science and technology. Although still taking its first steps, the PDF has already provided financial assistance to a number of projects (several of which are dealing with S&T) and it should be seen as a model for further project-oriented activities.

- *The participation in EU Framework Programmes:* All the BSEC Member States had the opportunity to participate in the successive EU Framework Programmes (FP) for Research and Technological Development (RTD). For their participation, the research teams from BSEC countries received financial support under various schemes, depending on their relationship with the EU and its Framework Programme (full membership for Bulgaria, Greece and Romania, Associated country for Turkey, specific activities dedicated to the Western Balkan countries for Albania and Serbia, the INTAS programme¹³ for the New Independent States). It is worth noting that in addition to the specific activities, the core activities of the FP6 (2002 – 2006) were also open to participations from Third countries among which the Russian Federation took maximum advantage of this opportunity, a fact that highlights its strong research potential but also the strong links between its research community and EU researchers.

¹² This section on "*The Project Development Fund*", draws heavily on information available on the website of the BSEC <http://www.bsec-organization.org>.

¹³ The International Association for the promotion of Co-operation with Scientists from the New Independent States of the Former Soviet Union (INTAS) is an international non-profit association formed by the European Community, EU Member States, and other countries to promote scientific cooperation with the New Independent States (NIS) and to strengthen their research potential. Following a recent proposal of the European Commission, INTAS has gone into liquidation as of 1 January 2007.



In the 7th Framework Programme of the EU (FP7) running from 2007 to 2013, INTAS will discontinue its activities but the FP is once again open to participations from Third countries. Specific activities are foreseen for the Eastern European and Central Asia countries as well as for the Western Balkan countries. That means that all BSEC Member States (i.e. members and non-members of EU) can participate jointly in research projects funded under FP7.

- *Bilateral S&T cooperation Agreements and Programmes:* Several such Programmes exist among many BSEC Member States but also between BSEC and EU Member States. They provide the framework for cooperation at a bilateral basis, as well as (in most of the cases) financial support mainly for the mobility of researchers involved in joint projects.

3. Proposals for an enhanced S&T cooperation

All the aforementioned structures and initiatives highlight the particular dynamic that exists in the field of S&T within the BSEC. This dynamic is based on the tradition and potential for research of the scientific communities in BSEC as well as on the increasing interest for S&T, at the political level, as a key factor for growth and prosperity.

Since progress and breakthroughs in S&T depend increasingly on multilateral scientific approaches, international cooperation and optimal use of the available funding opportunities, BSEC as an international organisation can play the role of a catalyst in that process. This section provides some proposals at the level of policy and implementation for an enhanced S&T cooperation.

3.1 Policy level

Action Plan assessment and future strategic orientations at Ministerial level

The adoption of the 'BSEC Action Plan on cooperation in S&T' constitutes a major political event and should be considered as the key strategy document for the current period (2005-2009). The Action Plan sets a series of objectives that need to be addressed in priority and already foresees a mid-term review at Ministerial level scheduled for fall 2007.

In this context, any additional activity at the highest political level does not seem to be necessary until the end of 2009. However, at that time an assessment of the achievements of the Action Plan will be mandatory and a new impetus and strategic orientation should be given to the cooperation in S&T within the BSEC. It is therefore important to plan well in advance a mechanism or initiative for the assessment of the Action Plan that will be used as an input document for future strategic orientations that should be endorsed at Ministerial level possibly during 2010.



The Role of the WG S&T

The WG S&T is an established organ with a permanent character within the BSEC structure. Therefore, its role is instrumental in the implementation of the Action Plan but also for the introduction of any other initiative in the field of S&T. Its role should be strengthened and transformed to that of a real 'steering committee' of all S&T related activities. To this end it is necessary to:

- Ensure a regularity for its meetings;
- Assign a Secretariat at the level of the Country Coordinator, which will ensure the information flow and continuity in the operation of the WG S&T.
- Prepare timely a well structured agenda for the meetings through a consultation mechanism with all stakeholders;
- Enrich its meetings with specific presentations by external experts (key topics, exchange of good practices, etc.) that would initiate discussions on future activities.

To better respond to this way of functioning and to the new challenges lying ahead, it would be desirable if the national delegations could increase their expertise in S&T policy setting and implementation issues by keeping the involvement of non-specialists (e.g. delegates from Embassies, Ministries of Foreign Affairs, etc.) to a minimum.

3.2 Implementation level

Use of the bilateral cooperation schemes and Programmes

The existing bilateral S&T cooperation schemes and Programmes constitute a very valuable asset for the cooperation within BSEC and beyond. Their use can contribute substantially to the implementation of the goals of the Action Plan. This can be achieved if some of the topics and activities foreseen in the Action Plan are included in the bilateral cooperation Programmes, the content of which are negotiated on an annual or bi-annual basis between the involved national authorities. Such a re-orientation of the bilateral Programmes is relatively easy to implement. The only foreseeable barrier is the lack of information that often exists between the administrative units in charge of bilateral cooperation and those that were in charge of the preparation and adoption of the Action Plan.

In order to increase their impact and visibility, some bilateral cooperation schemes could be transformed gradually to trilateral or even multilateral, on a variable geometry basis. However, even if this idea seems simple and attractive, its implementation is often difficult due to technical barriers such as the different programming period of every bilateral Programme, the different implementation procedures in every country, etc. Nevertheless, it is a promising perspective that needs to be further investigated.



Participation in FP7

The EU's 7th Framework Programme for RTD constitutes the main opportunity for research teams in the BSEC countries, in terms of participation in world class research projects and in terms of funding opportunities. The BSEC as a unique mix of EU Member States, Associated and Third countries could stimulate an increased participation in FP7.

In this context, the ICBSS already implemented as a pilot activity a series of three Workshops on the thematic priorities 'Environment', 'Energy', and 'Food-Agriculture-Biotechnology' aiming at the identification of research topics of mutual BSEC – EU interest that could be funded under FP7.

Such activities that provide added value to the cooperation within BSEC will continue in the forthcoming years on a more systematic manner in the framework of the 'Inco-Net EECA' project, which has been submitted by the ICBSS to the European Commission for funding under FP7 and is currently under evaluation. This project, which includes in its scope most of the BSEC countries, addresses the policy dialogue between EU and the 'Eastern European and Central Asia – EECA' countries through the creation of a regional policy dialogue platform and includes also capacity building activities, thematic workshops as the aforementioned ones, studies, etc. Since the BSEC is the most institutionally mature international organisation within the EECA region, it is expected that it will play a central role in the implementation of the 'Inco-Net EECA' project over the next four years.

FP7 provides also the opportunity, through the 'ERA-Net' type projects, to coordinate national policies in the field of S&T. Such activities could include the bilateral cooperation schemes that have been mentioned earlier contributing therefore to the goals of the Action Plan but also to an enhanced intra-BSEC and BSEC–EU cooperation.

A BSEC fellowship scheme as medium term goal

All the aforementioned proposals rely on existing funding schemes and recommend the stronger involvement of the BSEC and of its Member States to their optimal use for the benefit of the research community of the region. It must be noted that none of these schemes has been set up by the Organization or could be seen as a BSEC instrument. However, the cooperation among the BSEC Member States is rapidly developing and the setting up of the Project Development Fund (PDF) should be considered as a flagship initiative that could transform the political will for cooperation to concrete activities associated to financial commitments on the part of the Member States.

Since the field of S&T has proven to be one of the most dynamic for an enhanced cooperation, the possibility for a dedicated fund for activities in that field should be envisaged. As a first step, such a fund could support a 'BSEC fellowship scheme' for young or senior researchers.



This type of activity presents several advantages:

- It requires a relatively limited amount of funds, when compared to the financial support for RTD projects;
- The number of beneficiaries could be significant, increasing therefore the visibility of the activity;
- Young researchers could be among the main beneficiaries of such a scheme;
- The exchange of scientists will increase the links among the BSEC Member States;
- The fellowship scheme could be of a horizontal character, i.e. open to many scientific fields, therefore avoiding lengthy discussions for an agreement on common priorities.

Such a scheme could be used to facilitate the access to research infrastructures of global or regional importance that exist in several BSEC countries as, for example, the Joint Institute for Nuclear Research (JINR) in Dubna.

If a 'BSEC fellowship scheme' is set up it would be the second joint initiative that will bear the 'BSEC label' (the first one being the establishment of the PDF), but at the same time the first one on a specific field of activities, thus highlighting the pioneering role of S&T in the strengthening of cooperation among the countries.

4. Conclusions

The field of S&T is one of the most dynamic among the broad range of activities addressed within the BSEC. As it has been shown, a number of initiatives have been undertaken at the policy and implementation levels.

What is now necessary is the optimal and the coordinated use of all the existing structures and opportunities. In this context, BSEC as an organization could have an instrumental role in the stimulation of this process, for the benefit of its Member States and for the strengthening of its visibility and efficiency. The WG S&T will have a key role to play in the process, especially for the intra-BSEC activities. Moreover, the synergies that can be created between the WG S&T and the 'Regional Policy Dialogue Platform' can considerably increase the 'weight' of the BSEC in the European S&T environment.

As a next step, the BSEC should investigate the possibilities for activities bearing the 'BSEC label'. Among these, the setting up of a 'BSEC fellowship scheme in S&T' could be a realistic and politically important initiative.



The [International Centre for Black Sea Studies \(ICBSS\)](#) was founded in 1998 as a non-profit organisation. It has since fulfilled a dual function. On the one hand, it is an independent research and training institution focusing on the wider Black Sea region. On the other hand, it is a related body of the Organisation of the Black Sea Economic Cooperation (BSEC) and serves as its acknowledged think-tank. Thus the ICBSS is a uniquely positioned expert on the Black Sea area and its regional cooperation dynamics. Through all its activities, the ICBSS aims to foster multilateral cooperation among the BSEC member states as well as with their international partners.

The ICBSS is a [proactive member of the BSEC institutional family](#) with a predominantly consultative role. Its representatives participate in the deliberations of the BSEC decision-making, related, and subsidiary bodies. To this end, the ICBSS drafts policy documents (ministerial declarations, action plans, background papers), coordinates the work of ad hoc Groups of Experts and is actively involved in permanent BSEC Working Groups. The ICBSS regularly reports on these activities to the BSEC Council of Ministers of Foreign Affairs.

As an [independent research and training institution](#), the ICBSS exploits synergies with its institutional role and develops complementary activities. This includes the elaboration and publication of research papers and studies, the organisation of a variety of scientific events, the management of research projects on a contract basis, as well as networking activities. The ICBSS currently concentrates on [BSEC-EU interaction, good governance and institutional renewal, energy, science and technology, and security and stability](#) in the wider Black Sea area.

Our programmes and publications include:

- The [ICBSS Annual Conference](#): an international forum for focused debate between policy makers and researchers
- The [ICBSS Annual Lecture](#): an open event with expert guest speakers
- The [Black Sea Research Network](#): a multidisciplinary system of research institutes in the wider region
- The [ICBSS Outreach Programme](#): engaging leading experts and local stakeholders in debates on regional affairs
- [Project management](#); specifically with regard to EU co-funded regional projects on science and technology
- The [Xenophon Papers](#): a series of comprehensive, policy-oriented studies
- The [Black Sea Monitor](#): an electronic review of regional affairs
- Contribution to the [Journal of Southeast European and Black Sea Studies](#), published by Taylor & Francis Group (Routledge, London)

The ICBSS is governed by an [international Board of Directors](#), formed by senior representatives from the diplomatic and academic communities of all BSEC member states. The Board also includes the Secretary General of the BSEC Permanent International Secretariat and three professionals of international standing from outside the Black Sea region.

International Centre for Black Sea Studies (ICBSS)

4 Xenophontos Str., 10557 Athens, Greece

Tel: +30 210 324 2321 Fax: +30 210 324 2244

Email: icbss@icbss.org Website: www.icbss.org

Director General: Dr. Dimitrios Triantaphyllou