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**REPORT OF THE
MEETING OF THE WORKING GROUP
ON COOPERATION IN SCIENCE AND TECHNOLOGY**

Krasnodar, Russia, 28-29 October 1998

1. The Fourth Meeting of the BSEC Working Group on Cooperation in Science and Technology, proposed by the Russian Federation, was held in Krasnodar, Russia, on 28-29 October 1998.

2. The Meeting was attended by the following BSEC Participating States:

Republic of Albania
Republic of Azerbaijan
Republic of Bulgaria
Georgia
Hellenic Republic
Romania
Russian Federation
Republic of Turkey
Ukraine

3. The representative of the Republic of Poland attended the Meeting as an Observer.

The list of participants of the Meeting is attached as Annex I.

4. The Meeting was chaired by Academician Vladimir A. Babeshko, Rector of the Kuban State University, who greeted the delegations on behalf of the said University and the Russian scientists and scholars. The statement is attached as Annex II.

5. Mr. Evgueny Borissenko, Deputy Secretary General of the BSEC PERMIS addressed the Meeting. The text of the statement is attached herewith as Annex III.

6. The draft agenda of the Meeting was discussed and adopted. The agenda is attached as Annex IV.

RESULTS OF THE BSEC SUMMIT IN YALTA, TASKS AND PRIORITIES OF THE COOPERATION IN SCIENCE AND TECHNOLOGY IN THE BLACK SEA REGION

a) Elaboration of proposals for a new BSEC economic agenda for the future

7. Under this agenda item, the participants exchanged views regarding those programs which may be developed in their countries with the aim of implementing decisions of the BSEC Summit in Yalta in the field of science and technology. They noted that new horizons are being opened as a result of the BSEC's transformation into a regional economic organization.

8. The participants identified main areas for joint scientific research and potential projects. Attention was particularly paid to the economic, environmental and seismological problems of sustainable development in the BSEC region with a special emphasis on applying the progressive achievements of science and technology to concrete fields of cooperation.

9. The view was expressed that bilateral and multilateral arrangements at various levels would facilitate regional scientific cooperation. At the national level, more efforts are needed to continue legislative reforms in the field of research and related fields with a view to creating more favorable conditions for cooperation among the academic communities in the BSEC region.

10. The delegations unanimously supported the idea of employing the scientific and technological potential of the BSEC countries for an accelerated economic development of the BSEC region. With this goal in mind, it was suggested to invite interested Participating States to cooperate in initiating the establishment of data bases on scientific, economic, technological, industrial and business information in order to use them for technology transfer in the BSEC countries.

11. The participants found advisable that cooperation in the field of science and technology between the BSEC and regional and international organizations, in first turn the European Union, be further developed and strengthened. The delegations came to the conclusion that the existing scientific and technological potential of the BSEC States can and should play a greater role in the multilateral cooperation.

12. The participants called upon the Governments of the BSEC Participating States and the leading international economic organizations to render assistance and support, including financial, for further development of collaboration in science and technology in the BSEC region. Moreover, being part of Europe, the BSEC countries should more actively participate in programs of scientific cooperation adopted by various European organizations, particularly by the European Union.

b) **Activities of national research centers dealing with issues related to the Black Sea region**

13. All participating delegations of the BSEC introduced the necessary information and materials regarding the activities of their national research and scientific centers, as far as the prospective and future plans of their national programs are concerned the projects related to the BSEC region.

14. During the discussions, the delegations made some concrete proposals and took note of the following:

- The Delegation of Ukraine suggested to work out the framework program of scientific and technological cooperation of the BSEC member countries which is supposed to be oriented in character and presupposes the possibilities of participation of all interested Participating States in it, taking into account the experience and potential of the National Scientific Center “Kharkov Physics and Technological Institute”. The Ukrainian Delegation also stressed the necessity of working out of the multilateral cooperation particularly the usage of experience of the International Center on Marine Ecology and Epidemiology of the Black Sea Region on the basis of the Institute of Colloidal and Water Chemistry of the Ukrainian National Academy of Science and the International Center of Children Rehabilitation who became victims of ecological disasters with recreation complex camp “Artek” as its foundation and the application of the latest achievements of the Ukrainian scientists in the field of immunology, neurology and cancer studies. Considering the above-mentioned the proposal was advanced to discuss perspectives for cooperation in suggested directions on the joint session of the BSEC member countries and the PERMIS in Ukraine in 1999.

- The Turkish Delegation has vividly shown the possibilities of international centers in elaboration of projects and programs performed by the Turkish scientists. The Delegation has also stressed the possibility of a closer cooperation among the national centers of BSEC countries and Turkey. The willingness was expressed for establishment of closer contacts between the above-mentioned national centers and the Marmara Research Center as well as other leading Turkish institutions on the problems of scientific researches. The Delegation of Turkey put forward a concrete proposal that Turkey is ready to provide some financial resources for supporting and organizing the international workshop for the group of students which directly deals with the program and projects of science and technology with the Kuban State University.

- The Russian Delegation pointed out the necessity of further working out the BSEC concept of development in the middle and long-term perspectives. In this connection the BSEC region should be regarded together with neighbouring regions, with Caspian region in particular (problems connected with oil); the development of friendly relations between the BSEC countries and the European Community (looking for sources of international financing of BSEC), the search for the new horizons in the BSEC activity connected with its transformation into a

regional economic organization. Special attention was paid to the Russian National Research Center in the Black Sea and Mediterranean regions.

- The Delegation of Georgia stated that one of the main important issues in scientific activities of the BSEC Member States is the choice of financing sources. The national centers could advance the exact proposal on establishing joint financing funds, especially in the sphere of applied researches. In this connection, the regional scientific communities should adhere to the principle of the best possible coordination and fulfilment of exact researches on the basis of shares, mostly by one's country financing, so that the results would be delivered to all the participants. In order to solve regional scientific and technological problems such as seismology and seismo-resistance of constructions, environmental protection, transportation, energy and the infrastructure problems of transportation routes, etc. it would be much desired to have regional scientific funds.

- The Romanian Delegation pointed out that the national research centers of Romania are paying much attention to the development of separate projects which are to be implemented within the BSEC framework. More than 100 specific projects from the national research institutes were received at the Ministry of Research and Technology of Romania which were suggested for consideration of the Fourth Meeting of the WG.

- The Delegation of Bulgaria has stressed the fact that at the present stage of scientific cooperation of BSEC countries, it is necessary to coordinate one's own needs and possibilities so that the countries of the Black Sea region could solve by means of joint efforts the actual problems of economic development. In this respect the National Scientific Research Centers of the BSEC countries could be of great and effective use.

c) Activities of the BSEC Standing Academic Committee

15. Some delegations mentioned that the purpose of academic cooperation, as a new dimension of the BSEC, is to identify concrete projects with academies, universities as well as research institutions, particularly in the field of the transportation of energy resources in the Black Sea region, including its ecological implication; development and modernization of infrastructure projects (communication, transport, etc.); the establishment of a data bank on research units in the BSEC area; environmental and seismological monitoring of the Black Sea.

16. The participants of the WG expressed their awareness of the fact that science is a new dimension of the efforts to develop regional cooperation and they called upon consolidation of interaction between the BSEC WG on Science and Technology and the Standing Academic Committee as well as other BSEC Subsidiary Bodies dealing with scientific issues related to the Black Sea region.

17. The participants decided to work out a Plan of Action for the future activities of the Standing Academic Committee (SAC) and they welcomed the proposal of the Republic of Turkey to host the next meeting of the SAC in Ankara in the beginning of December 1998.

18. The representatives of a number of countries also emphasized the proposal which was adopted by the representatives of the BSEC Standing Academic Committee regarding the benefits of establishing a BSEC Scientific Fund which would serve to the prompt implementation of identified projects and programs in the region.

d) International Center for Black Sea Studies (ICBSS) in Athens

19. Under this subitem of the agenda the participants of the WG on Cooperation in Science and Technology took note of the recommendation regarding the inauguration of the ICBSS made by the Twelfth Meeting of Ministers of Foreign Affairs (MMFA) held in Sofia on 22 October 1998.

SETTING UP COOPERATION IN SEISMOLOGICAL RESEARCH IN THE BLACK SEA REGION

20. The WG took note with interest the ideas contained in the information materials and background paper on this subject presented by the Russian Delegation (Group of Academicians, V. Babeshko). In this context, the participants fully supported the result achieved by the said project prepared by the Kuban State University regarding new methods of solutions of differential equations and proposals for seismological research in the BSEC region.

21. Having listened to the report of V.A. Babeshko, Rector of the Kuban State University, participating experts of Ministry of Science and Technology of the Russian Federation and scientists on the problems of seismicity of the Black Sea coastal area, the Fourth Meeting of the BSEC WG stated that the seismic activity takes place in all the countries and causes serious damage often accompanied by victims.

22. The world experience proves that the seismic phenomena are of the global character and the efforts within one area only may turn out to be not enough to develop a reliable theory of the earthquakes forecasting. The experience of some countries in the BSEC region proves the idea that it is necessary for all the institutions to carry out theoretical and experimental research in the field of seismology and earthquakes forecasting.

23. There is a suggestion to appeal to the BSEC countries carrying out research on seismicity evaluation and prevention of its consequences aiming at the work coordination. The Russian Delegation made a proposal to recommend the establishment of an Association of BSEC countries seismology organizations and institutes. In order to do it, the initiative group is expected to work out the suggestions or regulations of those organizations, in accordance with the existing organizations of similar kind and to put forward for the BSEC Member States for discussion and further acceptance and starting the

work. The participants of the WG unanimously supported the idea of the establishment of the said Association.

24. The participants, after a fruitful exchange of opinions, welcomed and supported to develop a mathematical simulation ecological-seismological model for stable functioning and development of the Black Sea region. This model is to be based not only on the information infrastructure created and the data specified but also it would contain the proposal of the BSEC countries and their strategic plans on the above-said problems.

CONCEPTUAL APPROACH TO THE ELABORATION OF A MATHEMATICAL MODEL FOR ECONOMIC DEVELOPMENT IN THE BLACK SEA REGION WITH DUE ACCOUNT OF SITUATION IN BSEC COUNTRIES

25. The WG supported the creation of an imitative mathematical model for economic development in the BSEC region. It was recommended that for the principles of creation of this model can be used to work out of the Kuban State University, as a leader of this research, and plans and strategies for economic and social development of the BSEC countries.

26. Taking into consideration the report of the Russian Delegation (Professor V.A. Babeshko) on this question and the representatives of other countries of the Working Group, the Meeting concludes that during the past period, the Kuban State University has succeeded in involving different organizations in the problem of creating a mathematical model of ecologo-economic system of the Black Sea region. Among them there is a great number of organizations from Krasnodar, Moscow, St. Petersburg, etc. The concept of creating a model has been developed, the necessary data base is being created, separate model subprograms have been drawn up.

27. The WG stressed that after its completion, the mathematical model can serve to the Governments of the BSEC countries as a means of forecasting country development applying alternative decisions. It will allow to give an expert evaluation of different administrative strategies and to make the most appropriate decisions.

28. Having pointed out the importance of development of a mathematical model for eco-economic system of the Black Sea region, the WG participants were asked to inform their Governments of the work being done.

29. The WG highly appreciated the position of the Ministry of General and Professional Education and the Ministry of Science and Technologies of the Russian Federation, Russian Academy of Science and “Integration” Center in supporting the development of a mathematical model for eco-economic system of the Black Sea region which is being conducted in the Kuban State University in cooperation with other organizations.

CONSIDERATION AND ADOPTION OF THE PLAN OF ACTION ON IMPLEMENTATION OF THE PROVISIONS OF THE THIRD MEETING OF THE WORKING GROUP ON COOPERATION IN SCIENCE AND TECHNOLOGY

30. The WG considered the specific proposals regarding the Plan of Action for the implementation of the provisions of the Third Meeting of the WG on Cooperation in Science and Technology held in Krasnodar on 16-17 December 1997, presented by Armenia, Bulgaria, Romania, Russia, Turkey and Ukraine, to be circulated in due time by the Secretariat.

31. Other Participating States were invited to forward concrete proposals to the Secretariat at their earliest convenience, preferably by the end of 1998. By the same date, the WG suggested the Participating States to send to the PERMIS the relevant and updated information regarding the national research programs which could be connected with the BSEC priorities taking into account the solutions and recommendations of the current WG session.

32. The participants requested the BSEC PERMIS to start preparing the Plan of Action of the BSEC countries for the implementation, in the years of 1999-2000, taking into account the provisions of the Third and the Fourth Meetings of the WG. They recommended Romania as a country-coordinator to prepare together with the PERMIS the said Plan which should be guided by the principles of selections of programs and projects and to be connected mainly with the BSEC region priorities. Taking into consideration the above-mentioned proposal, the WG supported the idea of the Turkish Delegation of forming the Group of Experts to be composed by scientists from the BSEC member countries who will conduct evaluation and work out selective methods of first-rate projects that will be recommended for implementation within the framework of priority aims and tasks of the BSEC WG on Science and Technology.

33. The participants of the WG stressed the vital necessity that when setting up the criteria for evaluation of the first-rate projects it is important to involve not only the national specialists, but also independent experts as well, for carrying out highly professional and objective approaches to the setting of the priority evaluation of the projects recommended for evaluation in scientific and research directions.

34. The WG on Cooperation in Science and Technology recommended that the country-coordinator together with the PERMIS should invite the Black Sea Trade and Development Bank (BSTDB) to consider the possibility of rendering financial aid to the projects to be proposed by the Group of Independent Experts and to inform them on the results of consideration of such projects.

ANY OTHER BUSINESS

35. The participants highly appreciated the designation by the Twelfth MMFA of country-coordinators and their successors of the BSEC WGs and welcomed Romania in the capacity of country-coordinator of the WG on Science and Technology for the initial term.

36. The WG unanimously supports and finds it useful for the BSEC the idea of creating on the basis of the Kuban State University the Scientific and Coordination Center of Russia to contact with scientific institutions of the Black Sea region countries in the sphere of mathematical modelling, ecology and seismology.

EXPRESSION OF THANKS

37. The participants expressed their sincere thanks and gratitude to the Administration of the Krasnodar Region of the Russian Federation and the Rectorate of the State Kuban University authorities for hosting the Meeting and for the excellent arrangements as well as for the warm hospitality extended to them during their stay in Krasnodar.

DATE AND VENUE OF THE NEXT MEETING

38. The Participating State which may wish to host the next meeting of the WG will accordingly notify the PERMIS. At the same time the Romanian Delegation made a preliminary proposal to be the host country for the next WG Meeting, if this proposal will be adopted officially by the Romanian Government.

In addition to that, the Turkish Delegation also expressed its readiness to be a host country for the next WG Meeting in 1999 in the case that a principal solution on this matter could not be reached.

ADOPTION OF THE REPORT

39. The WG adopted the present report for submission to the Thirteenth MMFA in Tbilisi.
