

**EUROPE'S
BLACK SEA
DIMENSION**

EUROPE'S BLACK SEA DIMENSION

**TERRY D. ADAMS, MICHAEL EMERSON,
LAURENCE DAVID MEE AND MARIUS VAHL**

**PREFACE BY
YANNIS PAPANIKOLAOU**

**CENTRE FOR EUROPEAN POLICY STUDIES
BRUSSELS**

AND

**INTERNATIONAL CENTER FOR BLACK SEA STUDIES
ATHENS**

The Centre for European Policy Studies (CEPS) is an independent policy research institute in Brussels. Its mission is to produce sound policy research leading to constructive solutions to the challenges facing Europe. As a research institute, CEPS takes no position on matters of policy. The views expressed are entirely those of the authors.

CEPS Paperbacks present analysis and views by leading experts on important questions in the arena of European public policy. They are written in a style geared to an informed but generalist readership of policy-makers, government officials and corporate executives.

The cover contains a reproduction of a copper engraved map of the Black Sea, 'The Palus Maeotic and Pontus Euxinus for the Travels of Anacharsis by J.D. Barbie du Bocage', published in *The Travels of Anacharsis* (mid-4th century BC), London, 1825.

ISBN 92-9079-383-X

© Copyright 2002, Centre for European Policy Studies.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, mechanical, photocopying, recording or otherwise – without the prior permission of the Centre for European Policy Studies.

Centre for European Policy Studies
Place du Congrès 1, B-1000 Brussels
Tel: 32 (0) 2 229.39.11 Fax: 32 (0) 2 219.41.51
E-mail: info@ceps.be
Website: <http://www.ceps.be>

CONTENTS*

PREFACE	i
<i>Yannis Papanikolaou</i>	
EUROPE'S BLACK SEA DIMENSION – MODEL EUROPEAN REGIONALISM, PRÊT-À-PORTER	
<i>Michael Emerson and Marius Vahl</i>	
1. Introduction	1
2. Organisation of Black Sea Cooperation	2
3. EU Participation in Black Sea Cooperation	19
4. Conclusions	30
Sources	33
CASPIAN OIL AND GAS DEVELOPMENT AND THE BLACK SEA REGION: AN OVERVIEW	
<i>Terry D. Adams</i>	
1. Introduction	39
2. Caspian Oil	41
3. Caspian Oil Transportation, Black Sea Oil	46
4. The Turkish Bosphorus Straits and Black Sea Bypass Options	49
5. Caspian Central Asian Gas	57
6. The Caspian Legal Regime and Offshore Territorial Boundaries	61
7. Conclusions	67
References	70
Atlas of Maps	71
PROTECTING THE BLACK SEA ENVIRONMENT: A CHALLENGE FOR COOPERATION AND SUSTAINABLE DEVELOPMENT IN EUROPE	
<i>Laurence David Mee</i>	
1. Introduction	81
2. Examining the Symptoms of Environmental Degradation	81
3. International Action for Protecting the Black Sea	88
4. Emerging Challenges and Opportunities for Protecting the Black Sea Environment	107
5. European Integration and the Black Sea Environment	120
6. Conclusion: Towards a Common Purpose	130
References	133
LIST OF ABBREVIATIONS	136
ABOUT THE CONTRIBUTORS	140

* Separate contents pages appear in more detail at the start of each paper.

PREFACE

For many years, the countries of the Black Sea belonged to two totally opposing political and military blocs. With the end of the Cold War, the countries of the region jointly decided to revive the cooperative spirit by setting up the Organisation of the Black Sea Economic Cooperation (BSEC), despite the fact that the Black Sea area is one of the most diverse regions in the world. The eleven member states of the BSEC (Albania, Armenia, Azerbaijan, Bulgaria, Georgia, Greece, Moldova, Romania, Russian Federation, Turkey and Ukraine) have concluded that their common interests should prevail and that they can better promote them through cooperation.

BSEC's diversity makes it also very convenient to play the role of a bridge between Europe, the Caspian Sea and Central Asia. The BSEC member states together constitute a vast Euro-Asian space of almost 20 million square kilometres, populated by 340 million people. It possesses huge deposits of natural, particularly energy, resources. It is also very important for the transportation of the energy resources of the Caspian Sea and Central Asia to the rest of the world. Its geo-strategic importance is substantial since it includes Russia, Ukraine, Turkey and the countries of the Caucasus among its members.

Especially after the 11th of September 2001, BSEC could become an excellent example of how countries so different from each other cannot only co-exist but also cooperate closely in many fields. The success of a formation like BSEC may be also instrumental not only in promoting economic growth and stability in the region but in facilitating its integration with the wider European structures too.

The accession of the candidate countries from South East Europe into the European Union (EU) will create a de facto new relationship between the latter and the Black Sea region. The enlarged EU would greatly benefit from enhanced cooperation with the non-EU countries in the Black Sea region and will not be able to fully exploit its growth potential if the BSEC area continues to stagnate and lag behind its new members.

The BSEC has developed a rather sophisticated organisational structure which, in addition to its intergovernmental bodies, includes also the Black Sea Trade and Development Bank, the BSEC Parliamentary Assembly, the BSEC Business Council and the International Center for Black Sea Studies (ICBSS), its think tank.

In charting the future road of BSEC, its member states miss no opportunity to reiterate their readiness to establish a close collaboration with the European Union and jointly forge the Black Sea dimension with it. To this end the ICBSS and other members of the BSEC family are trying to contribute to a better understanding between the EU and the BSEC and to a recognition by all parties of the mutual benefits to be derived from an institutionalised BSEC-EU relationship.

This is especially so as the parallel processes of globalisation and its counterpart regionalisation affect the relationship between the EU and its new neighbouring regions and make necessary the search for new bonds of collaboration in various fields.

In order to facilitate a better exchange of ideas and understanding about the future of the wider Europe and to promote the dialogue between the BSEC and the EU, the International Center for Black Sea Studies identified the Centre for European Policy Studies (CEPS) in Brussels as an ideal partner. With its tremendous experience and credibility, CEPS is very well suited for the task of developing together with the ICBSS common projects of mutual interest on the interface between the EU and the BSEC in such important fields as energy, the environment and the overall relationship between the two.

The present publication is the result of this cooperation and we hope that it will bring the EU and BSEC closer. Such a development would lead not only to a stronger Europe, but more prosperity, security and stability to the wider region stretching from northwest Russia to the Black Sea, the Caucasus, the Caspian, Central Asia and the eastern Mediterranean.

We are grateful to CEPS and its staff for the quality of our cooperation so far and look forward to a long-lasting, mutually satisfactory and rewarding relationship.

Yannis Papanikolaou
Director-General, ICBSS
Athens

**EUROPE AND THE BLACK SEA -
MODEL REGIONALISM, *PRÊT-À-PORTER***

**MICHAEL EMERSON
AND
MARIUS VAHL**

CONTENTS

1. Introduction	1
2. Multilateral Organisation in the Black Sea Region	2
2.1 BSEC institutions	3
2.2 Other Black Sea regional arrangements	5
2.3 What kind of organisation is BSEC to be?	7
2.4 What is the core business of Black Sea regionalism?	10
2.5 Issues of deepening, widening and variable geometry	16
3. EU Participation in Black Sea Cooperation	19
3.1 EU interests in the Black Sea	19
3.2 Models of regional cooperation sponsored by the EU	22
3.3 Forms of EU participation in international organisations	25
3.4 Elements for possible EU or EC participation in BSEC	27
4. Conclusions	30
Sources	33

List of Tables

1. Participation by BSEC member states in selected European organisations	8
2. EU bilateral agreements with BSEC member states	20
3. The European Community in international organisations	27

List of Boxes

1. BSEC institutions	4
2. BSEC working groups	9
3. The BSEC Economic Agenda for the Future	12
4. Main EU regional initiatives in the wider Europe	23

EUROPE AND THE BLACK SEA - MODEL REGIONALISM, *PRÊT-À-PORTER*

MICHAEL EMERSON AND MARIUS VAHL

1. Introduction¹

The house of the Organisation for Black Sea Economic Cooperation (BSEC) is now a fine piece of regional architecture, symbolised by its elegant mansion on the shore of the Bosphorus, but reflected more significantly of course in its comprehensive institutional structure (ministerial councils, working groups, permanent secretariat, parliamentary assembly, business council, development bank, think tank, etc.).

There is a general concern that the operational performance of BSEC is still thin, however, and that the considerable political and institutional investments are under-exploited. What is BSEC really meant to do? Or, more broadly, how should Black Sea cooperation best be organised to fit into the new European architecture? How should BSEC relate to the important cooperative activities in the Black Sea region that essentially take place outside the BSEC framework (for example in the fields of the environment, transport and energy)? How should BSEC and the EU relate to each other, given that half the Black Sea coastline is now accounted for by member states that are also candidates for accession to the EU, and that BSEC has invited the EU to become an observer and later possibly a full member?

This paper argues that BSEC should focus more strongly right now on a set of core functions that have an intrinsically important regional aspect, rather than aspire to be a general purpose international organisation covering almost all desirable policy objectives of the member states. To achieve this stronger focus, BSEC would need to do three things. First, it would have to strengthen its technical staff expertise to prepare projects and actions in priority sectors. Secondly, it would need to reach a basic agreement with the European Union over how to deal with the several EU policy competences that are now going to increasingly overlap in EU

¹ The authors are grateful for helpful conversations with Valeri Chechelashvili and his colleagues at the BSEC Permanent Secretariat, Yannis Papanicolaou of the ICBSS and several EU officials, none of whom of course are in any way responsible for opinions expressed in the paper.

member states, its accession candidates and other European states. Third, it would also be necessary to bring closer to BSEC, if not fully inside its institutional structure, a number of core regional activities (such as in the interrelated fields of energy, environment and transport) which presently are largely pursued outside BSEC.

Whether to capitalise on the considerable investments already made in BSEC is now a matter for policy-makers to decide both within existing BSEC member states and the EU. From the EU point of view, BSEC is seeking to do all the things that EU policy is typically looking for in regional cooperative structures in the area of its borderlands. In other regions the EU has deplored the lack of will or capacity of regional leaders to develop seriously cooperative structures and has itself had to take the lead (e.g. in South East Europe and the Mediterranean), even if it is virtually impossible to succeed where the region itself is unwilling. In the Black Sea case, regional leaders have themselves put together in BSEC a *prêt-à-porter* ('ready-to-wear' or 'off-the-rack') set of institutional structures. It would seem to be a remarkable opportunity offered to the EU now to join this endeavour and help achieve possible high returns with the aid of a marginal investment of diplomatic, expert and financial resources on its part. The EU should surely not adopt a 'not invented in Brussels' reason for keeping at a distance from BSEC.

2. Multilateral Cooperation in the Black Sea Region

BSEC is not alone among the institutions of post-Cold War Europe which now, after around a decade of experience, are reflecting on how to proceed in the years ahead. A common challenge for these institutions is how to face the issues of deepening and/or widening. A related theme is whether to embrace flexibility (or variable geometry) in order to reconcile the deepening and/or widening challenge.

Europe as a whole has seen basically two types of institutional development in the post-Cold War era:

- Progressive widening of membership of the global and European organisations, which has gone ahead quickly for the OSCE, IMF, IBRD, and Council of Europe, but more slowly for the WTO, and even slower for NATO and the EU.
- Creation of new regional organisations or cooperative arrangements overlapping the former frontiers of the Cold War blocs, and the new primary categories of EU members, EU candidates, and non-EU candidate states. This has become in fact now a general pattern for all

the enlarging EU's border regions: with Baltic and Barents Sea organisations now grouped under the Northern Dimension initiative, the Barcelona Process for the Mediterranean, the Stability Pact for South East Europe. BSEC completes this picture, and is the only one of these home-grown regional organisations whose region has not been the target of an EU regional initiative.

The EU is now invited by BSEC to become more deeply involved in the Black Sea region, as an observer or full member. In principle this could help deepen the value of BSEC cooperation, since the EU could contribute skills and financial resources which are lacking, and because the EU enlargement process is in any case going to extend the reach of EU policies into the Black Sea region.

2.1 BSEC institutions

Although BSEC is primarily an intergovernmental organisation, it also has established parliamentary, local government, business, academic and financial institutions, and these all constitute important elements of an emerging network of cooperation in the wider Black Sea region.

Since the creation of BSEC in June 1992, most of the efforts have focused on the progressive establishment and development of these institutions. In 1993 the Parliamentary Assembly of BSEC (PABSEC) was established, and has since 1997 (when Bulgaria joined the Assembly) included parliamentarians from all 11 BSEC parliaments. Agreement on the creation of a Black Sea Trade and Development Bank (BSTDB) was reached in 1994, although the Bank was not established until 1998 and become operational as recently as June 1999. 1994 also saw the establishment of a Permanent Secretariat (PERMIS) in Istanbul. Academic cooperation was initiated in 1996-98 with the establishment of the Black Sea Universities Network, the BSEC Standing Academic Committee and the International Center for Black Sea Studies in Athens. In April 1999, BSEC was established as a regional economic organisation under international law, with the entry into force of the 1998 Charter of the Organisation of BSEC.

It is possible that the institutions of BSEC could be given a stronger regional identity. For example, Russian parliamentarians in PABSEC are from the Black Sea region. Is this also the case for parliamentarians of PABSEC from Ukraine and Turkey? While there is an association of Black Sea Capitals, BSEC might consider one of the features of the Baltic and Barents Sea initiatives, which are councils of regional government representatives.

*Box 1. BSEC institutions***Intergovernmental institutions**

Summit meetings of the Heads of State and Government of BSEC determine its strategic direction, such as its establishment in 1992 and its transformation into a formal regional organisation decided in 1998. Five summits of BSEC have taken place (1992, 1995, 1996, 1998 and 1999).

The principal regular decision-making organ of BSEC is the *Council of Ministers*, which consists of the 11 Foreign Ministers of the BSEC states. The Council meets twice a year, each time chaired by the Foreign Minister of the country assuming the six-month *Chairmanship* of BSEC. The Chairman-in Office is supported by a *Committee of Senior Officials*, a number of sectoral *Working Groups* (at present 13). In addition to the regular meetings of the Council of Ministers, there are also meetings of other BSEC ministers, although this is on an *ad hoc* non-institutional basis. A 'Troika'-mechanism of consultation, including the past, the current and the future chairmen, was introduced in 1995 in order to ensure continuity, but does not play a prominent role.

A *Permanent Secretariat* (PERMIS) has been established in Istanbul to co-ordinate BSEC activities. PERMIS has its own budget to which all member states contribute according to an agreed-upon formula, and currently has a staff of 16 people, nine of whom are professionals. PERMIS lacks the legal status to be a contracting partner on behalf of BSEC. In order to strengthen continuity of BSEC activities, the current (April-November 2001) Turkish Chairmanship intends to encourage the BSEC member states to accredit permanent delegations to BSEC, which, eventually, could lead to the establishment of a *Council of Permanent Representatives* based in Istanbul.

Interparliamentary cooperation

The *Parliamentary Assembly of BSEC* (PABSEC) is a related body of BSEC consisting of national parliamentarians, aimed at the harmonisation of legislation required to implement BSEC projects. The Assembly meets twice a year, and works in three committees (Economic/environment, Legal/political and Education/social). A Secretariat has been established in Istanbul. In contrast to the Council of Ministers, the PABSEC agenda is not limited to economic cooperation. Although there has been only limited progress towards legal harmonisation, PABSEC has taken several useful initiatives, such as its initiatives to promote sub-national cooperation.

Financing

The *Black Sea Trade and Development Bank* (BSTDB), the autonomous financial institution of BSEC, became operational in June 1999, with an

initial capital of \$300 million expected to rise to \$1.5 billion. Greece, Russia and Turkey have 16.5% of the shares each, Romania, Bulgaria and Ukraine 13.5% each, while the remaining five BSEC governments have 2% each. With BSEC now consolidated as an international organisation, the core of BSEC activity will be the implementation of concrete joint projects. The BSTDB is expected to play a key role in the future of BSEC.

Sub-national cooperation

In comparison with similar regional organisations in Europe (such as CBSS and BEAC), the sub-national level of cooperation is less developed within BSEC. Some institutions like the *International Black Sea Club* (IBSC) and the *Association of Black Sea Capitals* (BSCA) have been established, the latter following an initiative by PABSEC. However, the IBSC has participants only from 6 of the 11 BSEC countries, while BSCA is, as its name implies, limited to the capital cities.

Private sector involvement

The *BSEC Business Council* (BSEC BC) consists of representatives of the business communities in the 11 BSEC countries, and has observer status in BSEC. A Secretariat has been established for BSEC BC, located with PERMIS in Istanbul.

Academic cooperation

Following the establishment of the BSEC Standing Academic Committee in 1996, the *International Center for Black Sea Studies* (ICBSS) was set up in Athens to carry out policy-oriented and practical research. The ICBSS staff currently consists of only six persons, so its capacity to conduct extensive research is limited.

2.2 Other Black Sea regional arrangements

Although BSEC is the only multi-purpose arena for regional cooperation in the Black Sea region, there are several multilateral projects and programmes in the region that take place outside the BSEC framework. Cooperation in the fields of environment, transport, energy, soft security and, in the near future, fisheries are particularly important in the context of EU-Black Sea relations.

Environment. The 1992 Convention for the Protection of the Black Sea against Pollution (The Bucharest Convention) was ratified by the parliaments of the six littoral states in early 1994. Implementation is managed by a Commission with a small secretariat in Istanbul (the current staff of two persons will eventually grow to six), the establishment of which was delayed until autumn 2000. In the meantime,

a Black Sea Environmental Programme (BSEP) supported by the UN's Global Environment Facility (GEF) and the EU, was launched in 1993. Since 1993, the GEF has committed approximately \$11 million to the programme. The BSEP, through its secretariat in Istanbul (which shares premises with the Commission secretariat), has conducted a comprehensive analysis of transboundary environmental problems in the region and developed a strategic action plan for the rehabilitation and protection of the Black Sea, which was signed by the six governments in 1996. Regional activity centres have been established in all six countries, although they are not operational because of a lack of funding for projects, which is the responsibility of the host governments.

Infrastructure. The European Commission has developed several large multilateral infrastructure programmes for the wider Black Sea region. The Transport Corridor Europe-Caucasus-Asia (TRACECA) programme was launched in 1993 by the five Central Asian and three South Caucasus countries together with the European Union. This consists of EU-funded technical assistance and catalytic investment support (so far approximately €100 million) to develop a transport corridor on a East-West axis from Europe, across the Black Sea, through the Caucasus and the Caspian Sea to central Asia. Four sectoral working groups in operation from 1995 to 1999 developed the programme plan. The technical assistance provided through the TRACECA programme has helped to attract large investments by the international financial institutions, in particular the EBRD, which by itself has committed approximately €300 million to TRACECA projects. The TRACECA process led to the signing of the Basic Multilateral Agreement on International Transport for the Development of TRACECA in 1998 by 12 countries from Eastern Europe to Central Asia, among them all BSEC member states except Albania, Greece and Russia.

At the third European Conference of Ministers of Transport in 1997 dedicated to pan-European transport infrastructure, the Black Sea was designated as one of four Pan-European Transport Areas (PETrAs), the maritime complement to the Pan-European Transport Corridors. A Steering Group composed of representatives of the eight participating states (the six Black Sea littoral countries, Greece and Moldova) and the EU Commission was established in 1999. Four sectoral working groups and an annually revised Action Programme have been developed. A decision has been made by the Steering Group to establish a technical secretariat of the Black Sea PETrA in Odessa, Ukraine, although the BSEC Permanent Secretariat offered to house it in Istanbul on its

premises. Agreement on the final map is expected towards the end of 2001, and will be followed by an action plan for the Black Sea PETrA.

The Interstate Oil and Gas Transport to Europe (INOGATE) is an EU-funded regional programme of technical assistance and modest investment support for oil and gas infrastructure in the wider Black Sea region, launched in 1995. At the first INOGATE summit in July 1999, the INOGATE Umbrella Agreement, a treaty setting out an institutional system aimed at facilitating the development of oil and gas transportation networks, was signed. The treaty, which entered into force in February 2001, opened up for the participation in INOGATE of countries not covered by the Commission's TACIS programme. As of today, the Umbrella Agreement has been signed by 21 countries, including all BSEC member states except Russia. A secretariat for INOGATE was inaugurated in Kyiv in November 2000.

Security. First proposed in 1998, the Black Sea Naval Cooperation Task Group (BlackSeaFor) agreement was signed by the six Black Sea littoral states in April 2001, and will enter into force following parliamentary ratification. The group was activated in September 2001. The purpose of BlackSeaFor is to cooperate in search and rescue operations, mine-clearing operations, environmental cooperation and organising goodwill visits among the Black Sea navies. No permanent headquarters will be established for BlackSeaFor, but will follow the rotating presidency of the group. At least one joint manoeuvre is planned each year.

Fisheries. A fisheries convention for the Black Sea is likely to be signed in the near future, with two options currently under consideration. The first option entails a BSEC agreement, the second a convention outside BSEC with only the six littoral states participating. In the latter case, a Commission and a secretariat would be established, while in the former these functions would be handled by a working group on fisheries and PERMIS.

2.3 What kind of international organisation is BSEC to be?

The new Europe has an abundance of multilateral organisations and cooperative arrangements. The growth and evolution of these initiatives is a Darwinian process. Some institutions prove their vitality for decades. New circumstances, such as the end of the Cold War division of Europe, see new institutions created, some old institutions adapt, while others become marginalised or wither away. Some are complementary, whereas some are competitors. Differences of membership in some of these institutions by BSEC member states are illustrated in Table 1. This makes

it quite evident that the Darwinian processes have not yet run their course in this field. It is not possible for all of these institutions and BSEC to have significant roles in overlapping sectors of policy all at the same time.

BSEC cooperation is founded on three mutually supporting motivations, as clearly explained in the work programme of the Turkish Presidency in 2001:

1. *Cooperation rather than conflict.* Common ground among BSEC member states is that the organisation should serve to create a presumption of cooperation in a region that has much potential for tension and conflict, as can be seen between several of the pairs of member states. It is already to be recognised as a success that BSEC has gone a long way in establishing this presumption of cooperation, even while some serious conflicts and tensions in the region – in the Caucasus in particular – have remained unresolved.

2. *Regionalism as well as globalisation.* There is also a sufficiently widespread growth of regionalism in all continents, in a world of globalisation, to say with confidence that the two phenomena – regionalisation and globalisation – are complementary.

Table 1. Participation by BSEC member states in selected European organisations

	EU	NATO	GUUAM	CIS	Tashkent Treaty
Greece	X	X			
Turkey	(x)	X			
Bulgaria	(x)	(x)			
Romania	(x)	(x)			
Albania		(x)			
Georgia			X	X	
Moldova			X	X	
Azerbaijan			X	X	
Ukraine			X	X	
Armenia				X	X
Russia				X	X

X = Member state; (x) = Candidate state for EU accession.

3. *Avoiding new divisions in Europe.* Within Europe as a whole there is also the specific issue of how to bring together as harmoniously as possible the enlarging European Union and the rest of Europe, with many

sensitive issues arising over the relations between the EU members, its candidate states and the non-candidate states.

These principles are all well and good. They are sufficient to justify in principle the substantial investments made in the BSEC process. However there is next the question how to select the domains for substantive work. BSEC has chosen to throw the net exceedingly wide. This is seen in the long list of sectoral policy working groups that have been established (Box 2) and in the recent 'BSEC Economic Agenda for the Future' document of April 2001 adopted at the Moscow Ministerial Meeting (whose numerous headings are listed in Box 3). As the next section reviews in more detail, the many headings range from those which relate to very concrete Black Sea matters, through to important policy objectives which are general for the national policies of member states, with no real Black Sea regional aspect.

Box 2. BSEC Working Groups

1. Economic and trade development
2. Tourism cooperation
3. Communication
4. Environmental protection
5. Agriculture and agricultural industry
6. Energy
7. Electronic communication network
8. Scientific and technological cooperation
9. Statistical information and data exchange
10. Health care and pharmaceuticals
11. Transport
12. Emergency assistance
13. Combating crime

The unease over the under-performance of BSEC seems related to this primary distinction between the regional and the general issues. More precisely the problem is that several of the most important regional issues such as in the energy, environment and environment fields, where BSEC should in principle have a comparative advantage, are in fact being handled wholly or to a large degree outside the BSEC framework. On the other hand, BSEC aims to discuss many general policy issues, for which it does not have a comparative advantage, for example macroeconomic and governance issues, where the huge financial and/or analytical resources of the IMF, World Bank and OECD are deployed.

The European Union factor is now also of real significance to the future of BSEC. At one time a few years ago it seemed that several BSEC member states felt that BSEC could actually serve the purpose of being an alternative to the EU as their privileged regional framework. For example, it has suggested that this was at some point the case for Turkey [Valinakis, 1999], and for Romania [Hartwig, 2001]. Now the perspectives are completely different, however. The EU candidacies of Bulgaria, Romania and Turkey are deepening stories, and the external impact of EU policies beyond the forthcoming enlargements becomes a major topic for the future neighbours. In fact the EU is very active in areas of prime concern to the Black Sea region – energy, environment and transport.

The EU is not currently using BSEC, however, as an operational agency in these policy domains. If this does not change, the chances are that BSEC will continue to play a rather secondary role. The EU might take up a more visionary view of the new euro-regionalism, in which it already invests extensively (Northern Dimension, Stability Pact for South-East Europe, Barcelona Process), and where the Black Sea region remains the missing piece. According to such a view, the enlarging EU would establish deeply cooperative relations with all its eastern border regions, so to avoid perceptions of new Berlin Walls. This would mean a change of policy by the EU towards BSEC, and require first and foremost a clear signal by BSEC member states of their willingness to build up the role of the organisation.

2.4 What is the core business of Black Sea regionalism?

The recent *BSEC Economic Agenda for the Future* document does not really clarify what BSEC's core business is to be. A project-based approach is announced in general. However the list of sectoral policy headings remains extremely long (Box 3 lists all the headings of this document). The commentary on these headings often does not distinguish between desirable general objectives of national policies and specifically regional projects where BSEC as an organisation could have a comparative advantage. The Work Programme of the Turkish Chairmanship for the period May to October 2001 is more selective and perhaps reflects more realistically the present orientation of the organisation. As a contribution to discussing BSEC priorities, a tentative regrouping of the headings of the Economic Agenda document is offered, as follows.

Category A: *Domains where regional cooperation is an essential aspect of efficient policy-making, and where the Black Sea region itself has an objective vocation.*

- *Energy: gas and oil projects.* Key investment decisions over pipeline and transportation routes are intensely competitive processes, with the final responsibilities lying mostly with the major international energy corporations and unilateral or bilateral negotiations. Therefore BSEC has not been involved in negotiations or decision-making. That fact, however, should not exclude discussion of many vital issues at BSEC level, such as sharing full information about the options for strategic investments, policy framework conditions and secondary coordination activity. In particular the two big new trunk lines for exporting Caspian oil are now either built (CPC to Novorossisk) or committed (Baku-Ceyhan). As argued elsewhere in this book in the paper by Terry Adams, this new situation may make it easier now to discuss in a BSEC forum the alternative options for a Bosphorus bypass investment with independent experts.
- *Energy: electricity network interconnections.* The Black Sea electricity ring concept is established and is more the responsibility of state enterprises and ministries. Establishment of the ring, and then work on a regional electricity market are therefore highly plausible BSEC tasks. This project calls for technical assistance for its specification and later investment.
- *Transport.* BSEC transport ministers have drawn up an action plan, and the Turkish Chairmanship currently gives priority to the Black Sea Ring Corridor concept. There are two other major EU-led initiatives that are advancing outside BSEC, the Black Sea Pan-European Transport Area (Black Sea Petra), and the TRACECA project for linking Central Asia and the Caucasus to Europe. There is therefore a large issue of coordination with the EU here. In addition the Bosphorus poses very sharp issues of transport policy, which are inadequately covered by the outdated Montreaux Convention of 1936, especially its environmental aspects. As also argued in the paper by T. Adams, the Bosphorus issues deserve now to be the subject of constructive dialogue.
- *Environmental protection.* This is already the most advanced example of Black Sea policy-making, given the work under the aegis of the Bucharest Convention and the Black Sea Environmental Programme. The six littoral states adopted a Strategic Action Plan for the Rehabilitation and Protection of the Black Sea in 1996, and have

received substantial support from the Global Environment Facility of the UN and from the EU for its implementation. This significant activity grew up outside the BSEC institutional framework, however, although its offices are also located in Istanbul. While the six littoral states have special responsibilities for the Black Sea, the fundamentals of its pollution or protection lie in its watersheds, first in importance being the Danube basin, followed by the Dniester and Don. The crucial importance of the entire Danube basin for the Black Sea is now reflected in the forthcoming publication by the EU Commission of a policy communication on 'Environment in the Danube and Black Sea Region'. (Germany, Austria and most of Central and South East Europe are thus involved.) This is also a domain where the EU's enlargement has a direct impact on the Black Sea, given the legally binding water standards that EU law imposes on member states. If BSEC is to be the lead organisation for Black Sea cooperation, some way would need to be found institutionally to bring it closer to the Black Sea Environmental Programme. (See paper by Laurence David Mee elsewhere in this book.)

Box 3. The BSEC Economic Agenda for the Future

I. Acceleration of effective multilateral economic cooperation and attainment of sustainable development

- Concerted actions for economic expansion of the BSEC member states

Project-based approach

Project elaboration and promotion

- Intra-regional trade and investment

- Banking and finance

Defining priorities for cooperation in specific sectors of the economy

- Energy: oil and gas projects, interconnection of electricity networks
- Transport
- Telecommunications
- Environmental protection
- Science and technology
- Information and communication technology
- Investment in education and training
- Regional strategy for agricultural development and food security
- Tourism
- Strengthening of the BSEC business dimension – SMEs
- Exchange and harmonisation of statistical data and economic information and adoption of common accounting principles

II. Cooperation in the field of institutional renewal and governance

- Legality and legitimacy
- Effective partnerships
- Policy integration
- Investing in government capacity
- Black Sea cities exchange
- Anticipating crisis management
- Building key networks

III. Soft security measures in the framework of multilateral economic cooperation

- Cooperation in combating organised crime, illegal trafficking of drugs and arms, terrorism, corruption, money laundering in the wider European context
- Cooperation in emergency situations

IV. BSEC: Towards the mature partnership, common endeavour and shared values

- Broadening the basis for multilateral cooperation among governmental and parliamentary structures, NGOs, businessmen and academic communities
- The role of PABSEC and national parliaments of the BSEC member states
- Further development and improvement of the BSEC implementation and co-ordination mechanisms
- The role of the BSEC PERMIS

V. External relations of the BSEC organisation

- The BSEC role in the new European architecture
- The BSEC-EU Platform of Cooperation
- BSEC and the world – cooperation with other international organisations

Source: BSEC Economic Agenda for the Future: Towards a more consolidated, effective and viable BSEC partnership, document adopted by BSEC in March 2001, BS/SOM/R(01)2, Annex III. The main headings of this document are reproduced above.

- *Fisheries.* This is a surprising omission from the BSEC Economic Agenda document, especially since a multilateral convention has been under negotiation for some time. This is the purest example of a policy domain for the six littoral states to share. With Bulgaria and Romania now negotiating various policies related to their accession to the EU, including fisheries, there are some sharp issues also arising from the EU side (see paper by L. Mee).

- *Tourism.* The tourism sector has great potential, but is today limited by a series of problems (unresolved conflicts in the Caucasus, visa restrictions, dilapidated investments, limited ferry boat and air transport services, etc.). Redevelopment will call for much detailed coordination and new investment by local government and business interests.

All of the above domains will have important requirements for financing of investments and prior feasibility studies. The aim of BSEC to focus on a project approach in such areas seems fully justified, and the Black Sea Trade and Development Bank (BSTDB) is well suited to support this. The need for grant-financed feasibility studies and for leveraging the capital resources of the BSTDB is acute, and here the EU, EBRD and EIB could all be useful partners.

Category B *Domains where there might be a useful Black Sea dimension, although the policy domains are essentially domestic and national in character.*

- Telecommunications
- Science and technology
- Education and training
- Agricultural development and food security
- Business cooperation and SMEs

These are all policy domains where there is a secondary case for Black Sea regional cooperation, and the Turkish Chairmanship's work programme has several examples of the project approach, such as developing in the educational field the Black Sea University Network, and in the field of agriculture cooperating to prevent the spread of foot and mouth disease.

- Cooperation in emergency situations
- Anticipating crisis management
- Soft security: crime, trafficking, terrorism

These are new fields for BSEC, with specific initiatives on a Police Liaison Centre discussed, and a Task Force on money laundering. These three headings together are indicative of BSEC's interest in entering the soft security domain. Cooperation with the EU in these areas is also conceivable.

Category C: *Domains where the policy is essentially national or supranational at a more global level, and where the regional dimension has little or no operational meaning.*

- *Concerted actions for economic expansion.* This concerns general economic policy-making, for which the IMF, World Bank and OECD are the lead international organisations, and which have deployed their priorities considerably in favour of transition economics in the last decade. BSEC has no comparative advantage, especially noting the strength of professional analytical skills of the lead organisations. At best it can be said that Greece and Turkey have some special insights because of their recent or incomplete transitions.
- *Main features of trade policy.* BSEC continues to refer to a BSEC Free Trade Area as an objective, even if a long-term one. It has to be remarked that regional free trade is legally impossible for individual BSEC member states that are either partners in a customs union with the EU (Turkey) or EU members (Greece today, others tomorrow). Free trade for BSEC only makes sense as an objective under one of two conditions. Either the whole of Europe becomes one pan-European free trade area, which is certainly an interesting idea for the future but one whose achievement would not be through the agency of BSEC, or BSEC undertakes policies with a variable geometry that excludes EU members and candidate states. In the latter case, however, it reverts to becoming a variant of either the CIS, the EurAsian Economic Community or GUUAM free trade. More plausibly, BSEC can pursue more modest objectives for trade facilitation, and the Turkish Chairmanship's work programme includes the example of facilitating the transport of goods on the model that the Southeast Europe Cooperative Initiative (SECI) has developed for South East Europe.

Category C would also include most of the headings aiming at improved institutions and governance, namely:

- Legality and legitimacy
- Effective partnership
- Policy integration
- Responsible budgeting
- Investing in government capacity

Category C would seem to include sectoral policy domains such as:

- *Information and communication technology*
- *Statistics and common accounting standards*

In general these category C topics seem too extensive for BSEC to become significantly engaged in them. It is indicative they do not feature much or in some cases at all in the Turkish Presidency's work programme.

Category D: *Post-conflict rehabilitation of conflict zones.* The BSEC area still suffers from several sub-regional conflicts, either live conflicts or those frozen but unresolved (Transdnier, Abkhazia, Nagorno-Karabakh, South Ossetia, Chechnya). Resolution of these conflicts is surely not for the BSEC agenda, given the involvement of the specialised services of OSCE and UN, as well as intense negotiations between the parties directly concerned. However these conflict zones are areas of extremely depressed living conditions. As and when the directly interested parties succeed in making political settlements, there will be important needs and opportunities for re-opening these blockaded economies, reconstructing housing and economic infrastructures, and re-establishing normal flows of trade and personal movements. At some stage BSEC might be mandated to sponsor regional rehabilitation programmes for such regions.

2.5 Issues of deepening, widening and variable geometry

A sharper regional focus on the BSEC agenda seems indispensable in order to deepen BSEC's operational impact. This seems to be the way BSEC priorities are developing in practice.

In support of this deepening there would have to be a strengthening of the staff capacity to prepare technical proposals, since existing BSEC staff are mainly diplomats on secondment. There is a problem here of financing. BSEC's budget was in initial years entirely funded by Turkey, including costs of setting up. The present budget is only about \$1 million, but apparently stretches the possibilities of some member states. If BSEC's own budget cannot be increased substantially, there are two conceivable approaches, both involving the EU and its member states.

- First, at the most pragmatic level, cooperative arrangements could be developed where other agencies have set up technical offices in BSEC core areas of interest. For example the Black Sea Environmental Programme exists also in Istanbul, but even reciprocal observer status is not yet fully activated. For the transport sector, the PETra steering committee has an office being established in Odessa, which could have been located in Istanbul and even housed in BSEC's building. The servicing of BSEC policy analytical needs by

the International Center for Black Sea Studies can be further developed.

- Secondly, if the EU established an institutional link through an advanced observer or membership status, it could make available staff or experts or fund technical support units, as also could EU member states, to work as part of the BSEC in-house team.

As in the EU, there may be questions in BSEC whether the six-month rotating chairmanship of all member states in a predetermined order is optimal for continuity and depth of leadership. An alternative is the OSCE model of successive presidencies decided by common agreement, possible for a whole year, without a set list. The EU has positive experiences in some of its committees of senior officials or chairpersons being elected on a personal basis for several years, when someone of outstanding ability and commitment is identified.

There are plans for permanent representatives to BSEC, becoming later something presumably modelled on the Committee of Permanent representatives (COREPER) of the EU. With the scarcity of expert staff capable of preparing projects and policy proposals, it is not clear whether the first call on resources should be for permanent representatives, especially since the existing senior staff are all or mostly seconded diplomats from national capitals.

There are pressures also for widening BSEC, with applications for full membership from F.R. Yugoslavia, Macedonia, Iran and Uzbekistan. This would represent a substantial extension of membership both in numbers and range of interests of candidates. No decision on BSEC enlargement has yet been made. It may be commented that, for an organisation that is still only beginning to address the first priority of deepening, new decisions to enlarge membership at this stage would seem rather perilous. A reasonable approach might be not to reject the requests, but to hold them in abeyance for a period, during which BSEC would be consolidating its role in well-identified core functions.

There are also variable geometry options to be considered, for BSEC to undertake some tasks in a more restricted group of member states such as the six littoral states, and other tasks with a more extensive participation. Both variants merit consideration, and the first one already is provided for in the BSEC Charter. For example, in 1996, a Memorandum on cooperation in the electric power industry was signed by only eight member states, with Bulgaria, Romania and Turkey (maybe not coincidentally the 3 EU candidate states) abstaining. Nevertheless, BSEC

officials are understandably very cautious about opening BSEC to the risks of fragmentation. The CIS may be seen as an illustration of the menu approach to participation, in which CIS member states can choose which activities they wish to join. The result was a lack of cohesion and gradual erosion of the organisation itself, such that it is now largely overtaken by entities like the EurAsian Economic Community or GUUAM for just a sub-set of CIS states.

The EU also has been very cautious about opening up variable geometry, but in recent years it has developed a set of rules that permit 'enhanced cooperation' among a restricted number of member states. These rules were defined in the Amsterdam and Nice Treaties (a majority of states must participate, the interests of other states must not be affected, etc.). Important examples exist in the EU in the case of the Schengen regime and monetary union. Institutional arrangements include the example of the euro-group of finance ministers, who meet generally immediately before plenary meetings of EU finance ministers. The Schengen regime gradually re-integrates into the EU domain legally and institutionally.

For the Black Sea region one could also envisage a controlled regime for variable geometry. Such cases might be agreed where there were objective needs for specific groupings, rather than an open opting-out provision, which indeed would be very damaging to the existing cohesion of the organisation.

There are several domains where the six littoral states could have well identified reasons to act together, as in the examples of some aspects of environment policy, fisheries and maritime emergencies. A strict exclusion of possibilities for 'enhanced cooperation' (using EU language) may in the Black Sea case have the undesirable effect of forcing some of its potential core business outside the organisation, which runs against the deepening objective.

On the other hand, there are important cases where the existing BSEC member states need to be able to work with a wider circle of states in order to arrive at sound policies. Again there are examples in BSEC's potential areas of core business. In the environment field the main source of Black Sea pollution is in the Danube watershed leading all the way back to Germany. In the field of oil and gas supplies, Iran is a crucial actor in the Caspian-Black Sea context, in addition to the existing BSEC member states.

3. EU Participation in Black Sea Cooperation

3.1 EU interests in the Black Sea

The question of the EU's involvement in Black Sea cooperation, and an institutional link to BSEC in particular, is now reviewed systematically under its several aspects:

- The nature of the EU's strategic interests;
- Contractual and financial relationships between the EU and BSEC member states;
- Existing models of EU sponsored regional initiatives in the wider Europe; and
- Legal precedents for EU participation in international organisations.

EU interests. The EU's present official position is that its cooperation with BSEC should proceed on an ad hoc basis, without institutional links. This was the reply of Commissioner Patten to the invitation by BSEC to the EU in early 2001 to establish Observer status, leading later to more developed institutional links. The reasons for this cautious reply may have to do with the complexity of the EU's existing set of bilateral links with BSEC member states, as set out in Table 2. These different types of status for the EU mean different operating policies and programmes, legal bases and financial instruments. To cut across these different types raises considerable administrative and legal complications. Also individual BSEC member states are carefully guarding any acquired relative advantages. For example the pre-accession policies for EU candidate states are much more generous financially than for other categories of non-member states.

The negotiating accession candidates, Romania and Bulgaria, receive economic and technical assistance from the EU through the PHARE, SAPARD and ISPA programmes aimed at preparing them for EU membership. Turkey has a special financial protocol with the EU, which has only recently been activated after years of suspension. The non-candidates states of South Eastern Europe, including Albania, are beneficiaries of the CARDS programme of financial and technical assistance. The CIS states are beneficiaries of the TACIS programme. The distinctions between these programmes are very marked.

First, the amounts allocated to the different categories of countries vary enormously. In the EU's financial perspective 2000-06, enlargement candidates will receive almost €200/capita, Western Balkan countries in

excess of €200/capita, while the former Soviet republics will receive €13/capita on average. This allocation of economic assistance, while slowly reducing the economic disparities between the enlargement candidates and the EU, hardly reduces the growing socio-economic gap between the countries of enlargement candidates and the former Soviet republics.

Secondly, different EU aid programmes provide different types of assistance. While assistance to the candidate countries includes significant amounts of investment support, aid to the CIS countries is primarily in the form of technical assistance. In addition to the grants from the European Community, EU accession candidates also receive funds from the European Investment Bank, which has so far been unable to operate in the CIS.

Thirdly, the division of non-EU countries into different groups eligible for assistance from different programmes means differences in technical regulations and programming cycles as well as different administrative departments. Thus, a considerable, if not in some cases insurmountable burden of coordination would be required in order to support common projects of interest to a politically heterogeneous region such as the Black Sea. On issues that require multilateral cooperation among countries with different relationships with the EU therefore, the EU's approach poses problems for such regional cooperation.

Table 2. EU bilateral agreements with BSEC member states

	Member State	Europe Agreement (Negotiating candidate)	Association agreement (Non-neg. candidate)	Stability and Association Agreement (under neg.)	Partnership and Cooperation Agreement
Greece	X				
Bulgaria		X			
Romania		X			
Turkey			X		
Albania				X	
Armenia					X
Azerbaijan					X
Georgia					X
Moldova					X
Russia					X
Ukraine					X

Solutions to such problems can hardly go as far as unifying all these different programmes. Nevertheless, it is possible to create separate budget lines to service specific needs, when the political priority to do so is judged to be sufficient. The potential for developing such 'Black Sea synergies' was the main reason why the 1997 Commission Communication on regional cooperation in the Black Sea area [European Commission, 1997a] proposed that the Commission should become an observer in BSEC.

How then might one assess the EU's strategic interest in strengthening the effectiveness of Black Sea cooperation? In fact, it seems that there are no less than eight arguments of importance:

1. With the prospect of Bulgarian, Romanian and Turkish accession, the EU is set to become a major Black Sea actor, whose future member states account for half of its coastline. It is not a question of whether, but when the EU enters the Black Sea, with much EU legislation and policy due to be adopted by the accession candidate states even before accession. As these states become EU members, their interests become axiomatically EU interests.

2. The EU is concerned that the exclusion of some neighbouring states from the EU accession process should not cause a negative 'exclusion effect', undermining their progress in the political and economic transition towards modern European standards and values. This is the general EU interest in the new European regionalism overlapping its future frontiers.

3. There is the interest for the EU's security of energy supply. In particular, the Caspian basin offers a useful diversification away from excessive dependence on Middle East supplies and/or a replacement for declining North Sea production, which calls for cooperation and political stability surrounding the transport routes for oil and gas.

4. The EU is going to be investing very heavily in environmental policies in its new member states, and the Danube water basin is the one of the most important frameworks for this. Such investments would be substantially wasted if they did not fit into a coherent Black Sea environmental programme, involving also the Dniepr and Don River basins too.

5. The EU is interested in the resolution of the several conflicts in the Caucasus region, and the progressive shift of this region into modern modes of cooperative behaviour between nations and ethnic communities. BSEC is a framework that can facilitate this shift, and already maintains

multilateral collaboration between some nations of the region that do not at present have cooperative bilateral relations (e.g. Armenia-Azerbaijan and Armenia-Turkey).

6. With respect to Turkey, where the question of EU accession cannot progress very quickly, the EU is highly interested in finding ways of adding value together through the pursuit of common interests in advance of accession negotiations. The enrichment of Black Sea cooperation is an important opportunity for doing this.

7. *Vis-à-vis* Russia, the EU is interested in extending as widely as possible the mode of cooperative relations, and the Black Sea region can usefully complement the progress made already in the Northern Dimension in establishing regional cooperation across the frontiers of the enlarging EU where these reach or approach Russia, whether to the North or South. Given Russia's historical and political sensitivities, it is particularly important that the EU's entry into the Black Sea come to be appreciated in Russia as part of a long-term mutually beneficial positive sum game, not a zero sum game of competing for 'possession' of land and water space and control over transportation routes.

8. *Vis-à-vis* Ukraine, the EU is interested in deepening cooperative arrangements that are not in any way divisive for this country or Europe as a whole.

3.2 Models of regional cooperation sponsored by the EU

In spite of a tendency to prefer organising its relationships with states of the wider Europe on a bilateral basis, the EU has sponsored or supported several multilateral regional initiatives since the end of the Cold War. The main initiatives are the so-called Barcelona Process in the Mediterranean, the Northern Dimension in North West Europe and the Stability Pact for South Eastern Europe.²

All three initiatives address a well defined geographical and historical region, but one comprising states in three different political categories: EU member states, EU accession candidates and other states. The regional initiatives are seeking to support natural opportunities for regional cooperation if not integration, despite the political divisions.

² See, *inter alia*, Christiansen et al. [2000]; EastWest Institute and European Stability Initiative [2001]; Emerson [2001] and Vahl [2001].

*Box 4. Main EU regional initiatives in the wider Europe***The Barcelona Process**

The Euro-Mediterranean Partnership (the so-called Barcelona Process, also known as the Southern Dimension) is a framework for bilateral and multilateral relations between the EU and its 12 Mediterranean partners (three of whom – Cyprus, Malta and Turkey – are accession candidates) initiated by the 1995 Barcelona Conference.

Aims, agenda and performance. The aims of the Barcelona Process are broad, and include creating a common area of peace and stability and the establishment of a Euro-Mediterranean free trade area. The Euro-Mediterranean Partnership is constructed around three groups of issues: economic, political and socio-cultural. There has so far been little progress towards the principle objectives, primarily because of the continuing conflict in the Middle East.

Institutions and dialogue. Six conferences of foreign ministers have taken place since 1995, and a Euro-Mediterranean Committee consisting of representatives of the EU and the 12 partner countries has been established.

Financing. The MEDA programme established for the Barcelona process is the second biggest EU external relations programme worth approximately € billion per year.

The Northern Dimension

The idea of an EU Northern Dimension initiative embracing all 11 countries in Northern Europe – four EU states (France, Sweden, Denmark, and Germany), four EU accession candidates (Poland, Estonia, Lithuania and Latvia) and three others (Norway, Russia and Iceland) – was launched by Finland in 1997.

Aims, agenda and performance. The Northern Dimension agenda is broad and includes in principle all issues, except the hard security domain. An extensive Action Plan for the Northern Dimension was adopted by the Feira European Council in June 2000. At Feira, the EU decided that Kaliningrad, the fight against organised crime and the environment, including nuclear issues, would be the three priorities for the Northern Dimension. The second ministerial conference in April 2001 initiated a Northern Dimension Environmental Partnership.

Institutions and dialogue. Two ministerial conferences have taken place (in 1999 and 2001) under the Finnish (1999) and Swedish (2001) EU Presidencies that have played a crucial role in promoting the Northern Dimension. At the second ministerial conference it was decided that annual

Northern Dimension meetings will take place, alternating between foreign minister and senior official level.

Financing. Although in principle no new financing was initially envisaged for the Northern Dimension, the Commission will contribute €100 million of additional funding for environmental projects in Russia. The European Investment Bank (EIB) will also participate in these projects, following the decision by the Stockholm European Council to allow the EIB for the first time to operate in the CIS.

The Stability Pact for South East Europe

A Stability Pact for South Eastern Europe was launched in 1999 in the wake of the Kosovo war. The Stability Pact differs from the other main regional initiatives in that it includes countries beyond the wider Europe, such as Japan, the US, Canada and Russia, as well as the international financial institutions as full participants.

Aims, agenda and performance. The Stability Pact aims to create a stable regional order following the Balkan wars, and as an intermediary stage pending progressive integration of the whole of the region into the EU. Very large numbers of expert meetings have proved difficult for states of the region to service properly. A process of rationalisation of priorities is under way.

Institutions and dialogue. The Stability Pact has a more developed institutional structure than the Barcelona Process and the Northern Dimension, with a Regional Table (a forum for high-level officials), three sectoral Working Tables (security, economics and the 'human dimension'), and numerous specialised task forces and expert groups. A Stability Pact secretariat has been established in Brussels.

Financing. It possesses resources of its own, but participates in the organisation of donor conferences together with the European Commission and the World Bank.

From a financing point of view, each of these three initiatives has its strong points, although quite different ones. The Barcelona Process has a substantial budget line of its own (MEDA) from the EU budget, as well as loan funds from the EIB. The Northern Dimension and its related Baltic and Barents Sea Councils, have the advantage of rich patrons in the four Nordic countries, with EU funds also supporting EU frontier regions, and the accession candidate states. In addition the EU recently opened up additional EIB loan and Commission grant funds for Northern Dimension environmental projects. The Stability Pact region benefits from

substantial EU programmes for accession candidates, and the new CARDS programme (Community Assistance for Association, Democratisation and Stabilisation) for the other states of the Balkans, as well as substantial support from bilateral donors and the international financial agencies.

In terms of fields of their competence, the Stability Pact for South East Europe is the widest, covering the economic, political and security fields. The Northern Dimension excludes hard security as does Barcelona.

Any progress of Barcelona has been blocked by the continuing Middle East conflict. The Stability Pact was basically established as a post-war mechanism. The Northern Dimension proceeds in a region free of conflict. By comparison, BSEC is closest to the Northern Dimension in aiming at economic and political but not hard security relations, although it is notable for progressing without fatal damage from the unresolved conflicts of the BSEC region, from the Balkans to the Caucasus.

These three regional programmes are not ‘organisations’ but rather ‘dimensions’ to diplomatic and cooperative activity. The key difference is whether the activity has a legal basis or not, as well as staff and a budget, etc. The ‘dimension’ mode of activity is of course far more fluid in its nature, and allows for different sectors of policy to come and go on the agenda of foreign ministers. For the EU the ‘dimension’ mode is however the heaviest in that all member states, as well as the Commission and Council Presidency participate.

3.3 Forms of EU or EC participation in international organisations

EU involvement in BSEC is currently limited to national governments, with Greece as a BSEC member and four other EU states (Austria, France, Germany and Italy) as observers. In the ‘EU-BSEC platform’ document, the EU is invited ‘to consider the possibility of obtaining an observer status or full membership.’ The possibility of the Commission obtaining observer status in BSEC on behalf of the European Community was suggested as early as 1997 by the Commission.

There are many examples of the EU or EC participating formally and legally in official organisations.³ Participation normally falls within one

³ The distinction between the European Union (EU) and the European Community (EC) may seem an excessively technical matter, but it is of some practical importance in the present context. The EC is the juridical entity of the EU that has specific legal competences, financial resources and executive capacities (in the Commission). The EC is mainly responsible for economic

of two broad categories: full membership or observer status. The rights and conditions of members and observers differ according to the international organisation in question. As a rule, however, member status allows participation of the fullest kind, such as the right to vote and to propose motions, as well as requiring contributions to the budget. Full membership in international organisations is usually restricted to nation states and the status usually available to international organisations is that of observer, but the EU or EC enjoys a status in international relations and law that is higher than that accorded 'international organisations' and in some cases approximates that of sovereign states. The EC's membership in international organisations is much less common, however, than its participation as an observer [Macleod et al., 1996].

According to its Charter, BSEC consists of members and observers (Arts. 5-7). In addition BSEC promotes relations with third parties, under the three headings 'dialogue partnership', 'sectoral dialogue partnership' and 'invitation of guests' (Art. 9). European Community participation in BSEC has so far been as an 'invited guest', with the European Commission participating as an observer on an ad hoc basis.

From the perspective of the EU, there are a number of precedents that show that there are significant gradations in the broad categories of member and observer, as illustrated in Table 3. In some organisations the Commission is only an observer, while full membership is reserved for EU member states (most of the UN family). In others, the Commission participates as a member on a par with other member states (FAO, EBRD). In still other organisations, the Commission can be a member alongside some but not all member states (Baltic and Barents Sea Councils), and this model is conceivable for BSEC with just Greece as full member today. In the gradations between full member and observer, there are variables, e.g. being able to assume the chairmanship, paying into the budget, and eligibility for nominees in the staff structures.

matters. The EC is often the legal entity that establishes institutional links with other legally constituted organisations. The EU embraces all three pillars – economic, security and justice and home affairs. The EU is therefore the main actor in the field of foreign and security policy.

Table 3. The European Community in international organisations

Status	Examples	Community role
Member	FAO, WTO, commodity agreements, EBRD, fisheries organisations	Member on par with member states. Shareholder in EBRD, alongside EIB and member states.
Observer (or approximating observer status)	Council of Baltic Sea States (CBSS), Barents Euro Arctic Council (BEAC)	No formal link, but signatory of key documents and de facto member. Participates alongside member states, but the EC cannot assume chairmanship and related secretarial functions.
	OECD	EC participation defined by additional protocol of OECD Convention. Commission participates on almost equal basis with member states (for example no participation in the budgetary committee, and no vote).
	UN General Assembly, ECOSOC, UNCTAD, WHO, OSCE, OAS.	Formal observer (right to speak, but not to vote)
	Council of Europe	No formal status, but close institutional links.
	ASEAN, Council of Arab Economic Unity	No formal status, but institutional links.
	BSEC	No formal status, but the Commission is invited to participate in relevant meetings on an ad hoc basis.

3.4 Elements for possible EU or EC participation in BSEC

This section sets out a menu of possible institutional links between the EU or EC and BSEC, assuming of course that at some stage there was a political decision to consider more positively BSEC's explicit invitation to the EC/EU to join either as an observer or a full member.

Observer status. This would require little complicated negotiation. As an observer, the Commission would have the right to speak and present

proposals and draft documents, but not to vote. Nor would it contribute to the budget. In practice formal observer status would presumably mean participation in the numerous BSEC Working Groups. The Commission has the expertise required, both in the departments of DG External Relations dealing with the bilateral relations with BSEC countries, and in the external relations departments in other relevant DGs, such as Energy and Transport, Environment, Regional Affairs, Enlargement, etc. Staff resources are very tight, however, and if the Commission became a systematic observer, this would no doubt accentuate the issue of duplication with other Black Sea meetings on the same topics. The issue already raised above, of rationalising the handling of Black Sea agenda topics both inside and outside BSEC, would come to a head.

Membership. As a member of BSEC, the European Commission (representing the Community) would of course be entitled to vote, which would be a significant matter in cases where BSEC initiatives overlapped and perhaps were incompatible with EU policy and law. The Commission would also contribute to the BSEC budget, which today is very small (approximately \$1 million annually). Perhaps the Commission's accession would be the occasion to boost the budget. It could also be the occasion to offer special operational support for BSEC programmes and projects, preferably through a separate budget line because of the complications already referred to in putting together elements from different existing EU aid programmes. To begin with, even a small budget line for project feasibility studies, such as in the BISTRO facility used in some TACIS programmes, would be of great value to BSEC and the Black Sea Trade and Development Bank (see below).

As member, the European Commission would also provide officials and experts for the BSEC Secretariat and other BSEC centres.

High-level dialogue, restricted format. In addition to EC membership or observer status in BSEC, the *Platform for Cooperation between the EU and the BSEC* includes a proposal to establish a political dialogue between BSEC and the EU. The document envisages high-level meetings between the BSEC Chairman-in-Office and the EU Presidency, preferably at ministerial level. Different formats could be suggested. One option could be meetings between the Troikas of both organisations. Another alternative would be to choose the 'summit' formula used in the EU-Russian dialogue, whereby the EU is represented by the President of the Commission. This political dialogue need not be limited to foreign ministers, but could be conducted between other ministers (transport, energy, environment, etc.), depending on what issues are being discussed.

High-level dialogue, wide format. An alternative would be to organise a broader forum of high-level dialogue. This has now been institutionalised in the Northern Dimension, where annual conferences with participation from all 15 EU member states and the partner countries take place, alternating between foreign minister and senior officials level. Transferred to BSEC, this model would entail an annual EU-BSEC ministerial conference bringing together 25 foreign ministers (EU-15 plus 10 non-EU BSEC states), the European Commission and the BSEC Secretariat (PERMIS).

Dialogue among senior officials and experts. Regardless of the exact format chosen, the high-level dialogue could be supplemented by more frequent meetings at senior official level. This could either be between the BSEC Committee of Senior Officials or its (as and when designated) Permanent Representatives and a formation (specialised working group) of the EU's Political and Security Committee.

Parliamentary dialogue. The European Parliament could consider giving the Parliamentary Assembly of BSEC (PABSEC) observer status in the European Parliament. The European Parliament has a standing invitation to participate in PABSEC meetings as an observer. A MEP attended a PABSEC session for the first time only last year. The most practical arrangement would be for the two parliamentary bodies to establish reasonably compact 'delegations' for the dialogue.

Black Sea Trade and Development Bank. Because of the growing emphasis on BSEC as a project-oriented organisation, the BSTDB is likely to play an increasingly important role within BSEC. Although the BSTDB is a related body of BSEC and has the same members as BSEC proper, membership in the BSTDB is possible for 'multilateral banks and financial institutions' in addition to the 'BSEC participating states'. This provides the EU with the option of playing a more active role in BSEC without membership in BSEC, through the European Investment Bank (EIB). Alternatively, or in addition, the EU could propose that the European Bank of Reconstruction and Development (EBRD), within which the EU-15 have a majority of the votes, could become a member of the BSTDB. The BSTDB could also benefit from grant funds for feasibility studies.

International Center for Black Sea Studies. The ICBSS, currently financed by Greece because of the limited financial resources of BSEC, is seeking to mobilise the under-utilised scientific resources of the BSEC member countries. This could entail significant synergies with existing

EU research programmes for the region, for example the INTAS programme.

4. Conclusions

The new European architecture now takes shape after a decade of post-Cold War experience with three main features:

- *The thin pan-European organisations* such as OSCE and Council of Europe which have easily expanded in geographical coverage, but have not really been able to deepen their operational roles;
- *The leading European or Euro-Atlantic institutions*, namely the EU and NATO, which are attractive for accession candidates to the East, but which only admit new members progressively, so as not to undermine their core capacities, leaving some not too happy outside; and
- *The new European regional structures*, which find their roles in the shortcomings of the first two categories, namely the contrasting priorities they have given to widening and deepening respectively.

All regions of the wider Europe that have historical and natural geographical and historical identities, but which overlap today's main remaining political and economic divides, are the subject of this new type of European regionalism – as seen in the Northern Dimension encompassing Baltic and Barents Sea initiatives, the Barcelona Process for the Mediterranean, the Stability Pact for South East Europe, and finally the Black Sea.

The purpose of the new European regionalism seems thus to have a double rationale, reactive and active. The reactive aspect is to compensate for the thinness of the pan-European organisations and the exclusiveness of the leading institutions. The active aspects are to develop networks of cooperative activities, which gain functionally from their regional specificity and politically because they bridge the remaining political divides of the wider Europe. This rationale seems solidly founded, but it is not a static matter, since the enlargement of the leading institutions is gradually taking in increasing parts of the regions in question. For example the Baltic region will soon be all EU territory except for Russia, whereas the whole of the South East Europe is officially recognised as prospective EU members. As the EU membership process advances, there is increasing overlap between EU regional and other policies and the new European regionalism. There is a NATO version of this same story.

The Black Sea region has some common features with the other regions, but it is unique in that although it has a regional organisation – BSEC – which is the product of the states of the region, it has not been the target of an EU regional initiative. Indeed, it was seen by some for a while as an alternative to the EU. However times have changed, and now half of the Black Sea coast line is accounted for by EU accession candidate states. Thus, the EU enters the scene as a major Black Sea power in any mainstream scenario. For BSEC to have been a home-grown organisation is an important quality in terms of its political legitimacy, as is also its political achievement in introducing a cooperative structure in a region beset by serious conflicts or tensions.

The disadvantage, however, is the shortage of budgetary resources that most of the member states can make available. Turkey bore the main costs of setting up BSEC, but its operating budget now is tiny, and the result is a serious weakness in the technical capacity of the permanent secretariat. BSEC has continued to develop its institutions, such that it has now the most complete structure of the new European regionalism (ministerial councils, permanent secretariat, parliamentary assembly, business council, development bank, think tank, etc.). This is the *prêt-à-porter* organisation, waiting for the owner or owners to really take it on and use it. The organisational problem is made more serious by the fact that several of the core functions for Black Sea cooperation are being handled by ad hoc arrangements outside BSEC, such as is the case for the environment (Black Sea Environment Programme) and transport (Black Sea PETrA, TRACECA) and energy issues. The EU is supporting several of these initiatives outside BSEC. Comparing the scarcity of resources available to BSEC at present with the scale of resources that the EU is putting into the region in one way or another outside BSEC, it seems evident that if there is to be a solid future for BSEC there will have to be a conscious and joint determination by both BSEC and the EU to do so. The potential for developing such ‘Black Sea synergies’ was emphasised in the 1997 Commission communication on regional cooperation in the Black Sea area. Therefore it is understandable that BSEC has recently invited the EU to become an observer or full member, as mentioned as an option in the 1997 Commission paper. However, the EU has been cautious in its response. This may in part be because it is also not so clear what the underlying priorities of existing BSEC member states are, notably over how far they are willing to give BSEC room for initiative. BSEC has already experimented with an exceedingly long agenda of activities, with many items having no essential regional content, and with several domains that do have essential regional substance being left

outside the house of BSEC except in a token manner. This is a formula for continuing disappointment over the organisation. More recently the BSEC has placed the accent on a project-oriented approach, which should indeed mean dealing with concrete regional realities.

The question of whether and how to build up the operational effectiveness of BSEC as the lead organisation in the region remains therefore an open one.

From an objective public policy standpoint, the case for a multi-purpose organisation, rather than a set of ad hoc clubs for single purposes, relies on the possibilities for achieving synergies between the component actions and/or on linked bargaining in a consensus-ruled setting (country A may agree to policy X demanded by country B, as long as it can get sufficient satisfaction under policy Y). In the Black Sea case there are evident practical linkages between such domains as transport, energy and environment. More broadly one might hope that the habit of joint actions in uncontroversial domains may help ease various political tensions and indirectly facilitate conflict resolution among the parties.

At the geo-political level, Black Sea regionalism is in one important respect uniquely significant compared to the wider Europe's other regional dimensions. It involves three very large European actors (Russia, Ukraine and Turkey) with the EU as the possible fourth, in a quite balanced and non-hegemonic setting. Moreover, the first three all share varying degrees of unease over exclusion from one or other or both of the two leading European structures.

It is primarily for BSEC's present member states to decide how to proceed. With the prospect of substantial EU enlargement into the area, however, it becomes also a matter for policy-makers in the EU to reflect on, both as a pragmatic matter of efficiently organising policies such as energy, environment and transport, and as a matter of strategy for the wider European architecture. On the EU side, in the various regional dimensions of 'borderland Europe' that it has initiated so far, there has invariably been a political sponsor in a member state for whom it was a priority, and which chose the occasion of its EU presidency to promote it. At present there is only one common member state of both BSEC and the EU, which is Greece (slated to next hold the EU presidency in the first half of 2003).

If the EU were to decide to complete its set of borderland regional cooperation projects with a Black Sea dimension, the structure for giving it effect is ready, *prêt-à-porter*.

Sources

Official Documents

BSEC

Summit Declaration on Black Sea Economic Cooperation ('Istanbul Declaration'), Istanbul, 25 June 1992.

Charter of the Organisation of the Black Sea Economic Cooperation ('The Charter'), signed 5 June 1998 and entered into force 1 May 1999.

Platform for Cooperation between EU-BSEC ('The EU-BSEC Platform'), approved by the 13th Meeting of the Ministers of Foreign Affairs, Tbilisi, 30 April 1999.

Istanbul Summit Declaration of the Heads of State and Government of BSEC, 17 November 1999.

BSEC Economic Agenda for the Future: Towards a More Consolidated, Effective and Viable BSEC Partnership ('the BSEC Economic Agenda'), approved by the 4th meeting of the BSEC Council of Ministers, Moscow, 27 April 2001.

Work Programme of Turkey during Its Chairmanship of BSEC (April-October 2001).

Other

Strategic Action Plan for the Rehabilitation and Protection of the Black Sea, Istanbul, October 1996.

European Commission [1997a], *Regional Cooperation in the Black Sea Region: State of Play, Perspectives for EU Action Encouraging its Development*, Communication from the Commission to the Council, Com (97) 597 final, Brussels 14.11.1997.

European Commission [1997b], *Regional Cooperation in Europe*, Report from the Commission to the Council, Com (97) 659 final, Brussels 01.02.1997.

Agreement on the Establishment of the Black Sea Naval Cooperation Task Group, signed in Istanbul, 2 April 2001.

Draft Convention for Fisheries and Conservation of Living Resources of the Black Sea (CFCLRBS), 2001.

Books, articles and speeches

Aybak, Tunç (ed.) [2001], *Politics of the Black Sea, Dynamics of Cooperation and Conflict*, I.B. Tauris, London.

- Borisenko, E.N., A.P. Kononenko and I.V. Semonenko [1998], *Black Sea Economic Cooperation from Regional Initiative to International Organisation*, Uzman Publishing, Istanbul.
- Christiansen, Thomas, Fabio Petito and Ben Tonra [2000], 'Fuzzy Politics Around Fuzzy Borders: The European Union's "Near Abroad"', *Cooperation and Conflict*, Vol. 35 (4).
- EastWest Institute [2000], *Co-operative Efforts in Security of the Black Sea Region: Security Challenges and Co-operative Responses*, Conference report of the Black Sea Strategy Group first meeting, Bucharest.
- EastWest Institute and European Stability Initiative [2001], *Democracy, Security and the Future of the Stability Pact for South Eastern Europe*.
- Emerson, Michael [2001], *On the Forming and Reforming of Stability Pacts: From the Balkans to the Caucasus*, CEPS Policy Brief No. 4, available on the CEPS website <http://www.ceps.be>.
- Hartwig, Ines [2001], 'Romania and Black Sea Economic Cooperation: Leaning Towards the East or the West?', in Duncan Light and David Phinnemore (eds.), *Post-Communist Romania, Coming to Terms with Transition* (pp. 270-287), Palgrave, Basingstoke.
- Hartwig, Ines [1997], *The Black Sea Economic Cooperation Process*, available at http://eipa-nl.com/public/public_eipascope/97/1/2.htm.
- Herd, Graeme P. and Fotios Moustakis [2000], *Black Sea Geopolitics: Dilemmas, Obstacles and Prospects*, available at the website of the Conflict Studies Research Centre <http://www.ppc.pims.org/Projects/csrc>.
- Macleod, I., I.D. Hendry, and Stephen Hyett [1996], *The External Relations of the European Communities*, Clarendon Press, Oxford.
- Nures, Nurver [2001], 'Black Sea Economic Cooperation, A Vision of Opportunities', speech delivered at the NATO Economics Colloquium in Bucharest, 2-4 May.
- Papanikolaou, Yannis [2001], 'The Interrelationship between Regional Economic Cooperation, Security and Stability', paper presented to the 2001 NATO Economics Colloquium in Bucharest, 2-4 May.
- Vahl, Marius [2001], 'A Northern Dimension Model for Relations between the EU and Its "Near Abroad"', paper presented at a conference in Björkliden, Sweden, 14-18 June, available at <http://www.northerndimension.nu>.

Valinakis, Yannis [1999], *The Black Sea Region: Challenges and Opportunities for Europe*, Chaillot Paper 36, Institute for Security Studies of the Western European Union, Paris.

Websites

Black Sea Economic Cooperation (BSEC): <http://www.bsec.gov.tr>

Parliamentary Assembly of BSEC (PABSEC): <http://www.pabsec.org>

Black Sea Trade and Development Bank (BSTDB): <http://www.bstdb.gr>

BSEC Business Council (BSEC BC): <http://www.bsec-business.org>

International Center for Black Sea Studies (ICBSS): <http://www.icbss.gr>

Black Sea Environmental Programme:

<http://www.blacksea-environment.org>

Black Sea Naval Cooperation Task Group (BlackSeaFor):

<http://www.blackseafort.org>

Transport Corridor Europe Caucasus Asia (TRACECA):

<http://www.traceca.org>

Interstate Oil and Gas Transmission to Europe (INOGATE):

<http://www.inogate.org>

Seminar

‘Black Sea Cooperation and the EU’, CEPS seminar organised in Brussels, with participation from representatives of the 11 BSEC diplomatic missions in Brussels, officials from the EU institutions and independent experts, 30 May 2001.

Interviews

Michael Emerson and Marius Vahl undertook a series of interviews with officials and experts at the secretariats of the BSEC institutions and the Black Sea Environmental Programme in Istanbul on June 25- 27, 2001. Several interviews with officials from the European Commission were also conducted during the summer of 2001.

**CASPIAN OIL AND GAS DEVELOPMENT
AND THE BLACK SEA REGION:
AN OVERVIEW**

TERRY D. ADAMS

CONTENTS

1. Introduction	39
2. Caspian Oil	41
3. Caspian Oil Transportation, Black Sea Oil	46
4. The Turkish Bosphorus Straits and Black Sea Bypass Options	49
5. Caspian Central Asian Gas	57
6. The Caspian Legal Regime and Offshore Territorial Boundaries	61
7. Conclusions	67
References	70
Atlas of Maps	
1. Exploration in the Caspian	72
2. Oil pipelines in the Caspian	73
3. Black Sea oil flows, 2000 (crude and products)	74
4. Bypassing the Bosphorus: Proposed options	75
5. The Turkish market: Pivot for new gas geography?	76
6. Caspian Asian gas pipelines	77
7. South Caspian disputed areas	78

CASPIAN OIL AND GAS DEVELOPMENT AND THE BLACK SEA REGION: AN OVERVIEW

TERRY D. ADAMS

1. Introduction¹

Since its origins in 1875, oil and gas development in the Caspian has had a long and chequered history. Likewise oil export to the Black Sea has always been strategically important. Historically Baku oil has not always lived up to investor expectations. Nevertheless the early development of oil at Baku with its first international oil terminal at Batumi on the Black Sea laid down the technical and commercial foundations of our modern global oil industry. In 1900, Baku led the world in oil production. Through the inventiveness of the Nobel brothers Baku oilmen were amongst the first to demonstrate the competitive advantage of applied technology. The commissioning of the Baku-Batumi pipeline in 1905 saw the construction of the world's first long-distance transnational pipeline for oil exports to international markets. From pioneering investments at Batumi, the Rothchild family set new parameters for the risk financing in international oil and gas. From its earliest days Baku oil was sensitive to global oil prices, firstly from international price wars between oil producers in Europe and the United States. Today OPEC tends to drive the process. Shell as a modern multinational oil company owes its origins to Baku oil and the Rothchilds at Batumi. They were the first company to exploit new tanker technology through the Suez Canal to deliver cheap Russian oil to emerging markets in East Asia. By 1910, the complexity of risk management at Baku, where blood oil and politics had become an inexorable mix, was such that it drove Shell and others towards a process of global mergers and acquisitions; a trend not too different from what we see in our oil industry today. For global oil, size has always mattered, and

¹ This paper is based on a presentation made in September 2001 at the Halki Seminar on 'Regional Cooperation in the Black Sea and the Caucasus' arranged by the Hellenic Foundation. Information on Caspian oil transportation tariffs was primarily sourced from unpublished conference manuscripts by Ted Fergusson, President of AMBO. Laurent Rusekas of CERA is gratefully acknowledged for the help he gave in the preparation of this manuscript, and for the illustrations used in the final paper.

for Baku, access to the Black Sea for international oil export to global markets was commercially critical.

Baku oil became a military target for Germany and Turkey in the First World War (to be repeated by Hitler in the Second). In 1919 it was also a military target for the Bolsheviks who desperately needed Baku oil to fuel their ongoing Russian Revolution. The British and their Western Allies returned to Baku and the Caucasus in 1918, and for a brief period promoted the creation of three newly Independent Democratic Republics (Armenia, Georgia and Azerbaijan). In support of this political initiative, the badly damaged oil facilities in Baku were substantially refurbished by the British military. But despite renewed investment in Baku oil, the economic cost of maintaining regional security in the Caucasus against a Bolshevik takeover was not seen to be in the commercial or political interests of either Britain or the United States. In 1919 the region and its new Republics were abandoned to their fate. This is a message as fresh today perhaps as it was then. In 1921 these states became an integral part of the Soviet Union. Foreign investments in Baku oil were nationalised by the Soviets, and for the next 70 years external energy investments in the Caspian were closed to the West.

But with the collapse of the former Soviet Union in 1991, the Caspian and the Caucasus once more open to Western energy investment. By then Soviet experts had already built up a substantial database on Caspian oil and gas that had confirmed the presence of many new giant oil and gas fields. But constraints imposed by the inadequacies of Soviet offshore oil technology, and with the redirection of Soviet energy investment from the Caspian to Siberia in the 1970s, both meant that by 1992 there were several undeveloped giant oil and gas fields in the Caspian available for foreign licensing. There were two in Kazakhstan and one in Azerbaijan. These undeveloped fields became the focus of intense and extended negotiation. It was equally believed that there were many untested low-risk giant oil prospects in the shallow waters off Kazakhstan and in the deeper waters of offshore Azerbaijan, Turkmenistan and Iran. It was access to low technical risk and high-volume oil reserves that drove Western energy investment back into the Caspian. For these new multinational energy investors, access to Black Sea oil terminals once more became a critical priority. But the Caspian track record that has resulted from new energy investment has been uneven. There have been excessive bouts of optimism followed by equally dramatic periods of great pessimism. It is a repetitive story that reflects more than 100 years of Caspian oil and gas development. So what are the realities, what are

the current challenges, and how does the future export of Caspian oil impact on the Black Sea and global oil markets?

2. Caspian Oil

Over the past nine years, renewed Western energy investment in the Caspian has progressed through three distinct phases:

1. The period 1992 to 1996 was a time of difficult access and general pessimism. There was much hostility and misunderstanding. The Western investor faced an opaque Soviet business culture that displayed both resentment and suspicion to outside interference. The Western media were consistently highlighting the problems; in particular that the geographical isolation of the Caspian would present insurmountable difficulties for regional export and support logistics. In addition there were serious concerns over regional security arising from active ethnic conflicts in the Caucasus. Business risk was high. But access through new production-sharing and joint venture contracts to the undeveloped giant fields of Tengiz and Karachagenak in Kazakhstan, and Azeri-Chirag-Guneshli in Azerbaijan, drove the process forward (see Figure 1; all figures have been grouped together at the end of this paper). These three fields still dominate Caspian energy development today.
2. By contrast, the period 1996 to 1998 was a time of unbridled optimism. The Caspian became a global exploration 'hot spot'. Major projects were working, Caspian oil was getting to market, and excessive hyperbole raised investor and national expectations to unreal levels. But the collapse in 1998 of global oil prices, extinguished this euphoria, and the latest Caspian oil boom withered on the vine.
3. Since 1999 a greater sense of business reality has set in. Hard-nosed economic screening now places Caspian oil and gas investment into a more realistic context. Existing mega-projects are developing but at a slower pace than was predicted. Two new giant discoveries have been made (Kashegan in Kazakhstan, and Shah Deniz in Azerbaijan), but there have also been a significant number of failed Caspian exploration wells.

Nine years of investor experience has also shown that Caspian exploration and development is a high-cost exercise. To remain commercially competitive the Caspian requires a global oil price that is consistently above \$18 to \$20 a barrel (b) real. Caspian exploration failure costs are high (\$300-\$500 million per project), but in the success

case with the discovery of giant fields and large reserves, finding costs are low (30-50¢/bl). With both deficient infrastructure and geographical isolation, Caspian development costs are high, but there is a realistic expectation that applied technology will drive these costs down. Similarly with the successful development of existing Caspian export systems and with two new regional pipelines (one pending), a fall in oil transportation cost is confidently predicted. Today a fully built-up cost for Caspian oil is roughly \$12 to \$15/bl. This compares to the high-cost end in the North Sea, and is some two to three times more expensive than an equivalent OPEC barrel in the Persian Gulf. Nevertheless with new technology and lower transportation tariffs, Caspian built-up costs will fall. In future an \$8 to \$10/bl-cost band should keep Caspian oil globally competitive. Nevertheless, upstream oil and gas investment in the Caspian is not for the faint at heart. It only suits those multinational energy companies that have large and diversified global risk portfolios, with the critical ability to self-finance large-scale Caspian investment off strong company balance sheets.

Caspian energy development has suffered from both media hype and politicisation of the investment process by the United States and Turkey. In 1995 CIA energy analysts helped fuel expectations for Middle East reserve equivalents in the Caspian, with predictions of 200 billion barrels (bnbls) Yet to Find (ytf). This would have placed the Caspian oil potential on a par with Kuwait and the United Arab Emirates (UAE) combined. Some even saw for the Caspian the possible emergence of a new Saudi Arabia! What was being ignored was that this huge reserve prediction had sat at the extreme end of a CIA risk projection curve. It was therefore never realistically expected to occur. For their most likely case the CIA had proposed a more modest ytf of 50 to 70 bnbls that matched much of what the industry perceives today. However recent exploration drilling failures suggests that there is now an even stronger bias towards the lower end (50 bnbls ytf). The Caspian's potential is therefore more comparable to a new North Sea. It is not a Middle East. This message carries strong strategic overtones, particularly for Europe and the Black Sea.

This more conservative view of Caspian oil has been confirmed by substantial exploration drilling in both the oil basins of the North and South Caspian (see Figure 1). These two basins have very different hydrocarbon systems. In the North Caspian play types are dominated by super-giant Palaeozoic reef traps, as seen at Tengiz and now at Kashegan. Subordinate Mesozoic sandstone reservoirs contain more modest oil volumes onshore. Lukoil has also found a new Mesozoic sandstone oil

play straddling the offshore boundary between Russia and Kazakhstan. Conventional estimates place Kazakh proven remaining oil reserves at 8 to 10 bnbls recoverable. Speculative ytf recoverable oil is seen to fall within a 30 to 50 bnbls range that is entirely dependent on the discovery of new super giant fields comparable to Tengiz and Kashagan. But the commercial viability of the deeply buried carbonate reservoirs at Kashagan is still under appraisal. Sustainable high-volume well productivity from Kashagan has yet to be confirmed, and the costs of deep drilling in what is a technically complex drilling environment are very high. Application of novel technologies may be needed to monetise the project. The commercial disposal of high volumes of associated gas cap gas that is required for simultaneous oil production has also not been resolved. Oil field development in what are the most environmentally sensitive shallow waters of the Caspian that are the main breeding grounds for Caspian sturgeon and caviar production, and that are ice bound in the winter, all increase Kashagan oil development costs to very significant levels. There are in fact many technical challenges to be resolved before substantial oil reserves in Kazakhstan can be developed with confidence. Therefore current offshore ytf reserve forecasts are based on a limited number of appraisal wells and may be subject to dramatic change in either direction.

In the South Caspian Basin failed exploration drilling has significantly reduced estimates of future oil potential. Again the industry consensus placed Azerbaijan-West Turkmen proven remaining recoverable oil reserves at 6 to 8 bnbls, with a projected recoverable of 20 bnbls ytf. The latter figure must now be seriously challenged, however. Until recently the South Caspian Basin was thought to possess a significant number of large untested and prospective deepwater traps. The bulk of oil discoveries in the South Caspian Basin are all confined to the sandstone reservoirs of three Plio-Pleistocene palaeo-delta systems within the Azeri-Turkmen offshore areas. There are some smaller but coeval untested paleo-deltas in the Iranian offshore, but these are generally considered to be relatively non-prospective. Recent drilling has effectively confirmed that only the clean sandstone reservoirs of the north-central paleo-Volga delta south of the Apsheron Ridge (which geologically connects Baku to Turkmenbashi in the east) can support high well productivities that are both sustainable and commercially viable. Equivalent deeply buried reservoir sandstone in the Kura palaeo-delta to the west and the Uzboi palaeo-delta to the east is of poor quality. The presence of clay minerals and volcanic detritus disrupts reservoir performance, and well productivities are generally low and unsustainable.

Recent dry holes drilled in offshore Azerbaijan have also more precisely defined the limits of the main South Caspian oil and gas fairway. This is narrower than was originally perceived. Specialist sedimentological studies in the South Caspian by CASP (Cambridge) have confirmed the high-performance nature of the sandstone reservoirs of the palaeo-Volga south of the Apsheron Ridge. Their new geological model suggests that good reservoir development is unlikely to extend to the large untested deepwater prospects of the South Caspian that makes them a high-risk play. These prospects had previously accounted for the bulk of South Caspian ytf (15 to 17 bnbls recoverable). Together with high-risk development costs in very deep water, and with an increased risk of finding non-commercial gas rather than oil, means that the expectation for substantial new oil potential in the South Caspian has been materially downgraded.

From this resource analysis one can predict with some confidence that if there are no serious dislocations in the development process, by 2010 the Caspian should be producing around 3 million barrels a day (mmbd) or 150 million tonnes a year (mty). Two-thirds of this oil production will be from the North Caspian Basin with one-third from the South Caspian Basin. But to achieve these production levels it will require a substantial investment of incremental capital that depends on three essential factors: a sustainable global oil price that remains above \$18 to \$20/barrel real, the absence of regional political conflict, and that urgent attention is paid to serious deficiencies in Caspian infrastructure and the business environment. Caspian production could eventually peak by 2020 at 5 mmbd (50 mty), primarily from the North Caspian. But even at this level the Caspian would only contribute some 3% to future global oil supply. The Caspian will therefore never be a strategic supply alternative to the OPEC oil producers in the Gulf. But it is strategically important to Europe.

There is now an eight-year track record for project management in the Caspian. Space constraints prevent a comprehensive overview but the basic messages are simple. Caspian Soviet hydrocarbon infrastructure is seriously deficient through under investment and long-term neglect. Also much of it is not where it is most needed. There are Caspian construction facilities but all are in considerable need of new investment and expansion. Critical path items such as offshore drilling rigs, heavy lift equipment, marine fleets, and pipe laying barges are available, but more are needed. Those that already exist need substantial upgrade and capital injection to bring them up to Western insurable operating standards. The unpredictability of costs involved in upgrading Caspian Soviet

infrastructure is a serious commercial risk, which has been the common experience of Caspian operators so far. Skilled manpower and local management cadres are both in short supply, especially in the North Caspian. Contractual obligations in Caspian energy contracts that impose high levels of front-end local content for both materials and manpower exacerbate the problem. None of this can be resolved within a shortened time frame, and the idea that multiple Caspian mega-projects can proceed simultaneously without inherent delays is certainly flawed. Caspian oil and gas development will almost certainly proceed more slowly in the future than many currently predict, and this will impact directly on levels of future Caspian oil movement across the Black Sea.

But of equal concern to Caspian energy investors is their ability to finance long-term energy investment from conventional sources of international project financing. It is important to note that of the \$13 billion foreign capital invested in Caspian energy projects so far, only \$400 million was obtained through conventional third-party financing. The rest was all self-financed off company balance sheets. Can or will investors continue to do this in the future? Caspian energy investment must compete for capital in a global market. Therefore for most investors capital rationing in the Caspian seems inevitable. It will be difficult to access some \$15 to \$30 billion of new long-term Caspian borrowing over the next 10 to 15 years. It would require private-sector banks to have considerably greater confidence in the Caspian track record than they currently hold. Even then these banks would still expect the multinational lending agencies (MLAs) to cover political-risk financing, as well as requiring up to 60% or more equity financing from the energy investors themselves.

But what in the end will prove to be the greatest challenge is the absence of general reform and 'good governance' within the governments of the Caspian states themselves. Business risk arising from generally corrupt Soviet bureaucracies is well recognised. It requires no further elaboration here. But recent developments in Kazakhstan have alarmed Caspian energy investors. Kazakh foreign operators have been subject to spurious and continued harassment from local tax authorities and environmental interest groups. Fundamental legal rights within production-sharing agreements (PSAs) are also being challenged by the Kazakh government. In general Caspian governments and politicians do not particularly like international PSAs, although they are the most successful form of international long-term petroleum contract developed so far. For Caspian governments there is a fundamental downside. For multi-billion dollar oil projects within a PSA, the contractual cost recovery mechanism is

applied in such a way that material cash flows to the State are significantly delayed (generally 7 to 9 years from start-up). This reflects the early cost recovery of capital and operating costs through 'Cost Oil' by the foreign investor, who in all fairness have taken all the front-end financial risk. Both government and investor reach 'Profit Oil' at the same time, which is then shared in proportions negotiated under original contracts.

When high levels of front-end capital have been invested by the foreign operator, however, governments are tempted to renegotiate contract terms to the disadvantage of the investor. This is now happening in Kazakhstan. The government is attacking 'transfer pricing' under Kazakh oil contracts, which is seriously eroding investor confidence in the long-term sanctity and security of their contractual arrangements. Likewise the increasing monopoly that is developing over Kazakh oil transport under the state company Kaztransneft is also causing considerable concern, with fears that this monopoly will create a negative environment for foreign investment comparable to Transneft in Russia. If such hostility continues to grow within the Caspian business environment, the pace of Caspian oil and gas development will inevitably slow and materially reduce levels of projected oil production. Add to this the additional risks in regional security arising from both frozen and active ethnic conflicts in the Caucasus, together with the political uncertainties that surround the succession plans of ageing Caspian leadership, then the fragility of the Caspian business environment is clearly demonstrated. Current hostilities in Afghanistan can perhaps only increase instability in the region, especially in the north Caucasus. Nevertheless after nine years of foreign oil investment in the Caspian, a positive track record has still emerged. In general Caspian PSAs are working well compared to Russia in the north. Development pace, cash flow and protection of long-term returns are the genuine uncertainties. But for the larger multinationals with global risk portfolios, their presence in the Caspian is assured. Access to low technical risk giant oil and gas reserves in the Caspian is too attractive an opportunity for them to miss.

3. Caspian Oil Transportation, Black Sea Oil

Over the past five years, there has been considerable success in the development of Caspian regional oil transportation (Figure 2). Some 800,000 barrels (40mty) of export capacity was already available before an additional 600,000 barrels (28mty) came on line with the successful commissioning of phase one of the Caspian Pipeline Company (CPC) pipeline from Tengiz to Novorosysk (October 2001). Multiple oil export

routes by pipeline railway and river barge, all with competitive tariffs, are working well. Attractive commercial net-backs and regional markets thirsty for environmentally friendly Caspian oil have both dictated a predominantly westward movement of Caspian oil into the Black Sea and to the Mediterranean. Within a 10-year time frame, it is predicted that these markets will absorb up to 2.5 to 3 mmbd (125 to 150 mty) of Caspian crude. Significant volumes of Caspian oil will also move south to Iran (up to 500,000 barrels or 25 mty) for oil swaps from the Persian Gulf. Iran, however, is a market for Caspian crude (to be supplied primarily from Kazakhstan and Turkmenistan), rather than a transit country to take Caspian oil into the Persian Gulf. It is difficult to conceive that Iran would allow the transit of material volumes of Caspian crude, which would then move to and undermine their own Iranian oil markets in East Asia. Therefore the bulk of north Caspian and Russian export oil must transit the Black Sea on route to international markets.

Competitive tariffs and operational security will ensure that the multiple export options we see functioning today will continue to operate in the future, together with two new regional pipelines (one pending) to supply oil markets in the West. The Caspian Pipeline Company (CPC) exiting the North Caspian will feed some 1.2 mmbd (60 mty) into the Black Sea. Baku-Tblisi-Ceyhan (BTC) will bypass the Black Sea and will feed 1 mmbd (50 mty) into the Mediterranean. The BTC pipeline has not yet been fully sanctioned by its sponsor group. However unequivocal statements from BP as the lead sponsor together with unrelenting political pressure from the governments of Azerbaijan, Turkey and the US would suggest that this regional pipeline will be built to become operational as planned in 2005. The recent financial sanction by AIOC for the next phase of field development reinforces this commitment. It should be noted, however, that despite reports to the contrary, surplus Kazakh crude from the new discovery at Kashegan may not be available for early BTC operations. By the time that field goes on-stream, AIOC should require the full BTC design capacity for its own production. There will also be no surplus Azeri crude for shipment to Iran, as all Azeri crude will be needed to service BTC. Some Kazakh onshore (North Buzachi) oil could move to Baku to fill the empty Baku-Supsa pipeline, when this spare capacity becomes available once BTC is commissioned. Only when the AIOC production goes off peak at around 2015 would substantial export capacity be made available in BTC for others, unless there is an earlier expansion of the system.

It is therefore important to understand how all these oil movements impact the Black Sea, with its highly congested exit through the narrow Turkish Bosphorus Strait to the Mediterranean. With BTC awaiting sanction and CPC not yet fully operational, current oil flows into the Black Sea will remain at similar levels to last year, as all Black Sea oil export terminals were already operating at full capacity. In 2000 crude oil export from Russia and the Caspian through these five marine terminals totalled 66.6 mty, with an additional export level of 13.8 mty for oil products. Bulgaria and Romania between them imported 10.8 mty of crude (mainly Russian blend). Some 2.2 mty of Middle East oil was also imported into the Black Sea, for use by Romania and Bulgarian refineries (Figure 3). This resulted in a total oil flow through the Bosphorus (both imports and exports) of 74 mty (1.48 mmbd). These volumes will increase this year after the commissioning of CPC Phase 1 to 8 mty. However as future crude oil flows into the Black Sea will be unaffected by the commissioning of BTC (2005), the next step jump in Black Sea crude transit volumes will not occur until CPC is expanded to full planned capacity (62 mty) some time around 2010. This also coincides with probable Kashagan full field expansion

Preferential markets for these Black Sea oil flows have developed in both the Black Sea region itself and more importantly within the Mediterranean. Following the collapse of the Soviet Union, crude markets in the Black Sea are once again developing but at a slower rate than was originally expected. It is predicted that Black Sea demand will increase from 10.8 mty in 2000 to 18 mty in 2010. However Black Sea refineries are primarily configured to run on sour crude for residual fuel oil production, for which there is a strong demand. For this the Russian export blend (32 degree API and 2.9% sulphur) has a competitive advantage. Therefore for the foreseeable future the bulk of Caspian lighter crude (32 to 48 degrees API with low or no sulphur) will of necessity move to the Mediterranean, through the heavily congested Turkish Bosphorus Strait. The Eastern Mediterranean market is fairly large (Turkey, Greece and Israel), but refineries here prefer supplies of cheap sour crude from the Middle East. Such crude is readily available, from Iran, Syria and Saudi Arabia through the Suez Canal and Sumed pipeline. There is no commercial incentive for the East Mediterranean refineries to pay a premium for Caspian light crude that will need to search for premium market share elsewhere.

The eastern coastal markets of Europe are large with a focus on Italy. Here refineries run at around 50% on sweet crude, with an increasing demand for low sulphur fuels. Caspian supplies will be in direct market

competition with North African producers. Exceptionally keen Caspian pricing will be needed to displace established Libyan crude supply. Therefore the most important coastal markets for Caspian crude will be in the Western Mediterranean, which has the largest demand for sweet crude imports within the Mediterranean region. Refineries in Spain and France and pipeline links to refineries in Germany and Switzerland must be the primary markets for Caspian crude supply into the Mediterranean. Here Caspian crude will need on a highly competitive basis to displace both North and West African supplies. The remaining markets of Central Europe are not large, and are already almost entirely supplied by Russia through their Druzhba export system. Some media profile has been given to the fact that Poland, Hungary and Slovenia are searching for new supplies as alternatives to the North Sea. But their demand volumes are still modest. Therefore to a large extent Caspian oil exports must focus on Mediterranean markets to the west, where there is a refinery demand for 'just-in-time' supplies. This would give preference to smaller tanker sizes that are also suitable for continued Bosphorus transits. This may well colour Russian thinking on their future oil transits through the Bosphorus.

However there are alternative trading views. It is believed that resistance from Middle Eastern and North African producers against infiltration of Caspian crude into their established Mediterranean markets will be so intense, that it would of necessity drive Caspian oil to more distant markets in both Northwest Europe (where the North Sea supply is potentially in terminal decline), and to markets on the eastern seaboard of the United States. In this event, large tankers (VLCCs and ULCCs) would be the most commercially viable transportation option. This would automatically require deepwater export facilities for Caspian exports, such as the existing terminal at Ceyhan (or Vlore on the Adriatic if the port is ever built). The passage of such large tankers through the Bosphorus would be prohibited and the need for a Bosphorus pipeline bypass for Black Sea export would then be critical. Likewise if the use of smaller tanker transport were to continue to expand from the Black Sea, then either a more highly controlled and improved maritime oil transit through the Bosphorus must be adopted or a bypass pipeline must be built.

4. The Turkish Bosphorus Strait and Black Sea Bypass Options

For Turkey, oil transit and the transit of other hazardous cargoes through the congested Turkish Straits is an international bottleneck of immense historical, social and economic importance (Figure 4). It presents a difficult challenge involving legal status and multinational rights of

passage (under the now outdated Montreux Convention of 1936), technical marine management, cost sharing, and important elements of potential regional conflict. The Bosphorus is approximately 31 km long but on average only 1.5 km wide (700 metres at its narrowest point). It has several sharp turns, and ships alter course at least 12 times at these difficult bends. More critically the Strait runs through the heart of Istanbul. Strong currents and counter currents (reaching 5 to 8 knots) continually change their pattern, and seasonal fog, snow and rain increase the hazards of transit. For mariners the Bosphorus is one of the most hazardous, crowded and difficult waterways in the world. The channel currently handles over 50,000 vessel transits a year (up from 25,000 in 1988). With the projected economic growth expected for the littoral states of the Black Sea, these levels of transit are expected to grow exponentially. Oil tankers (including not only crude oil and refined product but also LPG) account for less than 15% of the total shipping, and their share is expected to decline as non-oil traffic, such as dry-bulk and container vessels continue to grow even faster than oil. But none of this takes into account the number of daily cross-ferry and other shuttle boats that transport 2 million people from one side to the other. These currently exceed more than 1000 crossings per day. All this adds to the complexity and risk. For Turkey it is the multi-billion dollar loss exposure that would arise from a single catastrophic marine disaster at the heart of Istanbul that is now the pressing issue. But Russian and Caspian oil investors are polarised over their conflicting views on transit risk, between those who believe a Bosphorus bypass should be built as soon as practicable, and those who believe Bosphorus oil transit can continue to be safely managed using upgraded marine technology.

Comparisons are made with hazardous cargo transits through the Houston Shipping Canal, the Mississippi River, the Malacca and Singapore Straits, and the Suez Canal. However the incidence of marine accidents in the Bosphorus are significantly higher than in these channels (6 Bosphorus marine accidents per million transit miles, versus 3 in the Suez Canal, and 0.2 in the Mississippi River). These statistics are quite startling but do in fact reflect the incremental benefits that arise from high quality marine and traffic management systems (especially VTS) that have been adopted elsewhere. Undoubtedly the Bosphorus will benefit materially from the installation of their new \$30 million VTS system, but it would be in the interests of all if all Bosphorus transit vessels (especially for hazardous cargoes) took on a Bosphorus pilot, which is not yet mandatory. Similarly Bosphorus transit risk would be materially reduced if standards of vessel quality and reliability were raised to EU (and US) requirements. But this

would present an enormous commercial and political challenge for Russia and the other Black Sea states. However as Russia will be obliged in 2005 to meet EU tanker standards at their receiving terminals for future oil deliveries if it wishes to retain its European market share, then perhaps the new tanker requirement is not an issue for that country.

Total oil flows through the Bosphorus have grown significantly in recent years but not hugely. Between 1998 and 2000, growth was 7% per year, reflecting both the commissioning of the Supsa terminal in Georgia and the impact of high oil prices on increased Russian production. But it can be noted that the 74 mty Bosphorus oil transit of 2000 is still significantly lower than the 91 mty transit peak of 1989 (which, it should be pointed out, was a time when non-oil traffic was also much lighter). CERA has recently completed a projection for possible oil flows through the Bosphorus to 2010. They studied three scenarios. CERA's preliminary analysis revealed some interesting results. By 2010, the flow of oil through the Bosphorus would not more than double or triple as feared in many quarters, but was projected to increase to no more than 110 to 120 mty. Even in their worse-case scenario, CERA predict that the growth in volumes transiting the Strait within this time frame would only be some 60% greater than today. Some do hold a more pessimistic view, but even then transit volumes do not double (up to 127 mty by 2010).

Therefore this more moderate growth in transit numbers may perhaps support the case for improved marine management in the Straits without the requirement for a new Bosphorus bypass. Most Caspian multinationals see a 50 mty increase in crude transit through the Bosphorus as requiring no more than one modern double-hulled Suezmax tanker daily. But herein lies the rub. Transit through the Bosphorus under the current terms of the governing international Montreux Convention prevents Turkey from either imposing new transit rules and operating standards to lower transit risk, or the right to retrieve the costs involved in upgrading Bosphorus marine management systems. Current transit through the straits is in economic jargon a 'free good'. As long as shippers believe that they can continue to move their oil freely through the Bosphorus, there are few incentives for them to undertake increased costs from either the building of a bypass pipeline or to contribute financially to improved control systems in the Bosphorus. Turkey is therefore left on the horns of a political and environmental dilemma.

BP and the BTC sponsor group so far have been the one group of Caspian producers to declare their firm position on the Bosphorus. They see the undoubted transit risks as being unacceptable, both from the point of

view of international reputation and environmental economic prudence. They recognise the magnitude of the multi-billion dollar 'negative opportunity costs' that could arise from a catastrophic oil disaster at the heart of Istanbul. This would be far greater than say the 'Exxon Valdez' incident in Alaska (with a reputed retrieval cost of \$10 billion), or the clean-up costs arising from the recent break-up of the 'Erika' off Brittany last year. For BP's South Caspian export, BTC is already their most expedient Bosphorus bypass. For the past three years the focus of Turkey's political attention on BTC largely removed the transit crisis in the Bosphorus from the regional debate. Turkey's environmental arguments were seen by many more to reflect their support for BTC than the realities of a catastrophic threat to Istanbul. But with the recent commissioning of CPC and the associated growth in oil transit volumes, the Bosphorus transit issue is once more centre stage. It needs to be addressed with urgency. A multilateral initiative between the Caspian and Russian oil exporters and the Black Sea littoral states is now urgently required to advance this critical debate. BSEC is an ideal and existing forum that could help the regional debate move forward.

At least eight Black Sea Bosphorus bypass options have already been proposed to address the issue, but with few firm commitments (Figure 4). One popular proposal is for the construction of a new 320 km 42" pipeline from Bourgas on the Bulgarian Black Sea to Alexandroupolis on the Aegean coast of Greece. This line is designed to handle some 32 to 50 mty, with new storage and offshore marine handling facilities at either end. The project's cost is estimated at some \$800 million with transit tariffs of 46-79¢/bl. Environmental concerns have been raised over the increased environmental and operating risks arising from the introduction of substantial volumes of Black Sea crude into the Aegean. It is self evident that VLCCs could not be used in these restricted waters for oil transport to distant markets.

For some time, Russia's Gazprom expressed considerable interest in this bypass option, and it is still in favour with several Russian Ministries. The Russian preference for a Bourgas-Alexandroupolis bypass was recorded in the final communiqué from the 'Prodi Energy Dialogue' between Russia and the EU last year. A trilateral meeting recently increased momentum for this Greek-Bulgarian-Russian project. In late October 2001, during the official visit of the Greek Minister of Development to Bulgaria, there was a pragmatic shift by the new Bulgarian administration to accelerate the final steps required for the legal establishment of the Trans-Balkan Oil Pipeline Company that will undertake the construction of the Burgas-Alexandroupolis pipeline. The

project was also discussed during the official visit of Russian President Vladimir Putin to Greece on 10 December 2001. At a trilateral meeting in Moscow in January 2002, representatives from the governments of the three countries signed a *Protocol of Cooperation* in which they declared their intention to continue negotiations for the early establishment of the Trans-Balkan Oil Pipeline Consortium.

A second Bosphorus bypass option, which is being heavily promoted by AMBO, proposes a new 900 km 32" from Bourgas to Vlore on the Adriatic coast of Albania. With a design capacity of 30 to 37 mty, this would be built at an estimated cost of \$900 million with a pipeline tariff of \$1/bl. Vlore has the strategic potential for a deepwater port to handle VLCCs and ULCCs in the long term. This pipeline transits three Balkan countries, however, in which the security risk arising from internal conflict is high, and for that reason, this option has yet to attract the support of the Caspian multinational shippers.

Two further Balkan bypass options have been proposed that involve western Black Sea ports. The Romanians are promoting a new 630 km 32" line from Constanza, to connect with the existing Adria pipeline system in Hungary, with a pipeline extension to an Adriatic export terminal at Trieste. A transit tariff of \$1.37/bl to \$1.50/bl has been proposed. This project remains at a conceptual stage. The Ukrainians have already completed 673 km of new pipeline linkages and upgrades within existing infrastructure for a 920 km 33" pipeline system from Odessa to Brody, connecting the Black Sea with the Russian Dhrubha pipeline system. Phase 1 with a capacity of 9 mty will soon be operational, with plans to expand capacity to 40 mty by 2005. A transit tariff of \$1.37 to \$1.50 was originally proposed, but recent press reports suggest that the system may well become operational with tariffs of less than \$1/bl. Both these Balkan bypass systems are exposed to the same commercial challenges, however. These arise from shared capacity limitations in the existing Druzbha and Adria systems; and from contractual requirements to deliver crude supplies at sub-market prices to refineries in Central and East Europe, that are for the most part already being supplied by Russia. The pipelines also suffer from the security risk arising from multinational transits in countries where there is already a poor track record for crude and product theft. The Russians recently expressed the view that this bypass system could not be commercially viable until such time when the pipeline is extended to Gadansk.

Two shorter Black Sea Bosphorus bypass alternatives have also been identified. The first is for a 200 km 40" pipeline through Turkish Thrace

from Kyiko on the Black Sea to Ibrikhaba on the Aegean. The estimated cost for this line is \$800 million, but no tariff estimates have yet been proposed. At the time it was being reviewed, Turkey was focusing on securing BTC above all other Turkish options. The solution would be incapable of accommodating VLCCs or ULCCs. The second Turkish alternative was to build a 40 km pipeline low-cost link from the Black Sea to the TUPRAS Izmet refinery on the Sea of Marmara, to handle some 9 to 12.5 mty of Russian blend. Although this is a very practical proposal, it would have little material impact on the issue of long-term Bosphorus transits.

A more attractive Turkish Black Sea Bosphorus bypass option is likely to emerge once BTC is built. It is proposed that a new 250 km 40" pipeline is laid from Samsun on the Black Sea to Kirikkale, which on a like-for-like basis with the current Turkish onshore sector of the 'Blue Stream' gas pipeline would suggest an investment cost of \$170 million. This could initially join with an existing Botas pipeline that already connects with the deepwater port of Ceyhan. Throughput would be limited in the initial phase, but as the bypass route follows an existing pipeline right-of-way, a new 40" line could then be built to link Samsun to Ceyhan. Again on a like-for-like basis with BTC, a transport tariff of around 60¢/bl would seem to be appropriate. This bypass option is certainly commercially competitive and could bring with it substantial political benefits. It would create direct energy interdependence between Russia and Turkey, with the latter dependent on Russia for its strategic gas supply and with Russia dependent on Turkey for export of its Black Sea oil to international markets. The fact that Ceyhan is currently the only deepwater port capable of handling VLCC and ULCC tankers for long-distance export reinforces its attraction.

Finally the State Oil Company of Georgia (GIOG) have proposed a novel alternative that would provide the only bypass solution (other than BTC) not to use marine transit or double crude loading in the Black Sea. They have promoted the idea of a 40" land based trunk line skirting the eastern margins of the Black Sea, from Novorosysk through Sochi and Sukhumi eastwards to Tbilisi, to link with BTC on the Georgian Turkish border. But this 700 km landline would need exceptional political support from Russia to cooperate with Georgia, at a time when government relations are strained. More importantly the pipeline would need to transit Abkhazia, where a frozen ten-year conflict between Abkhazia and Georgia presents a critical stumbling block. It has been argued that the opposite could apply, whereby the commercial benefits that would arise from a trunk pipeline transit would in fact help facilitate conflict

resolution in this volatile area. GIOC have suggested that a transit tariff of \$1/bl could be achieved from comparisons with BTC. This would not include the additional tariff for the BTC sector from Tbilisi to Ceyhan. Nevertheless, for the long-term protection of the Black Sea, this landline solution is without doubt environmentally the most attractive bypass option. All other Black Sea options carry inevitable environmental risk from the double handling of Caspian-Russian crude at both ends of the Black Sea.

The immediate need for a Bosphorus bypass is not universally accepted, however. Russia currently believes that they already have Turkish agreement for short- to medium-term free transit of their oil through the Bosphorus, and have repeatedly stated so in public. In addition both Russia and the North Caspian oil exporters believe they too had the support of the US government on this issue, arising from the intense diplomatic pressure imposed on Russia by the US State Department to facilitate a commercial resolution of the CPC trunk pipeline (and thus protect US investment in Kazakhstan). Consequently early agreement to a new Bosphorus bypass may not be high on the Russian agenda today. Recent statements from Russia suggest that they believe that a Bosphorus bypass is not required until such time as oil transits through the Bosphorus exceed 120 mty sometime early in the next decade. Veiled threats have been made within the media that Turkish gas supply from Russia would be at risk if Russian Bosphorus transits were blocked.

Inevitably any closure of the Bosphorus to oil transits will attract an additional transportation cost that will undermine existing \$net-backs for the Black Sea barrel in markets to the West. It is useful for comparative purposes to target a single oil refinery in the Mediterranean against which to compare Black Sea transportation costs. If Caspian oil tankers were to continue unhindered through the Bosphorus, one could use an indicative transportation tariff from Tengiz through CPC to Novorosysk (\$3.50/bl), and then across the Black Sea to the Augusta refinery in Sicily (60¢/bl) to give a built-up transportation cost of \$4.10/bl. The tariff for transport of a comparable barrel from Baku to the Mediterranean at Ceyhan would be \$2.60/bl (although this could rise as financing discussions for the BTC project proceed). With tanker shipment to Augusta (50¢/bl), this would result in a built-up transportation tariff of \$3.10/bl, which would already give Baku oil a \$1/bl competitive advantage over Tengiz. However if the Bosphorus were closed to CPC oil transit, this would introduce additional transportation costs for double crude handling across the Black Sea, a new Bosphorus bypass tariff, and an additional tanker transportation cost to Augusta. Through Bourgas Vlore this would raise transportation costs

for Tengiz crude to some \$5.30/bl. The comparable cost through Bourgas Alexandroupolis would be \$4.90/bl. It would therefore mean that closure of the Bosphorus to Novorosysk crude transit would reduce existing Tengiz Mediterranean net-backs by some 80¢ to \$1.20/bl. that would further increase the competitive advantage of Ceyhan. This is a significant cost increase in transportation for Black Sea shippers that may be resisted. It could result in continued support for the current risky status quo.

Nevertheless despite the legitimate concerns of Turkey over the risk of hazardous cargo transits through the heart of Istanbul, Turkey has no existing international legal redress to impose a new solution. In fact the obsolete (though still very much in force) Montreaux Convention of 1936 sets strict limitations on the Turkish government, to ensure complete freedom of transit for all cargo without formalities, taxes or charges. In 1994, following a major tanker accident in the Straits, the Turkish government did unilaterally impose a new set of regulations governing passage of oil tankers through the Bosphorus. These regulations were presented to the IMO for review and comment. Subsequently the IMO approved the more important parts of the new Turkish regulatory regime, but due to the constraints of the Montreaux Convention they could not be made mandatory, and many shippers still do not respect them. At the same time the EU too has been moving aggressively to strengthen regulations concerning tanker movements in EU waters. A recent draft EU Directive has moved forward from 2012 to 2005, the date by which EU oil terminals will only handle double hulled tankers. Given Turkey's own initiative to prepare for EU membership, the suggestion that such maritime standards should not equally apply to the Bosphorus is an unrealistic expectation. Environmental activism has also arrived at the Bosphorus that imposes further pressure on the oil shippers to respond to increased international reputation risk.

But it is clear that the Turkish government has no desire to antagonise Russia or other Black Sea littoral states over Bosphorus transit constraints. It has consistently opposed abrogation of the Montreaux Convention, which is within Turkey's right to do. The raising of standards for Bosphorus marine management is essential, and is not opposed by the multinational oil shippers who wish to continue with the Bosphorus transit. However as tanker transit growth within the Straits is likely to be gradual and not explosive, it is in the interest of all parties that any reaction to this issue is not precipitate. Turkey as a matter of some urgency is now politically (and morally) behovent to raise the international profile and debate over Bosphorus transit at a formal

multinational forum. Any multilateral solution must clearly involve all Black Sea countries, as well as the IMO. It is equally imperative that an agreed time frame must be set by which date a long-term and effective solution for Bosphorus hazardous transits is resolved. The technical and commercial realities of all bypass options must be refined so that direct cost comparisons can be made. A commercial risk assessment for improved shipping standards through the Straits in comparison to a new-build pipeline bypass is the only practical basis on which to progress.

For Turkey the continued use of the Bosphorus as a 'free good' is not a valid option. The case for a market-led solution is now compelling. It would appear that the cost differential for the Black Sea barrel using a bypass route against continued use of a Bosphorus free transit is 80¢ to \$1.20/bl. This gives a benchmark against which future Bosphorus marine transit costs can be compared. Nevertheless in the final analysis it would only take one catastrophic event in the heart of Istanbul to attract a multi-billion dollar retrieval cost, which should in the future be reflected in increased tanker insurance rates. For many this means that a Bosphorus bypass is inevitable. If a five-year deadline is envisaged for such a bypass to be put in place, then the final decision on any route selection must be made within the next two years, to allow sufficient lead time for design financing construction and commissioning. For Turkey and the Bosphorus, time is clearly of the essence. It is certainly a Caspian energy issue that requires the attention of both Russian and Caspian energy investors as a matter of urgent priority. Clearly BSEC provides an existing and attractive vehicle to progress this regional debate.

5. Caspian Central Asian Gas

Once it is on board a tanker, oil is an internationally tradable commodity. Gas export on the other hand (excluding LNG) is generally tied to regional markets through dedicated pipelines under long-term sales and purchase agreements. The Caspian region, including Central Asia together with Russia Iran and Iraq, incorporates a surfeit of proven remaining recoverable gas reserves (82 trillion cubic metres (tcm)). This represents more than half of the world total (151 tcm). But there is a corresponding dearth of regional gas markets. For the South Caspian, including Iran, up to 2010-15, this gas market will be Turkey, with possible onward transits to the European Union. For the North Caspian and Central Asia, the gas market will be Russia. Remote geography, complex geopolitics, and high development and transportation costs will combine to frustrate the export of Central Asian gas to alternative international markets. Current military conflicts in Afghanistan, if

successfully resolved, could perhaps at some time in the distant future resurrect visions of a Central Asian gas line through Afghanistan to Pakistan and India. Until last year the transnational gas pipeline (TCGP) from Central Asia across the Caspian and through the Caucasus to Turkey and beyond received intense geopolitical support from the US government. But with the discovery of a super-giant gas condensate field at Shah Deniz (offshore Azerbaijan), long-term commercial competition and unrealistic commercial demands from the Turkmen government removed this politically fraught option from the Caspian gas agenda.

So what are the critical issues surrounding future domestic gas demand in Turkey? Until their recent economic crisis, Turkey was forecasting rises in demand for imported gas (primarily power sector driven) of some 42 billion cubic meters a year (bcmy) in 2005, 55 bcmy in 2010, and 83 bcmy by 2015. Turkey consumed 14.5 billion cubic meters (BCM) in 2000. But new economic realities suggest that for the coming decade it would be prudent to revise downwards Turkey's optimistic gas demand projections, to a 23 to 28 bcmy low/high case in 2005, and 38 to 45 bcmy in 2010. There will inevitably even be a market bias towards the lower case. But Turkey has been particularly vigilant in securing future gas supplies. They already have supply and purchase agreements (SPAs) in place for the contractual supply of 52 bcmy (30 bcmy from Russia, 16 bcmy from 'Blue Stream' and 14 bcmy through the Balkans; 10 bcmy from Iran; 6.5 bcmy from Azerbaijan; and 5.5 bcmy from LNG). For at least the coming decade the Turkish domestic gas market is oversupplied. Therefore new opportunities for market growth in Turkey for South Caspian gas, including Iran ('eastern gas'), are effectively closed.

But could Turkey then become a transit hub for 'eastern gas' supplies to markets in the EU? For this a Balkans transit must hold the key (Figure 5). An alternative solution could emerge for a direct gas pipeline from Turkey to Greece and onwards into Italy. Intergovernmental discussions are already taking place. But in both scenarios Russian interests in these markets are likely to dictate the outcome. Russia is highly protective of its lucrative gas position in Europe. For 'eastern gas' to access a EU market the first step required should be the negotiation of a commercially driven gas swap arrangement with Russia, to back out their current 14 bcmy supply to the Turkish market through the Balkans. This would not only accommodate an increased market share for 'eastern gas' in Turkey, but would also allow 'eastern gas' access to existing Balkan gas infrastructure, for more direct gas transits into Europe.

But this would only happen if it were clearly in the national interest of Russia so to do. It would require that it be commercially more beneficial for Russia to redirect their Balkan supplies away from Turkey into their own domestic gas market, where there is a current supply shortfall and where domestic gas prices are expected to rise to commercial levels. Alternatively Russia could redirect their Balkan gas supplies into more lucrative gas markets in Western Europe where higher gas prices generally prevail. It is impossible to envisage that 'eastern gas' could also back out Russian 'Blue Stream' gas from the Turkish market. 'Blue Stream' is a Russian prestige project that directly links with Turkey across their common offshore Black Sea border. It enjoys exceptional levels of political commitment and investment. Two 375 km of offshore pipelines are currently being laid in the ultra-deep waters of the Black Sea. The project involves the application of leading-edge technology in an aggressively corrosive environment, where long-term maintenance will be difficult. Environmental risk for this novel Black Sea project is high. (This is reflected in the simultaneous laying of two gas lines to ensure continuity of gas supply).

But it would be an equally brave political decision by Europe, if they were to unilaterally select a Turkey-Greece solution for the direct export of 'eastern gas' to Italy and Europe. Russia is protective of its Italian gas market that would be undermined. Any Turkish-Greece gas transit would need early Russian buy-in to protect Europe's broader interests to secure their long-term dependence on other Russian gas supplies. Consequently in all scenarios Russia can to a large extent dictate the pace of how and when a Turkish-European transit hub may form. It is unlikely to be soon.

The regional context for Central Asian gas is different. Despite current geopolitical events in Central Asia, it is difficult to envisage in the short to medium term (2010), that Central Asian gas will ever be transit Afghanistan to markets in Pakistan and India. Likewise an alternative land route through Iran to these same markets is also most unlikely. Iran will wish to control access to these markets for their own gas supplies. North Iran will absorb some small amounts of Turkmen gas (+/- 7bcm) for domestic use. But for the same competitive reasons Iran will never be a transit country for Turkmen gas to Turkey. The gas markets of China and East Asia are potentially very large, but in the short to medium term remote geography, politics and built-up delivery costs will combine to undermine a Central Asian gas supply. China and East Asia already have more commercially attractive options, such as East Siberian Russian gas for which a new project is already in progress.

Therefore for Kazakhstan, Turkmenistan and Uzbekistan, supplying gas ('southern gas') to the Russian domestic gas market is now their only real option. Russia needs this Central Asian 'southern gas' (Figure 6). For various reasons Russian domestic gas supplies are in decline. Despite operating their West Siberian gas fields at full capacity, Russian gas production fell from 545.6 bcm in 1999 to 523.2 bcm in 2000. New Gazprom investment in the Zapolarnoe gas field failed to deliver the incremental 25 bcmy that was expected. Over the same period, Russian domestic consumption increased by 31 bcmy, from 533.1 bcm in 1999 to 564.1 in 2000. Therefore the current squeeze for Russian domestic gas is real. For Russia to preserve its lucrative supply of gas to Europe, which is critical to the central government for generating hard currency reserves, then current shortfalls of gas into the Russian domestic sector must be acquired from elsewhere. Russia can do this through the purchase of southern Central Asian gas where there is an existing gas surplus. However it is difficult to envisage that Russia would then go one step further, to allow commercial transit of Central Asian gas to Europe to compete with Russian gas in the markets of the EU. The same constraints may not of course apply to the delivery of Central Asian gas to the high-risk markets of the Caucasus, Ukraine and the Balkans, where debt repayments are uncertain and where Russia needs security of transit for its own export of gas to Europe.

Likewise despite the hopes of many it is most unlikely that Russia will in the short to medium term engage in a major structural reform of Gazprom. This semi-state monopoly is serving Russian interests well and sees no urgency in the need to expand external investment within its domestic gas sector. But even with Russia as a semi-monopolistic buyer, this need not necessarily be bad news for Central Asia. The current evolution of a two-tier domestic gas market in Russia (regulated and unregulated) is already producing commercially attractive net-back pricing in the unregulated gas sector. Russia will make every effort to drive down the price it pays for Central Asian gas through barter deals, political pressures, and through market competition between the main suppliers. But Russia is still dependent on security of supply from 'southern gas', which means they cannot drive the price down to unrealistic levels without incurring a strategic risk themselves. Central Asian gas tariffs of between \$25 to \$40 per million cubic meters should be realistically achievable.

Within this context the urgency with which the Kazakh foreign oil companies will need to dispose of their associated gas cap gas for future oil and condensate production, will weigh heavily into this market

equation. But the increasing dependence of Russia on Central Asian gas supplies will itself reinforce and bring discipline to the market. It would seem unlikely that Russia could or would even wish to attract sufficient global capital for major new investments in its own gas upstream to meet domestic shortfall in gas supply. Time is not on their side. Thus Russia and 'southern gas' are already in a commercially symbiotic relationship that has directly attracted private-sector gas investment from Russian oil and gas companies, both in Russia and in Central Asia. By 2005, Russia should be importing between 43 to 56 bcm of Central Asian gas. These amounts could double by 2010, but this will need substantial sums of capital investment in both field and infrastructure upgrades, that will reinforce the need for competitive gas tariffs being paid by Russia to support this new investment.

It would therefore seem that Central Asian gas may have a brighter future in the short to medium term than many currently perceive. This is particularly true when all factors are placed within a Central Asian demographic context. Likewise, if cooperation between Russia, the United States and Europe develops from current geopolitical events in Central Asia, then one could perhaps envisage the development of a coherent and integrated Russian-EU energy supply strategy along the lines proposed last year by President Prodi ('The EU-Prodi Russian Energy Initiative'). Such an initiative would have material benefits in terms of improved regional security for Central Asia, the Caspian and the countries of the Black Sea region.

6. The Caspian Legal Regime and Offshore Territorial Boundaries

One final issue impacts on the likely pace of Caspian oil and gas development that needs to be addressed. Legal uncertainties over the national ownership of the waters of the Caspian arose from the collapse of the FSU. In 1991, the Caspian legal regime changed from existing bilateral treaties and agreements between Iran and the Soviet Union to today's unclear position under international law. This now requires the formal recognition of the national interests of the three newly independent states of Azerbaijan, Kazakhstan and Turkmenistan as well. With so many other priorities requiring attention at the time of the Soviet collapse, resolution of the Caspian legal title was low on the Caspian political agenda. With the arrival of Western energy investors in the Caspian, however, subdivision of the offshore into territorial waters and the rights of each riparian state to award production sharing contracts (PSCs) rebalanced the debate. It soon became an issue of potential

regional conflict and security that introduced an element of significant business risk for international investment.

For the states themselves it was a matter of national rights of access to offshore energy resources that are essential for their economic revival. For the foreign energy investor it was a matter of confidence in their offshore title under their PSCs. Obtaining secure title is essential for long-term contractual confidence as well as future access to new sources of conventional project financing. It impacts equally on the ability of the foreign investor to acquire political risk cover from the multilateral lending agencies (World Bank, IFC, EBRD). Conflict over offshore Caspian title came to a head in September 1994, when Azerbaijan signed its 'Contract of the Century' with the foreign oil investors in the AIOC consortium. This provoked the Russian MFA to issue a formal warning that the Azeri PSA was flawed. This was clearly stated despite the fact that Russian Lukoil was by then also part of the new consortium, with the written approval of their Ministry of Energy. Nevertheless work under the contract continued, as AIOC used balance sheet self-financing in the short term to solve their financing problems.

So what is the fundamental legal issue? The land-locked Caspian, although connected to the Black and Baltic Seas by a series of canals, a priori does not meet the criteria for a 'closed' or 'semi-closed' sea, as set by the Convention of the United Nations on the Law of the Sea (1982). Furthermore the newly emerging Caspian states have not yet ratified this 1982 Convention. The problem as to whether or not the Caspian may be an international lake under international law remains ambiguous. However the essential challenge at the heart of the debate is whether sovereignty or jurisdiction over the Caspian seabed is based on the principle of 'common ownership' or 'separate ownership'. Until 1991, the Caspian had two littoral states, Iran and the USSR. With the collapse of the USSR, Caspian jurisdiction is now claimed by five riparian states: the Russian Federation, Kazakhstan, Azerbaijan, Turkmenistan and Iran. Existing Caspian Treaties (1921, 1928 and 1940) that established an agreed regime between Iran and the USSR became subject to renewed legal challenge but are still in force. Although these early treaties addressed the issues of a common border and rights of navigation, they made no reference to the exploitation of natural resources beneath the seabed and the legalities involved.

By 1994, the Russian Federation had concluded that they alone retained the rights and obligations under existing treaties, and warned the newly independent states against unilateral action in offshore resource

development. These new Caspian states soon recognised, however, perhaps with some reluctance, the need for dialogue and mutual cooperation if long-term stability and sustainable economic development was to be achieved. In 1995, the littoral states agreed to establish a permanent mechanism for negotiations on the legal status of the Caspian, in the form of Joint Working Groups. These were to be led by the respective Legal Directors in their Ministries of Foreign Affairs. The first meeting took place in Tehran (June 1995), followed by Almaty (September 1995), at which time the participants (excluding Russia) confirmed their commitment to the principles of the United Nations Charter as it applied to the Caspian. This was done with particular reference to territorial integrity, demilitarisation, protection of the environment and free navigation for the littoral states.

In March 1996, Azerbaijan signed a formal Intergovernmental Agreement (IGA) with Russia, in which the latter provided guarantees for the safe transit of Azerbaijani oil through its sovereign territory, which de facto recognised Azerbaijan's right to produce and develop the sub-surface resources of its offshore oil fields. (It is also claimed, however, that Azerbaijan may have signed a separate and confidential MoU foregoing this precedent). In particular the IGA confirmed the titular rights of the new Azerbaijan International Oil Company (AIOC) to produce oil from the Chirag Oil Field. A year earlier, NIOC (State Oil Company of Iran) had applied for membership of the AIOC consortium, which de facto also provided recognition of Azerbaijan's rights to develop its Caspian oil resource. The subsequent participation of Iran in the Shah Deniz PSA and Lenkoran PSA reinforces this interpretation. By 1997, a polarisation of views developed between the littoral states. Both Iran and Russia advocated that the Caspian should be divided on the basis of a Condominium of equal interests, with the creation of a 12-mile coastal zone under national jurisdictions (the 'Caspian doughnut').

Azerbaijan and Kazakhstan proposed an opposing solution based on a sectoral split of the Caspian, using common norms of international practice for the determination of median lines. The sectoral subdivision obtained the progressive support of Turkmenistan, which embarked on negotiations for a determination of a median line over a disputed area with Azerbaijan in which undeveloped oil fields were located (Kapaz/Sirdar). But in July 1998, Russia and Kazakhstan unexpectedly signed a bilateral Caspian Delimitation Agreement, over the seabed of the North Caspian. This was done for the specific purpose of their exercising respective sovereign rights to develop separately their offshore mineral resources. For the first time a new Caspian successor state to the USSR

established an exclusive right to develop and manage their subsurface resources, whilst at the same time clearly separating the issue of seabed delimitation from the issue of the full legal status of the Caspian. Consequently this 1998 agreement recognised that freedom of navigation (and aviation), placement of underwater pipelines and cables and all other uses of the Caspian Sea, would be regulated by future bilateral/multilateral agreements between the littoral states, within a broader convention that would only then address the legal status of the Caspian as a whole.

Iran and Turkmenistan immediately disputed the validity of this independent bilateral agreement between Russia and Kazakhstan. They emphasised 'the irreversible principle of unanimity by the five littoral states on all decisions regarding the legal status of the Caspian Sea', to ensure equality in the sharing of Caspian resources by all five states. However, this alignment of common interest between Iran and Turkmenistan was soon short-lived. By February 1999, Turkmenistan was committed to the construction of a trans-Caspian gas pipeline from Turkmenbashi to Baku. This culminated in November 1999, in the signature of a framework agreement between Turkmenistan, Azerbaijan, Georgia and Turkey, for a gas pipeline that would bypass both Iran and Russia. This initiative was subject to continuing protest by Russia, on grounds of disputed legal status and ecological risk. For commercial reasons the project was subsequently abandoned.

By then Iran was also taking independent action. In December 1998, Iran signed an exploration study contract with Lasmo and Shell, to assess the hydrocarbon potential of the Iranian sector of the Caspian Sea. This agreement included certain rights for the award of subsequent contract areas to the participants, on previously negotiated contract terms. In May 1999, Iran claimed formal territorial rights over a substantially extended sector in the South Caspian. This impinged on areas that both Azerbaijan and Turkmenistan claimed as their territorial waters, and included contract areas already awarded to foreign energy investors by Azerbaijan. At the same time Iran continued to claim an equal share of all Caspian mineral resources under a Condominium, to provide them with 20% of the regional economic benefits from all existing and future energy developments. Clearly Iran has the most to gain and the least to lose from procrastination over Caspian title resolution. A settlement through the International Court could be obtained, although the track record for reaching such international resolutions extends to decades. It would also set an unattractive precedent for Iran in its ongoing offshore territorial dispute with the UAE over certain islands in the Persian Gulf.

Despite repeated attempts over the past two years by Russia to bring matters to a close, resolution of a common Caspian legal regime remains elusive. Periodic challenges between Azerbaijan, Iran and Turkmenistan over offshore territorial boundaries continue, with Iran increasingly suspicious that Russia was focusing its efforts on reaching separate settlements with the other Caspian players, to the detriment of Iran's national interests. On 23 July last year, Iran raised the profile of the dispute when its gunboats accompanied by air support brought to a halt some seismic work being carried out by BP on its 'Alov' offshore contract block (Figure 7). Iran had previously laid claim to this area (which they call 'Elborz') in 1998, and saw their action as a legitimate response comparable to an earlier event in October 1999. Azerbaijan had then threatened to seize the company assets of Fugro-Geoteam in Baku, if they commenced seismic operations on behalf of PetroIran Development over the disputed structure. This forced the Dutch company's withdrawal from its Iranian contract.

Thus Iran's direct action at Alov/Elborz was seen by them to be their legitimate right to protect their national territorial interests in the Caspian until such time as a mutually acceptable multilateral agreement on Caspian demarcation was agreed. At the same time Iran took the opportunity to propose the immediate demilitarisation of the Caspian. This was primarily directed towards the activities of Russia. Through this event Iran has forcefully and successfully registered its position within the Caspian title debate, and reinforced their opening position for a territorial claim for 20% of the Caspian Sea area. Turkmenistan quickly followed the 'Alov' incident by reiterating its own claims to disputed territory with Azerbaijan, especially over what they saw as the 'illegal' development of the Azeri-Chirag fields by AIOC. Russia now publicly supports Azerbaijan on this issue against Turkmenistan, which was raised by President Putin in Moscow meetings with the two Caspian Heads of State earlier this year. In theory, a multilateral meeting to make progress on the Caspian title issue was scheduled to take place in Ashgabat in April (2002), but an early resolution of the title conflict is not to be expected. It is entirely within the national interest of Iran to make haste slowly on the issue, even with the increased risk of militarisation that may be happening in the Caspian today.

But is early resolution of Caspian demarcation a matter of such importance? If the matter were investment driven for incremental oil production, then Caspian geology would suggest that it only truly impacts two existing projects. These are at AIOC and the Chirag-Azeri dispute between Azerbaijan and its neighbour Turkmenistan; and for Lukoil with

its new discovery at Severen that straddles the offshore Kazakh/Russian boundary. Long-term conventional financing for the development of both these projects could be at risk, but so far the title debate does not seem to have resulted in delays. On the other hand, both Turkmenistan and Azerbaijan are losing economic benefits from the disputed stranded asset of the proven Kapaz-Sirdar oil field that could also provide valuable incremental oil for the proposed BTC pipeline to the Mediterranean.

The remaining deep waters of the South Caspian are effectively areas of high-risk exploration where investment can be postponed without material short-term loss. However there are alternative solutions available to governments and investors for Caspian title resolution that do not require a full and immediate resolution of Caspian offshore demarcation. There are already many international precedents for the adoption of bilateral solutions, whereby the disputing Parties can agree to the formation of Joint Development Zones within disputed areas on a project-specific basis. The initiative taken by Azerbaijan in 1997 to postpone Caspian median line negotiations under principles described within the convention of Montego Bay (1982) was driven by similar thinking. It would have enabled the parties to focus on the recognition of exclusive areas of undisputed territory previously described within Soviet Oil Regulations (1970). But this would have still had to take into account the particular interest of Iran, which no longer recognises the legal status of the offshore boundary line adopted during Soviet times. The Montego model would have left such matters as freedom of navigation, fishing and the management of the Caspian marine environment as separate issues, to be dealt with under the International Law of the Environment. According to the International Court of Justice, it 'is the general obligation of the States to ensure that activities executed within their jurisdiction and control and respect the environment of other states or of areas beyond national control, and that this is now part of the corpus of international law relating to the environment (and) this need is aptly expressed in the concept of sustainable development to reconcile economic development with the protection of the environment.' The creation of a common ecological baseline for the future management of the Caspian is clearly a matter of regional priority, and needs to be addressed with urgency. This can and should be done outside the resolution of offshore territorial boundaries. Nevertheless, until a comprehensive Caspian legal regime is satisfactorily resolved for all the Caspian states involved, there is an inherent business risk for the Caspian energy investor.

7. Conclusions

The post-Soviet history of Caspian energy investment has generated nine years of unprecedented misinformation and misunderstanding. Extreme views have been forcefully expressed, with some considerable interference in the private sector investment process by various international powers. Some saw the province emerging as an alternative global oil supplier to the Middle East. Others saw the geographical isolation of the Caspian as an insurmountable obstacle that together with the many frozen conflicts seen within the region would prohibit any large-scale oil developments that could benefit the West. The latest fictional James Bond film, 'The World is not Enough' was based on much of the attendant intrigue, and correctly identified the Bosphorus as the critical bottleneck through which Caspian oil must pass to reach its primary market.

Three proven but undeveloped Soviet oil and gas fields (Tengiz, Karachaganak and Azeri-Chirag-Guneshli) drove original Western energy investment into the Caspian, and the same three fields dominate Caspian energy development today. To a large extent Western exploration activity has confirmed earlier Soviet resource predictions. Two new super giant fields have been discovered (Kashegan and Shah Deniz), but eleven dry holes so far in the South Caspian offshore have materially downgraded future expectations for new oil. Exploration failure costs have been exceptionally high, but when successful, exploration finding costs have been correspondingly low. Development costs are also high, but with the application of new technology and falling transportation costs, the fully built-up cost of the Caspian barrel should soon fall within an \$8 to \$10/bl band. Caspian oil is globally competitive, but still needs a sustainable oil price in excess of \$18 to \$20/bl real to maintain commercial and investor confidence. Therefore Caspian offshore exploration and production only suits those multinationals with international E and P portfolios that allows for risk investment for the longer term.

Proven remaining recoverable oil reserves in the Caspian Sea fall within the range of 8 to 10 bnbls for the North Caspian Basin, and 6 to 8 bnbls in the South Caspian. The future Caspian yet to find potential is currently predicted to reach 50 bnbls, the bulk of which will be confined to the North Caspian Basin. By 2010 Caspian production should reach some 3 million barrels a day, two-thirds from the North and one-third from the South. Caspian production could peak at 5 million barrels a day by 2020, which conventional industry wisdom would suggest would provide a 3%

contribution to future global oil supply. Caspian energy supplies will never be a strategic alternative to the OPEC producers of the Persian Gulf, but are certainly strategically important to consumers in Europe and the Black Sea. Nevertheless the future pace of Caspian oil development is still heavily dependent on the timely construction of new support infrastructure and the training of critical national manpower. New Caspian energy investment will also require freely available conventional global financing, which is by no means certain. A necessary self-imposed capital rationing by Caspian multinationals will result in development constraints. But more importantly the continuing absence of 'good governance' in Caspian governments will erode investor confidence and slow down the investment process. Resolution of Caspian title is important, especially if the demand for conventional project financing is increased. It is self evident that the Caspian business risk is high.

The development of Caspian export capacity continues to improve. Multiple export options already exist that can accommodate up to 1.4 mm bls/d through pipelines, rail systems and barges through the Volga Don. A northern regional pipeline (CPC) from Tengiz to Novorosysk has just come on-stream with an initial export capacity of 560,000 barrels a day (bls/d). In the South Caspian a major pipeline with a capacity of 1 mmbbls/d will be built from Baku to Ceyhan in Turkey (BTC), to become operational in 2005. Up to 500,000 bls/d of Caspian crude will move to north Iran. Iran provides a market for Caspian crude but is not a transit country. The bulk of Caspian sweet crude will move to markets in the West Mediterranean where it must displace alternative supplies from North Africa, West Africa and the Middle East. Resistance to market penetration may provoke the need for Caspian sweet crude to access more distant markets, in northwest Europe and the US eastern seaboard. In this event, economies of scale will dictate the use of large tankers (VLCCs and ULCCs) from an appropriate deepwater port, which only currently exists at Ceyhan. Such large vessels could not transit the Bosphorus Straits. For Turkey and many Black Sea shippers the increased risk of a catastrophe arising from hazardous oil transits through the heart of Istanbul is no longer acceptable. The selection of either a Bosphorus pipeline bypass or dramatically improved maritime system for Bosphorus transits is now a matter of social political and economic priority. The increased transportation costs involved within a bypass option would potentially erode Black Sea export \$netbacks by some 80¢ to \$1.20 a barrel. This sets the benchmark price for costs involved in any alternative solutions. The pressing need for BSEC to promote a forum for early resolution of this issue is now a matter of considerable priority. The

recent use of military force by Iran against Azerbaijan in their assertion of Caspian offshore territorial rights has raised the Caspian profile on unresolved title. Full settlement will require a broad-based multilateral agreement between all the Caspian riparian states. That is unlikely to occur within the shorter term. Nevertheless the realities and fundamentals of Caspian oil development are clearly understood; and the nature of Caspian business risk although demanding is also clearly manageable. As a global oil producer, the Caspian has been materially downsized. For the coming decades, Caspian oil will be strategically important to Europe at a time when North Sea oil production is already in terminal decline.

References

There has been a plethora of publications in recent years on Caspian energy investment. For historical and political background on Caspian oil development, three books are recommended:

Swietochowski, T. [1995], *Russia and Azerbaijan. A borderland in transition*, Colombia University Press, New York.

Toft, R.W. [1976], *The Russian Rockefellers. The saga of the Nobel Family and the Russian oil industry*, Stanford University Press, Stanford, CA.

Yergin, D. [1991], *The Prize. The Epic Quest for Oil Money and Power*, Simon and Schuster, New York.

For Caspian energy in a geopolitical context, one book is strongly recommended:

Ebel, R. and R. Menon [2001], *Energy and conflict in Central Asia and the Caucasus*, Rowan and Littlefield, Boulder, CO.

For more specific works of reference on Caspian energy issues two reference works are recommended:

Ascher, W. and N. Mirovitskaya [2000], 'The Caspian Sea: A quest for environmental security', in *NATO Science Series 2. Environment vol. 67*, Kluwer Academic, The Hague.

Dekmeijan, H. and H. Simonian [2002], *Troubled Waters. The Geopolitics of the Caspian Area*, I.B. Taurus, London.

To place Caspian oil in a global context:

Mitchell, J., K. Morita, N. Selley and J. Stern [2001], *The new economy of oil. Impacts on business geopolitics and society*, Royal Institute of International Affairs Energy and Environment Programme, London.

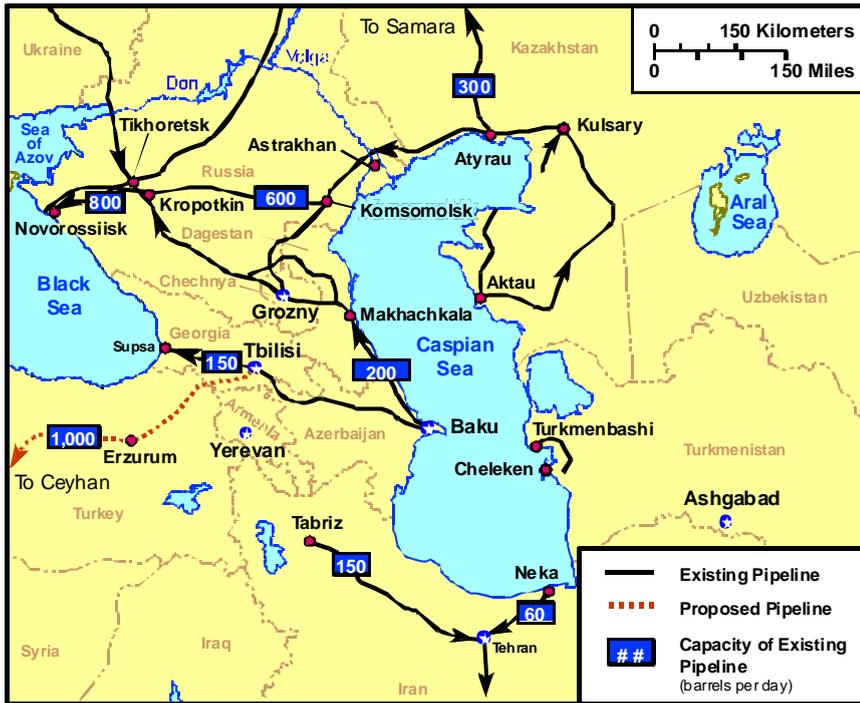
ATLAS OF MAPS

Figure 1. Exploration in the Caspian



Source: Cambridge Energy Research Associates (CERA).

Figure 2. Oil pipelines in the Caspian



Source: Cambridge Energy Research Associates (CERA).

Figure 3. Black Sea oil flows, 2000 (crude and products)



Notes: All figures in millions of tonnes annually. The figures for Romania and Bulgaria represent crude oil imports. Except for the volume of crude oil imported into the Black Sea, these imports are roughly the equivalent of Russian and Caspian crude; this drawing thus reduces total flow through the straits.

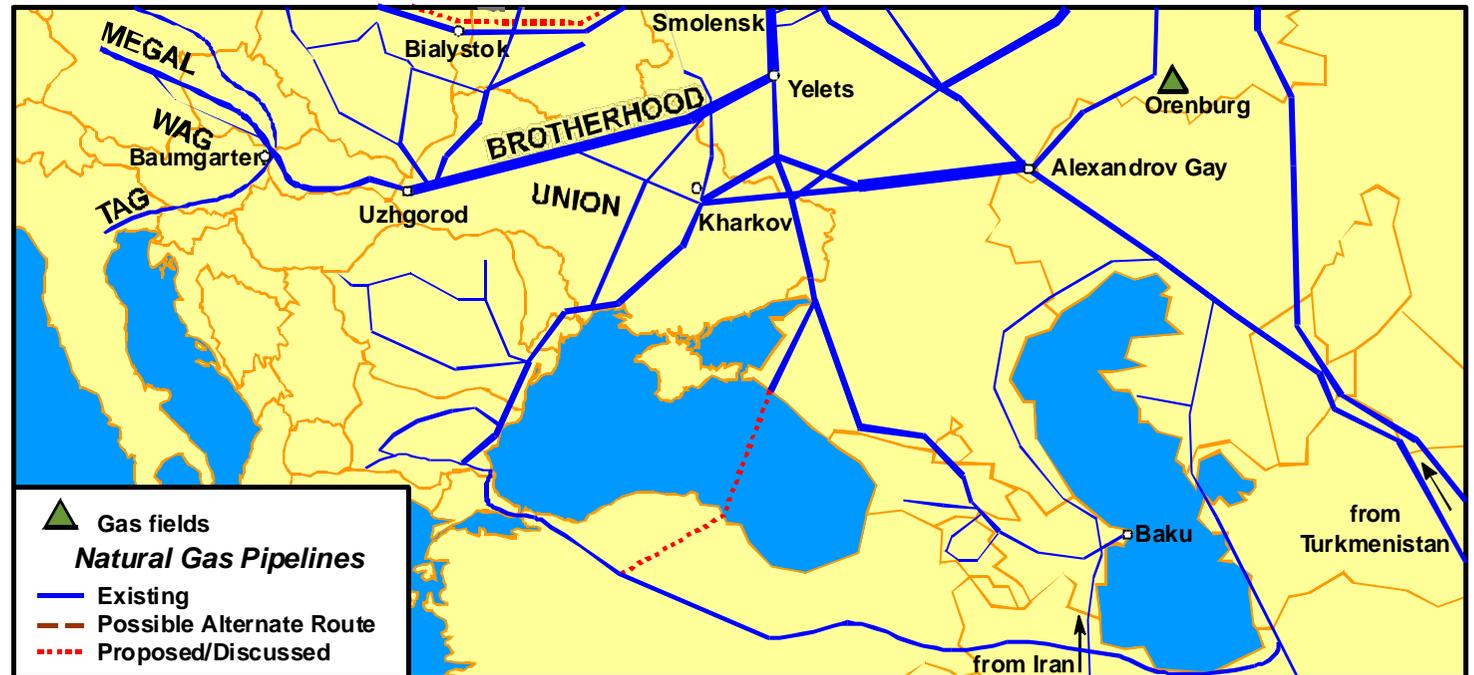
Source: Cambridge Energy Research Associates (CERA).

Figure 4. Bypassing the Bosphorus: Proposed options



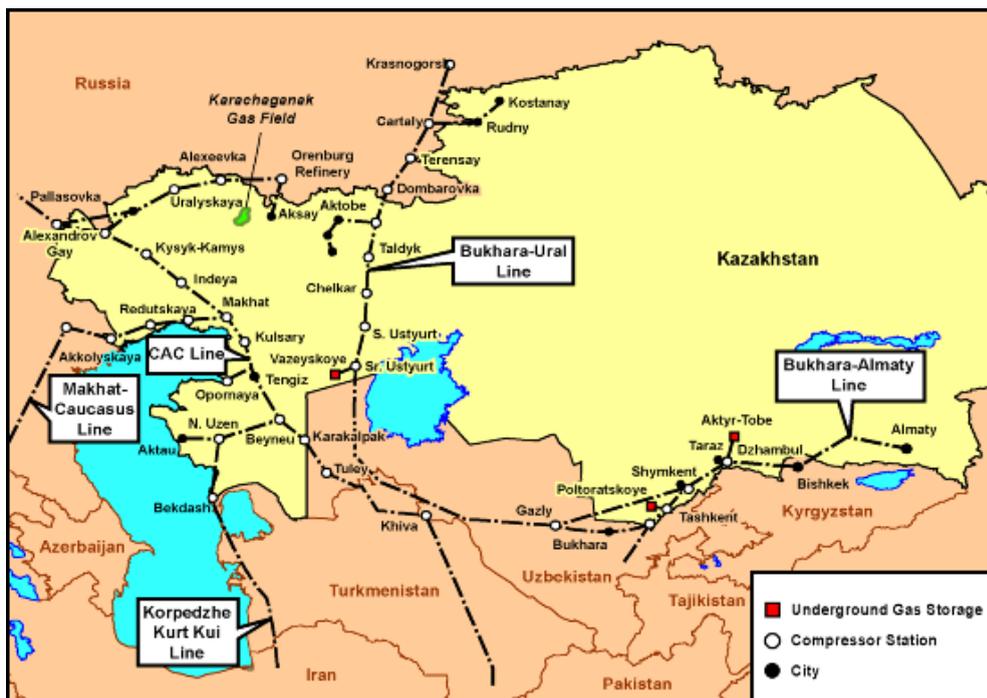
Source: Cambridge Energy Research Associates (CERA).

Figure 5. The Turkish market: Pivot for new gas geography?



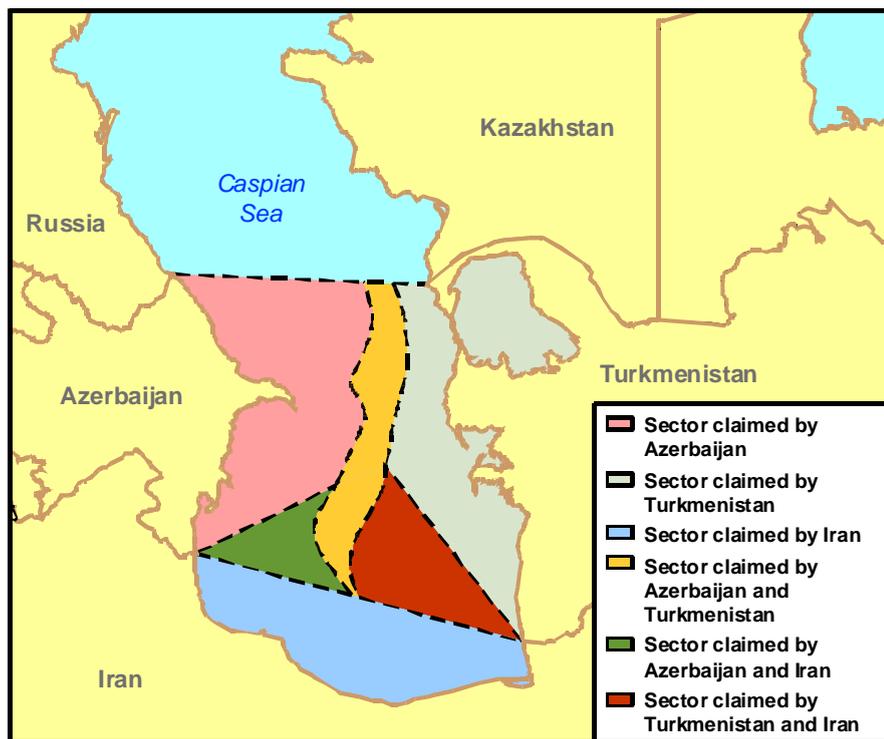
Source: Cambridge Energy Research Associates (CERA).

Figure 6. Central Asian gas pipelines



Source: Cambridge Energy Research Associates (CERA).

Figure 7. South Caspian disputed areas



Source: Cambridge Energy Research Associates (CERA).

**PROTECTING THE BLACK SEA
ENVIRONMENT:
A CHALLENGE FOR COOPERATION AND
SUSTAINABLE DEVELOPMENT IN EUROPE**

LAURENCE DAVID MEE

CONTENTS

1. Introduction	81
2. Examining the Symptoms of Environmental Degradation	81
3. International Action for Protecting the Black Sea	88
3.1 Unsuccessful early attempts to take international action	88
3.2 The Bucharest Convention: The first steps	90
3.3 The Odessa Ministerial Declaration: A statement of common policy	94
3.4 The Black Sea Strategic Action Plan	97
3.5 The Black Sea Commission takes over	106
4. Emerging Challenges and Opportunities for Protecting the Black Sea Environment	107
4.1 A basin-wide approach	107
4.2 Integrating the stakeholders into sustainable development in the Black Sea	110
4.3 An economic reality check	116
5. European Integration and the Black Sea Environment	120
5.1 Prerogatives for change	120
5.2 Case studies of EC legal and policy instruments	121
5.3 Longer-term perspectives	127
5.4 EC involvement in the Black Sea Commission	127
6. Conclusion: Towards a Common Purpose	130
List of Figures	
1. The Black Sea basin	82
2. Identification of the major underlying causes of environmental degradation in the Black Sea	98
List of Boxes	
1. The Black Sea Strategic Action Plan: 20 major points	103
References	133

PROTECTING THE BLACK SEA ENVIRONMENT: A CHALLENGE FOR COOPERATION AND SUSTAINABLE DEVELOPMENT IN EUROPE

LAURENCE DAVID MEE

1. Introduction¹

The expansion of the European Union will eventually bring its borders to the Black Sea., which has a recent legacy of environmental degradation through pollution, loss of habitats and overexploitation. Protection of this sea and its coastal environment will become an inescapable responsibility of the enlarged Community but one that will require cooperation beyond its frontiers. The present paper examines the nature of the environmental crisis facing the Black Sea, the measures adopted to overcome it and the obstacles for implementing those measures. It explores how the new geopolitical framework of Europe will change the basis of environmental politics in the region.

The Black Sea covers almost 2 million square kilometres and includes parts of 17 countries and Europe's second, third and fourth rivers (Danube, Dnieper and Don).

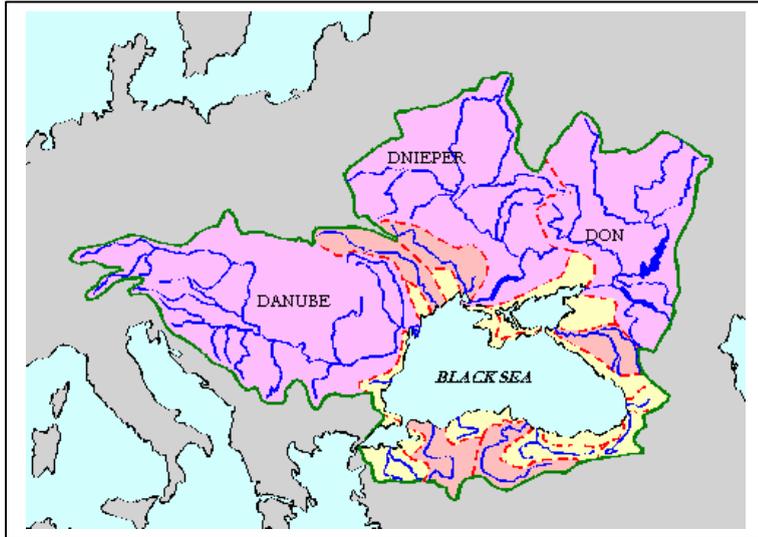
2. Examining the Symptoms of Environmental Degradation

The Black Sea is a remarkable by-product of the geological collisions between the ill-fitting jigsaw pieces that constitute the world's continents. It is a sea of great depth – over two kilometres in places – and comparable in surface area to the shallow Baltic or North Seas. However, what makes it unique is its virtual isolation from the rest of the world's oceans and its huge drainage basin covering two million square

¹ The author wishes to express his thanks to his many colleagues in the Black Sea region, particularly the staff of the Black Sea Project Co-ordination Unit in Istanbul for sustaining their vision during the past ten years of rapid change and trying circumstances. This paper was prepared partly thanks to the support of a Pew Fellowship in Marine Conservation, an initiative of the Pew Charitable Trusts in Partnership with the New England Aquarium. Interpretations of current events in the Black Sea do not necessarily reflect the official positions of CEPS, the ICBSS or the Pew Charitable Trusts or Pew Fellows Program in Marine Conservation. Thanks are expressed to Michael Emerson of the Centre for European Policy Studies for suggesting and commissioning this paper.

kilometres; over one-third of the area of continental Europe. On the one hand, the Black Sea receives water (and waste) from 17 countries from Germany to Georgia, and on the other hand, it is connected to the Mediterranean through the narrow, twisting Bosphorus, the Sea of Marmara and the Dardanelles. Every year the Bosphorus, 700 metres wide and less than 60 metres deep in places, carries about 600 cubic kilometres of surface water flowing from the Black Sea and 300 cubic kilometres of deep water replacing it from the Mediterranean. It also carries some 50,000 cargo ships (including 1,500 tankers) annually,² and flows through the middle of the megalopolis of Istanbul.

Figure 1. The Black Sea basin



The Black Sea is also one of Europe's newest seas. It was formed a mere 7,000 or 8,000 years ago when a rise in the sea level caused Mediterranean waters to break through the Bosphorus valley refilling a vast freshwater lake tens of metres below the prevailing sea level. The salty water sank to the bottom of the lake, filling it from below and forming a strong density gradient (known as a *pycnocline*) between the Mediterranean water on the bottom and the freshwater mixed with some seawater near the surface. The depth of this natural density barrier depended (and still depends) upon the supply of fresh water from rivers and rain, and the energy available from the wind and the sun for mixing it

² See Mee [1997].

with the underlying seawater. The oxygen in the incoming water was quickly exhausted by the demands of bacteria associated with decaying biota and terrestrial organic material falling through the density gradient into the bottom water. Within a few hundred years, the Black Sea, some 100-200 metres below, became depleted of oxygen. The bacterial population switched to organisms capable of obtaining their oxygen by reducing dissolved sulphate to toxic hydrogen sulphide and the resulting water body became the largest volume of anoxic water on our planet.

For several thousand years therefore, only the surface waters, down to the 'liquid bottom' pycnocline, have been capable of supporting higher life forms. Though not very biologically diverse compared with open seas at similar latitudes, the Black Sea developed remarkable and unique ecosystems, particularly in its expansive northwestern shelf where the sea is relatively shallow. The seabed in this part of the Black Sea was well oxygenated since it is well above the pycnocline. This area, and the adjacent shallow Sea of Azov, also receives the inflow of Europe's second, third and fourth largest rivers, the Danube, Dnieper and Don. A particularly unique ecosystem developed based on the 'keystone' benthic (bottom living) red algae, *Phyllophora* sp., which formed a vast bed with a total area equivalent to that of Belgium and the Netherlands. The term 'keystone' is not used lightly: like the keystone in the middle of a stone bridge, its removal causes the entire structure to collapse in a precipitous manner. This particular keystone was also a place of great beauty, vast underwater fields of red algae and home to a myriad of dependent animals, all linked together in a complex web of life.

Despite its uniquely fragile natural physical and chemical characteristics, the Black Sea ecosystem appears to have been relatively stable. During the first half of the 20th century, perhaps until three decades ago, there was little obvious evidence of human impact on the Sea or on its flora and fauna. Some changes had occurred, however, and these were precursors of much worse events to come. Sensitive monk seal populations, for example, began to decline from the late 19th century, driven from their breeding grounds by human activity. Nowadays the rarely sighted minuscule population of these seals seems likely to be doomed. Indeed, there is no certainty that any of these animals remain in the Black Sea. From the first decades of the 20th century, all Black Sea countries ruthlessly hunted dolphins. In 1954, for example, almost 270,000 dolphins were killed.³ Populations were in rapid decline; the USSR declared a moratorium in 1966 and other countries except Turkey

³ See Ivanov and Beverton [1985].

followed suit. It was not until 1983 that dolphin hunting ceased in Turkey, and calls for renewed hunting continue to be heard today.⁴ As a precautionary measure, however, dolphins have now been included in the Black Sea Red Data Book and all countries have agreed to protect marine mammals.

Another early change was through the introduction of a number of exotic animal species, introduced by accident from the hulls, bilges or ballast tanks of ships, and which flourished to the detriment of the Black Sea's characteristic fauna. The voracious predatory sea snail *Rapana thomasiana*, for example, arrived from waters around Japan in the mid-1940s and devastated beds of the Black Sea genotype of the common oyster, *Ostrea edulus*. It is one of a list of at least 27 species introduced through human activity (accidentally or intentionally) since the beginning of the century and which have profoundly altered the Black Sea ecosystem.⁵

Another gradual change was taking place on the coastlands of the Black Sea. Urban construction occurred in an unplanned and haphazard manner or one that paid little respect to environmental protection. The Black Sea was an increasingly popular tourist venue, particularly for the peoples of the former Soviet Union and the other Central and East European COMECON countries. This, together with competing demands for space from shipping, industry and coastal settlements (mostly with inadequate waste disposal), placed increasing demands on coastal landscapes. The damming of many rivers brought hydrological changes, particularly through the decrease in sediment flux to the coast, a phenomenon that contributed to major problems of erosion.⁶ This, in turn, was often ineffectively combated by the construction of a very large number of breakwaters to protect beaches. In the Sochi district of Russia alone, 80 km of breakwaters, 50 km of walls and 900 jetties were built. Soviet civil engineers poured millions of tonnes of concrete to cap stony beaches along part of the coasts of Crimea, scarring the landscape and destroying habitats as well as exacerbating pollution problems. This is not only a problem of former Communist countries but also in Turkey, where high

⁴ In the proceedings from the Black Sea Symposium in Istanbul, 16-18 September 1991, organised by the Black Sea Foundation (p. 229), Çelikkale stated, for example, that 'this [his opinion that there are too many dolphins] is one of the main problems which needs to be solved by international cooperation'.

⁵ See Zaitsev [1992a].

⁶ See Kos'yan and Magoon [1993].

levels of economic growth have sometimes been at the expense of environmental protection. More than 100 km of coastal road eastwards from Trabzon have been constructed along the shore, for example, severely altering its ecology and limiting the value of the landscape for other human uses. Throughout the entire Black Sea region, a large proportion of ecologically important coastal wetlands were also lost to developers, polluters or those who considered they could 'improve' such habitats.⁷ In the competition for coastal space, the natural environment was the inevitable loser. Though many areas of great beauty remain, the Black Sea has virtually no areas where marine life is protected. Throughout its entire coastal area, the human population has continuously encroached on the ecosystem that it is part of and upon which it depends.

From the late 1960s to the early 1990s, events occurred in the Black Sea that can objectively be considered as an environmental catastrophe.⁸ The strongest single symptom of the catastrophe was the virtual elimination of the *Phyllophora* ecosystem of the Black Sea's northwestern shelf in a matter of some ten years. The chain of events leading to the decline of this ecosystem started with an increase in nutrient flux down the major rivers, particularly in the late 1960s when fertiliser use increased markedly as a result of the 'Green Revolution'. This brought about a decrease in light penetration in the sea due to the increased intensity of phytoplankton blooms (*eutrophication*). Deprived of light, the red algae and other photosynthetic bottom-dwelling (*benthic*) species quickly died. Their function was lost as a source of oxygen to the bottom waters of the shelf seas and as a habitat for a wide variety of organisms. The bottom waters of the northwestern shelf became seasonally hypoxic (very low oxygen) and even anoxic (no measurable oxygen). Between 1972 and 1990, it is estimated⁹ that some 60 million tonnes of large benthic animals (macrofauna) perished through oxygen depletion. Thousands of tons of dead plants and animals were washed up on the shores of Romania and Ukraine every year and the seabed became a barren area with a very low biological diversity.¹⁰

The loss of the northwestern shelf ecosystem had an impact on the entire Black Sea. It also coincided with a period of expansion in the fisheries

⁷ See, for example, Wilson and Moser [1994].

⁸ See Mee [1992].

⁹ See Zaitsev [1992b].

¹⁰ This problem has still not disappeared; warm temperatures in the summer of 2001 resulted in increased stagnation and a huge mortality of organisms that were subsequently washed up on Romanian beaches.

industry and the application of high-technology fish-finding hydroacoustics and more efficient, though poorly regulated and destructive, purse-seining and bottom-trawling gear. The consequence was a decrease in the diversity of commercially exploitable fish species from some 26 to 6, in less than two decades. As eutrophication advanced in the Black Sea, the smaller fish species such as anchovies and sprat were favoured since they depend upon the phytoplankton-driven pelagic ecosystem, rather than the benthic one. Furthermore, their predators had often been removed by overfishing or habitat loss. As a consequence, fishing efforts switched to these lower-value species. Annual catches of anchovy, for example, rose from 225,000 tonnes in 1975 to some 450,000 tonnes a decade later.¹¹

In the mid-1980s, another exotic species arrived in ship's ballast waters, the ctenophore *Mnemiopsis leidyi*, sometimes known as the comb jelly.¹² This species was brought from the eastern seaboard of America and, without predators, flourished in the eutrophic Black Sea environment where it consumes zooplankton including fish larvae. Perhaps the word 'flourished' is an understatement. At its peak in 1989-90, it is claimed to have reached a total biomass of about one billion tonnes (1,000,000,000 tonnes wet weight) in the Black Sea, more than the world annual fish harvest! This massive population explosion had an enormous impact on the Black Sea's ecosystems and commercial fish stocks. The loss of zooplankton allowed huge populations of phytoplankton to develop in a series of blooms that reduced the mean Secchi depth (the maximum depth to which a white disk lowered into the sea from a ship remains visible) from the normal average of 20 meters, to only five meters. Anchovy catches plummeted in 1990 to only 60,000 tonnes.

The situation in the Black Sea was mirrored by another environmental stress on its coasts. The economic decline of the Black Sea coastal countries and the political upheaval of transition to a market economy led to a lack of maintenance of waste treatment facilities for domestic sewage and industrial waste. Of course, many cities had never had effective sewage treatment, but the general decline was evidenced by an increased frequency of outbreaks of waterborne diseases, such as cholera, and frequent beach closures due to unsanitary conditions. In Ukraine, for example, 44% of bathing water samples taken in 1995 did not meet the national microbiological standards.¹³ Summer closure of beaches in the

¹¹ See MacLennan et al. [1997].

¹² See GESAMP [1997].

¹³ See Black Sea Environmental Programme [1997].

Odessa region became a regular phenomenon. This added to the woes of a tourist industry suffering a chronic lack of investment and declining infrastructure.¹⁴ Spending power of many people in the new economy was also reduced and there were competing opportunities for cheap foreign travel (e.g. to Turkey) for those who could afford it. All of these factors led to a sharp decline in tourist numbers and in income for the local economies.

The state of the environment in the Black Sea in the early 1990s gave little reason for optimism. The economic crisis did however give some respite for pollution. Farmers were often unable to apply the quantity of fertilisers used in the former centrally planned economies. In the Danube basin, for example, by 1997, phosphate fertiliser application was lower than in 1962 and nitrogen fertiliser was at its 1967 level.¹⁵ Furthermore, many large energy-inefficient and polluting industries were forced to close. By 1996 there was already some evidence of recovery of the benthic ecosystem on the northwestern shelf of the Black Sea, albeit small. Furthermore, *Mnemiopsis* populations started to decline, especially with the arrival of its own natural predator, a similar but larger organism called *Beroe ovata*. Anchovy fisheries recovered, almost to their mid-1980s level. Most local economists and ecologists agree, however, that the pressure on the environment will return as the economies recover, unless urgent measures are taken to limit the environmental impact of renewed growth.

As the new century dawns, additional environmental pressures are emerging as a result of the rapid increase in the use of the Black Sea as a maritime transport route, particularly for the shipment of oil en-route from the newly opened Caspian oil fields. This issue has given rise to major political differences between the coastal countries of the Black Sea as the countries compete for revenue-generating pipeline routes across their territories or defend their rights to use the Black Sea as an international shipping route (see the preceding paper in this volume by T. Adams). Unfortunately, the eagerness to join this perceived bonanza is often leading to the failure to follow proper environmental impact assessment procedures or to invest in measures to protect the natural environment and assure sustainable development.

¹⁴ See Black Sea Environmental Programme (BSEP) [1996].

¹⁵ See Mee [2001].

3. International Action for protecting the Black Sea

Protection of the Black Sea environment requires a concerted approach between the six coastal countries. This must be accompanied by measures implemented at the national level. Cooperation on environmental issues between Black Sea countries was very slow to develop, given the historical division across the Sea between the Communist north and Western-leaning Turkey in the south. This was only part of the reason however. Admitting that there was a serious problem in the first place was a major barrier that was only overcome at the time of *Perestroika*, more than a decade after some of the worst symptoms of environmental decline had become apparent.

3.1 Unsuccessful early attempts to take international action

The Varna Fisheries Agreement. A fisheries convention (the Varna Convention) was signed by the Black Sea members of COMECON: Bulgaria, Romania and the USSR, in 1959. This convention focused on data gathering and exchange of information, but it did set minimum size limits for eight species and a minimum mesh size for turbot and prohibited fishing for one species of sturgeon deemed close to extinction. Turkey remained outside this agreement, however, and it had practically no enforcement provisions. Thus it had no significant impact on restraining the fisheries effort or managing stocks.¹⁶ Bulgaria, Romania and Turkey cooperated within the framework of the General Fisheries Council for the Mediterranean, but the USSR was not a member and the Council had little or no impact on the management of fishing in the Black Sea.

Black Sea fisheries remain internationally unregulated to this day. National regulations vary considerably between countries and are poorly enforced. There are frequent accounts of conflicts due to the violation of territorial waters, mostly but not exclusively by Turkish fishermen. A particularly serious incident occurred in March 2000, when a Ukrainian patrol vessel sank a Turkish fishing boat resulting in two deaths. The patrol vessel had invited a TV crew on board to film the macabre event. With the collapse of centrally planned economies in the North (and of their fishing industries in the Black Sea), Turkish fishing now accounts for some 90% of the economic value of all landings in the Black Sea.¹⁷ Private investors in countries such as Ukraine and Bulgaria are now

¹⁶ See Reynolds [1987].

¹⁷ McLennan et al. [1997].

displacing traditional cooperatives by purchasing sophisticated trawlers. The cooperatives (and some local NGOs) accuse them of trawling intensively close to the coast, resulting in immense habitat destruction. There are persistent rumours in the press, however, that members of cooperatives themselves are illegally trading part of their catch in the high seas to Turkish fishermen in order to circumvent the regulations on both sides of the Black Sea. Similarly, there are frequent press reports in Turkey of trawling in national prohibited zones including the entrance to the Bosphorus. Overcapacity in the industry is chronic and fishermen often plead that their illegal activities are driven by the need to pay back costly loans.

The stakes are high for an international management policy (including quotas) to be completed, but the individual country perspectives on an equitable division of resources are divergent. There are powerful private interests happy to maintain the status quo. Serious negotiations for a new Black Sea Fisheries Convention have been underway since the early 1990s. 'Final' draft conventions are circulated from time to time but progress is painfully slow. It is now widely recognised that trawling is one of the most destructive human stresses on global marine habitats.¹⁸ Without restrictions on trawling, it is unlikely that benthic algal communities will ever be restored, irrespective of measures to control eutrophication.

The MARPOL Convention Special Areas Provision. Another early international convention is MARPOL 73/78, a global convention that was signed in its original version in 1973 and is designed to protect the sea from ship-based pollution. Though ratified by all Black Sea countries (and legally fully in force in the region), its provisions have not been fully nor consistently applied. MARPOL 73/78 offers a possibility of extra protection for the Black Sea region, having designated the Black Sea as a 'specially protected area' within several of its Annexes.¹⁹ Under this regime, if in force, discharge of oil or garbage within the region would be prohibited. In order to enforce this regime, however, Black Sea countries will need to provide for sufficient reception facilities in their Black Sea ports. Effective enforcement, however, will also require clarity concerning the delimitation of exclusive economic zones, a process likely

¹⁸ See Jackson et al. [2001].

¹⁹ MARPOL 73/78 has five Annexes, concerned with: oil (Annex I), noxious liquid substances in bulk (Annex II), harmful substances carried by sea in packaged forms (Annex III), sewage (Annex IV) and garbage (Annex V). Acceptance of Annexes I and II is obligatory for all contracting parties.

to be rather lengthy. It will be in the economic interest of the coastal countries to implement the special area provisions, as they will be able to increase tariffs for ships entering Black Sea ports. The use of the Black Sea as an oil tanker super-highway makes the implementation of this legislation an urgent priority for environmental protection.

One of the positive developments arising from MARPOL is the gradual replacement of single-hulled tankers with double-hulled vessels. These have separate cargo and ballast tanks, improving safety and reducing operational oil discharges. On the other hand, however, they may increase the risk of transporting opportunistic species such as *Mnemiopsis*. The International Maritime Organisation is currently studying options to reduce this problem using the Black Sea as a case study.

3.2 The Bucharest Convention: The first steps

In late summer 1986, at the initiative of the then USSR, representatives of the then four countries of the Black Sea (Bulgaria, Romania, Turkey and the USSR) met to discuss the possibility of drafting a Convention for the Protection of the Black Sea against Pollution. This was to be largely modelled on the Regional Seas Conventions of UNEP, notably the Barcelona Convention, though the negotiating process was conducted between the four countries with no external participation. The opening of this chapter in cooperation was a direct consequence of *Perestroika* in the Soviet Union and marked a new era in relations with its neighbours, which was to see dramatic developments in a short space of time. The negotiating process continued for a period of six years during which time the Soviet Union itself was to break up. The four countries became six – Bulgaria, Georgia, Romania, Russian Federation, Turkey and Ukraine – but all parties demonstrated their commitment to complete the process.

The Convention and its three Protocols²⁰ were adopted by the Diplomatic Conference on the Protection of the Black Sea against Pollution held in Bucharest on 21 April 1992, and deposited with the Government of Romania. The Convention, as well as the Land-Based Sources Protocol and the Emergency Response Protocol entered into force on 15 January

²⁰ Protocol on Protection of the Black Sea Marine Environment Against Pollution From Land-Based Sources (Land-Based Sources Protocol), the Protocol on Cooperation in Combating Pollution of the Black Sea Marine Environment by Oil and Other Harmful Substances in Emergency Situations (Emergency Response Protocol), and the Protocol on the Protection of the Black Sea Marine Environment Against Pollution by Dumping (Dumping Protocol).

1994, in accordance with Art. XXVIII of the Convention, i.e. 60 days after their fourth ratification.

Structure and contents. The name ‘Bucharest Convention’ actually refers not only to the framework convention itself, the Convention for the Protection of the Black Sea, but also to its five Resolutions and three Protocols: the Land-Based Sources Protocol, the Emergency Response Protocol and the Dumping Protocol. Annexes containing so-called black and grey lists accompany the Land-Based Source Protocol and Dumping Protocol. In accordance with general practice, pollution by the substances and matter on the black lists (Annex I), categorised as hazardous, needs to be prevented and eliminated by the Contracting Parties. Pollution by substances on the grey lists (Annex II) categorised as noxious, need to be reduced and where possible eliminated. In the case of land-based sources, there is an additional Annex III, which prescribes restrictions to which discharges of substances and matters listed in Annex II should be subject. Furthermore, dumping of wastes and materials containing the noxious substances contained in Annex II requires a prior special permit from ‘the competent national authorities’, while, according to Annex III, dumping of all other wastes and materials requires a prior general permit.

The Convention addresses five of the six generally recognised sources of marine pollution²¹: land-based (in Art. VII and Protocol), vessel-source (Art. VIII), ocean dumping (Art. X and Protocol), exploitation of the seabed of the continental shelf or margin (Art. XI), and from or through the atmosphere (Art. XII). The only source not covered is exploitation of the seabed of the international area, simply because the Black Sea does not contain territory that falls under this definition. It also deals extensively with emergency response (Art. IX and Protocol), a term that refers to the use of techniques to prevent pollution arising from accidents, since the Black Sea, but especially its entrance, the Bosphorus Straits, has been confronted with a considerable number of accidents.

Implementation. The provisions of the Bucharest Convention require implementation by the six Contracting Parties: the Black Sea coastal states. They are bound to implement the provisions since the Convention is part of the legislation of all six countries. In practice, however, some countries were not immediately capable of implementing it, mostly because of economic constraints, and in some cases they were unwilling to take action to implement all of its provisions. The Convention does not

²¹ See Brubaker [1993], p. 33. The classification is reflected in UNCLOS III, Part XII. Prior to UNCLOS III, it was common to ‘combine’ the pollution source ‘from and through the atmosphere’ with ‘land-based pollution’.

provide for special enforcement techniques, such as a dispute settlement mechanism (the traditional enforcement technique, which is however not necessarily useful in case of environmental matters, where prevention rather than resolution or restoration is required). Furthermore it lacks a compliance reporting procedure, but, 'in order to achieve the purposes of the Convention', it does provide for the establishment of a Commission for the Protection of the Black Sea, which consists of at least one representative of each Contracting Party. The Commission shall, *inter alia*, 'promote the implementation of the Convention, inform the Contracting Parties of its work, and assist them by making recommendations on measures necessary for achieving the aims of the convention, and on recommendations of possible amendments to the convention and protocols' (Art. XVIII). The Convention further determines that the 'Commission shall be assisted in its activities by a permanent Secretariat' (Art. XVII).

Unfortunately, despite the determination of the Parties to complete the ratification process, the full implementation of the Convention did not followed suit. The Commission was established, and had its first meeting in May 1995. The Commission provisionally decided to adopt the name Istanbul Commission as it was agreed to locate its Secretariat in Istanbul. The Commission however, did not initially prove to be the active, supervisory body as intended by the Convention. This was due to the failure to integrate the Secretariat. Experience in earlier Regional Seas programmes has shown that the existence of an organisational structure, providing for a coordinating body, increases the chances of success of a convention. In the case of the Bucharest Convention, the delay was mostly due to the failure of the Parties to secure the necessary funds for its integration. The economic circumstances of many of the Parties led to severe restrictions on overseas spending. This was coupled with a series of diplomatic problems regarding the agreement for establishing the Secretariat. A major logjam, for example, was a conflict between Russia and Turkey regarding the provision of immunities and privileges for the staff of the Secretariat. It was not until 15 October 2000 that the Secretariat started operations, with a core staff of two and a reduced budget based on the contributions of all countries except Georgia and Russia. In the six-year gap between ratification and opening the Secretariat, much momentum had been lost and the task faced by the first Executive Director, Mr. Plamen Djadjev (Bulgaria), is an onerous one.

It is useful to examine the financial difficulties of the Commission more closely. The Convention had undergone scrutiny by all six legislative assemblies at the time of ratification and it is surprising that the financial

implications had not been taken into account. Certainly, in the case of the host country, Turkey, the Government had committed itself to covering 40% of the total costs of the Secretariat, a provision conditional upon the compliance of other countries. This left 12% of the budget to be covered by each remaining country, an initial amount of about \$43,000 each, seemingly trivial compared to the revenues from tourism and fishing in a healthy Black Sea. Until a critical mass of countries contributed simultaneously, however, nobody seemed prepared to make the first payment. The deadlock was finally broken in April 2000 at the fifth meeting²² of the Commission where Russia finally withdrew its reservations on the Headquarters Agreement for the Secretariat and the other countries agreed de facto to accept the default in payment of Russia and Georgia.

The non-payment of Russia was symptomatic of a deeper problem with its environmental governance. Since the time of signature and ratification of the Convention, the 'environment sector' had gradually been downgraded in status from a Ministry to a State Committee and, in 2000, from a State Committee to a Department of the Ministry of Natural Resources (for which the former Ministry of Environment had been a regulator). Despite reassurances, this has given a strong signal that environmental protection does not occupy a high place on Russia's political agenda. The continuous institutional turmoil, unwieldy procedures and budgetary uncertainty led to non-payment of contributions to Helcom (the Helsinki Commission for the Baltic) and to the Black Sea Commission. In an official statement to the seventh meeting²³ of the Commission, the representative of Russia explained that support to the Black Sea would be within the Federal Programme for Ecology and Natural Resources but that a Federal legal act will be required to pay any contribution from the Federal budget. Since Russia has still not officially ratified the Commission Headquarters Agreement, its financial contribution is still blocked but the roadblock should be overcome by 2002. This tortuous process for releasing \$43,000 contrasts sharply with the speedy approval of the international multi-billion dollar Blue Stream project to carry gas under the Black Sea from Russia to Turkey, as many local NGOs have been quick to point out.

²² Minutes of the 5th Meeting of the Black Sea Commission, Istanbul, Turkey, 27-28 April 2000.

²³ Minutes of the 7th Meeting of the Black Sea Commission, Istanbul, Turkey, 29-31 May 2001.

The case of Georgia is one of setting priorities for spending in the environmental sector where the state budget is minuscule. Georgia has also not ratified the Headquarters Agreement for the Commission, possibly because of its financial implications. It is however a major beneficiary of international funding for environmental protection in the Black Sea region.

Full and active functioning of both bodies is essential if the Convention is to succeed. It will also be necessary for the process of further elaborating a 'Protocol Concerning Cooperation in Controlling Transboundary Movement of Hazardous Wastes and Combating Illegal Traffic Thereof', and a Biodiversity Protocol²⁴. As mentioned earlier, the Bucharest Convention is closely modelled on the format and substance of the UNEP Regional Seas Conventions²⁵, most notably the Barcelona Convention for the Protection of the Mediterranean. However, in the 20-year lag time between the approval of these earlier Conventions and the Bucharest Convention, there have been many improvements in the available legal tools. The Barcelona Convention in particular has been completely revised, together with its respective Protocols.²⁶ One of the earliest tasks of the Istanbul Commission will be to re-examine the provisions of the Protocols and whether or not these need to be readjusted to current international circumstances. It may be timely to revisit the entire Convention and restructure it as the Convention for the Protection of the Black Sea Environment, a much needed legal tool for the 21st century.

3.3 The Odessa Ministerial Declaration: A statement of common policy

The Bucharest Convention itself is a legal and diplomatic tool for joint action and does not set out to establish environmental policy goals (e.g. targets for reducing the loads of specific pollutants, etc.). It also does not establish any regulatory mechanism for exploitation or development of the natural environment (e.g. straddled marine resources or specially

²⁴ Elaboration and adoption of such Protocol was agreed by the Commission at its September 1996 session. It is referred to in the Black Sea Strategic Action Plan.

²⁵ For a recent review of the Regional Seas Conventions, see Mee [1998], p. 35.

²⁶ Barcelona Convention for the Protection of the Mediterranean Sea against Pollution (1976, ratified 1978, amended 1995). Protocols on dumping (1976, 1995), emergency response (1976), LBS (1980, 1996), specially protected areas and biodiversity (1995), seabed exploration and exploitation (1994), transboundary movement hazardous waste (1996).

protected areas). In order to develop a common policy framework, a clear Declaration of Environmental Quality Objectives was considered necessary. Following the initiative of the Government of Ukraine and employing the stewardship of UNEP, a Ministerial Declaration was formulated during nine months of negotiations and signed by all six countries in Odessa in April 1993 (the Odessa Declaration²⁷). This Declaration is a pragmatic and innovative policy statement that sets environmental goals and a time frame to guide management regimes and associated investments. It was the first policy agreement on regional seas to reflect the philosophy of UNCED, Agenda 21, and features a heavy emphasis on accountability, periodic review and public awareness. These features represented a major conceptual shift in a public statement from countries of the region, particularly those emerging from totalitarianism.

The Odessa Declaration is remarkable in two ways. The first is the spirit of consensus. While negotiations were going on, Ukraine and Russia were engaged in a dangerous conflict about ownership of the Black Sea naval fleet and Georgia was suffering civil war. 'The environment has no political boundaries' explained Professor Sherbak, then Minister for the Environment of Ukraine. The second remarkable feature was the commitment to a new approach to environmental policy-making in the region, including much greater public participation and accountability. The Declaration also represented the first public policy statement in the region to endorse the precautionary principle,²⁸ an important departure from the earlier de facto acceptance of rivers and seas as waste receptacles.

Structure and contents. The Odessa Declaration consists of a preamble, a general policy statement and 19 specific actions. These actions were designed to facilitate the rapid development of practical measures for controlling pollution from land-based and marine sources (including the harmonisation of environmental standards); to restore, conserve and manage natural resources; to respond to environmental emergencies; to

²⁷ See Hey and Mee [1993].

²⁸ Several different definitions have been given of this principle, which is also embodied in the Odessa Declaration. One definition is contained in Principle 15 of the Rio Declaration: 'In order to protect the environment, the precautionary approach shall be widely accepted by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation'. For further information, see Hey and Freestone [1995].

improve the assessment of contaminants and their sources; to introduce integrated coastal-zone management policies and compulsory environmental impact assessments; and to create a transparent and balanced mechanism for reviewing and updating the Declaration on a triennial basis. The Declaration was designed to provide a basis for a flexible but continuous process for taking decisions on coordinated national action towards common goals at present and in the future. Its clear objectives and specific time frames were to guide and stimulate implementation of the Bucharest Convention.

Implementation. On 7 April 1996, the first triennium came to its end. A report commissioned by UNEP²⁹ evaluated to what extent the Odessa Declaration has succeeded to serve as an 'agenda' for implementation of regional measures, in accordance with the Bucharest Convention. The results of this analysis were encouraging even despite the lack of formal implementation of the Bucharest Convention. The Odessa Declaration had given a strong signal to donors, particularly the newly created Global Environment Facility, that the Black Sea countries were willing and able to cooperate on restoring and protecting this severely damaged and unique shared environment. This paved the way for financial assistance to be granted for implementation of the Odessa Declaration.

In June 1993, as a result of the Declaration, a three-year Black Sea Environmental Programme³⁰ (BSEP) was established with \$9.3 million funding from the Global Environment Facility (GEF) and over \$5 million collateral funding from the EU, Austria, Canada, Japan, the Netherlands and Norway. The BSEP was designed to improve the capacity of the Black Sea countries to assess and manage the environment, to support the development and implementation of new environmental policy and laws for protecting the Black Sea, and to facilitate the preparation of sound environmental investments. A Programme Coordinating Unit (PCU) was established to coordinate the activities of BSEP. In order to share the task of programme implementation between countries, each Black Sea country agreed to host a BSEP 'Activity Centre', a specialist institution that addresses one aspect of the Black Sea environment, such as Emergency Response to oil spills (Varna, Bulgaria); Fisheries (Constanta, Romania); Pollution Assessment (Odessa, Ukraine); Coastal Zone Management (Krasnodar, Russia); Biodiversity (Batumi, Georgia); and Pollution

²⁹ See UNEP [1996].

³⁰ See GEF Black Sea Environmental Programme Annual Reports (1994, 1995, 1996, 1997), BSEP Project Implementation Unit, Harekat Köskü II, Dolmabahce Sarayı, 80680 Besiktas, Istanbul, Turkey.

Control (Istanbul, Turkey). The BSEP also created a Black Sea Data System and a Black Sea Geographic Information System. The networks of institutions enabled specialists to 'reconnect' with each other, and external funding provided additional training and modern equipment. Non-governmental organisations began to play a key role in the BSEP, holding national and regional fora. The programme also included organisations such as the Black Sea Economic Cooperation, specialised UN agencies and international NGOs. Amongst many other things it generated an urgent investment portfolio, implemented by the World Bank and which was instrumental in leveraging almost \$100 million in new investments with environmental benefits.

The Odessa Declaration was seen from the outset as an interim policy arrangement. It signatories called upon the GEF partners to assist them with the development of a medium/long-term action plan for the protection of the Black Sea. It thus set the wheels in motion for a much more comprehensive strategy of which the Declaration itself was to be one of the building blocks.

3.4 The Black Sea Strategic Action Plan

The Transboundary Diagnostic Analysis. Development of the Black Sea Action Plan followed a carefully implemented technical process spanning two years. The first step was the integration of an effective institutional network, a process described in the previous section. The network was then asked to conduct an analysis of Black Sea problems within the field of specialisation of each 'Working Party' (Biodiversity, Emergency Response, Fisheries, Pollution levels and effects, Pollution Sources, Legislation, Integrated Coastal Zone Management, etc.) The thematic analyses were conducted at a national level and then integrated regionally. In the case of sources and levels of pollution, new reliable information had to be gathered and much of the data used to leverage new investments was obtained during this preparatory period. This was a remarkable accomplishment in such a short time and one that required the cooperation of many national and international actors. A similar situation occurred in the case of fisheries. The thematic analyses were then gathered together and studied intensively by a group of regional and international specialists in order to construct a 'Transboundary Diagnostic Analysis' (TDA) of the Black Sea.³¹

³¹ See Mee [1997].

Figure 2. Identification of the major underlying causes of environmental degradation in the Black Sea (from the Black Sea Transboundary Diagnostic Analysis)

Perceived major problems	Transboundary elements	Principle underlying causes*	Key
			<div style="border: 1px solid black; padding: 5px;"> 1 Deficient management of living natural resources </div> <ul style="list-style-type: none"> • Overfishing • Poorly regulated fisheries practices • Ill-defined resource allocation
Decline in Black Sea fisheries	Virtually all fisheries resources are shared and management requires the effort of more than one country	1, 2, 4, 8 3, 5, 6, 7	<div style="border: 1px solid black; padding: 5px;"> 2 Eutrophication and chemical and microbiological pollution of coastal and marine areas </div> <ul style="list-style-type: none"> • Discharges of industrial wastes • Domestic sewage • Nutrients and pesticide residues from agriculture • Operational oil and ballast discharges • Solid waste dumping
Loss of habitats, notably wetlands and shelf areas, supporting important biotic resources	Biotic resources are often mobile or migratory. Wetlands provide nursery grounds and may also reduce the inputs of transboundary pollutants	1, 2, 3, 4, 5, 6, 8	<div style="border: 1px solid black; padding: 5px;"> 3 Inadequate planning at all levels </div> <ul style="list-style-type: none"> • Poorly planned urban/industrial/recreational/agricultural development

Limited protection of endangered species	Endemic and/or rare species are of regional and global significance.	1, 2, 3, 4, 5, 6, 7, 8	<ul style="list-style-type: none"> • Poor inter-sectoral coordination • Coastal erosion and inappropriate erosion control
Replacement of indigenous Black Sea species with exotic ones	Exotic species are a global transboundary problem. Entire Black Sea affected and may become vector for extra-regional contamination.	1, 2, 4, 7, 8 5	<p>4 <i>Inadequate implementation of available regulatory instruments</i></p> <ul style="list-style-type: none"> • Inadequate compliance and trend monitoring • Lack of international coordination • Ineffective pollution inspectorates
Poor protection of the Black Sea landscape	Reduction of regional value of Black Sea tourism.	2, 3, 5, 6, 8 4	<p>5 <i>Poor legal framework at the regional and national level</i></p> <ul style="list-style-type: none"> • Poorly defined environmental laws and regulations • Regionally incompatible laws and regulations • Ineffective EIAs • Inefficient contingency plans <p>6 <i>Insufficient public involvement</i></p> <ul style="list-style-type: none"> • General lack of awareness of environmental issues

Inadequate protection of coastal resources from maritime accidents	Black Sea coastlines are short and transboundary pollution is highly likely following accidental spills.	3, 4, 5, 8	7	<ul style="list-style-type: none"> • Deficient public participation • Apparent lack of transparency
				<i>Major uncertainties to be resolved</i>
Unsanitary conditions in many beaches, bathing waters and shellfish-growing areas	Transboundary human health problems from exposure. Region-wide loss of revenue.	2, 3, 4, 5, 6, 8 7	8	<ul style="list-style-type: none"> • Poor data exchange • Inadequate management oriented research
				<i>Lack of financial support</i>
				<ul style="list-style-type: none"> • Ineffective economic instruments • Unsustainable subsidies • Low value assigned to environment within national economic policies • Poor perception of opportunities for development

**Note:* Major causes are indicated by bold numbers, lesser but significant causes are shown in italics.

The Black Sea TDA is a technical document that examined the root causes of Black Sea degradation and options for actions that could be taken to address them. It examined each major environmental problem, the ‘stakeholders’ involved in the problem (who is responsible? who has to act?) and the uncertainties in the information describing the problem (do we need more information and if so what kind?). It then proposed solutions, often giving various alternative options as well as a time frame and cost for the solutions. Some of the solutions required policy changes and other capital investments. They were all part of a holistic management approach that did not limit itself to end-of-pipe solutions but encouraged the development of more environmentally sustainable economic activities.

The relationship between perceived problems and their social and economic underlying causes is the starting point for the TDA. This is illustrated in Figure 2, abstracted from the TDA. The figure shows the major perceived problems, their transboundary consequences and the major causes within society (grouped into 8 major categories). Many of the environmental problems share common root causes and these cannot be addressed by a single sector. This diagram illustrates the conundrum facing environmental agencies.

'Environment' has been defined as a sector of government rather than an issue that permeates all sectors. Environmental ministries are often too weak to resolve problems at the level of their underlying causes because the causes are within the authority of other, more powerful sectors. Environmental agencies in the Black Sea region are often blamed for inaction but are rarely empowered to intercede in the work of other ministries. Environment sector budgets are generally minuscule in comparison with those of other ministries and this has a cascade effect on the entire regulatory framework. The monitoring and regulatory institutions that depend upon the Ministry of Environment for support often receive too little funding too late to fulfil their functions. In some cases their staff is paid salaries well below the cost of living and have to seek employment elsewhere in order to feed their families. The state institution itself often becomes the part-time job. This situation often applies to those professionals who are supposed to be providing essential data for environmental protection or the inspectors who are supposed to implement state and local legislation.

The Action Plan: Development, structure and contents. The BS-SAP³² was developed from June to October 1996 as a direct consequence of the TDA. It is a negotiated document, prepared during a series of meetings between senior environmental officials of all six Black Sea coastal countries and adopted (following in-country cabinet consultations) at a Ministerial Conference, celebrated in Istanbul on 31 October 1996. The Plan, only 29 pages in length, contains 59 specific commitments on policy regarding measures to reduce pollution, improve living resources management, encourage human development in a manner that does not prejudice the environment, and to take steps towards improving financing for environmental projects. In adopting this plan, the Black Sea governments have committed themselves to a process of profound reform in the manner in which environmental issues are addressed in the Black Sea and its basin.

³² BSEP [1996b, p. 29].

The structure of the Plan itself is simple. It starts with a set of 'opening statements' which link the BS-SAP to the on-going process in the region, the Bucharest Convention and the Odessa Declaration. It recognises that a considerable amount of effort has already been made to save and protect the Black Sea but that there is a 'pressing need to take further actions both locally and regionally'.

The first formal chapter of the BS-SAP is entitled 'The challenge: The state of the Black Sea environment'. It describes the priority issues facing the Black Sea countries and identified in the Transboundary Diagnostic Analysis (TDA): eutrophication; insufficiently treated sewage; harmful substances, especially oil; the introduction of exotic species; poor resources management and the loss of habitat and landscape. The challenge is summarised by a single statement: *The challenge which the region now faces is to secure a healthy Black Sea environment at a time when economic recovery and further development are also being pursued.*

The overall aim of the Plan is presented in a rather evocative manner: It is to *enable the population of the Black Sea region to enjoy a healthy living environment in both urban and rural areas, and to attain a biologically diverse Black Sea ecosystem with viable natural populations of higher organisms, including marine mammals and sturgeons, and which will support livelihoods based on sustainable activities such as fishing, aquaculture and tourism in all Black Sea countries.* Why marine mammals and sturgeons? Apart from humans (and perhaps monk seals), marine mammals and sturgeons are the largest life form sustained by the Black Sea. Their presence is more than symbolic. Both depend upon a healthy unpolluted and diverse Black Sea ecosystem. Dolphins depend on the healthy connection of the Black Sea with the world's oceans, and sturgeon depend upon clean rivers for breeding as well as a clean Black Sea. The message is clear: the Black Sea offers opportunities for human development in co-existence with the most sensitive ecosystems.

The second chapter of the BS-SAP sets down policies that form the basis for international cooperation. These consist of a set of principles regarding the *concept of sustainable development, the precautionary principle, anticipatory actions, the use of clean technologies, the use of economic instruments, considerations on environment and health, close cooperation among Black Sea coastal states, Cooperation among all 17 Black Sea basin states, better recognition of stakeholders, and last, but certainly not least, transparency and public participation.* The chapter continues with a detailed analysis of the institutional arrangements for

implementing the Bucharest Convention and the BS-SAP. Here, the BSEP Working Parties were transformed into *Advisory Groups* to the Commission, many with new mandates. The concept of *Activity Centres* is retained and further strengthened. Finally measures are proposed to promote *wider cooperation* throughout the Black Sea basin and beyond.

The third, and longest chapter of the BS-SAP, looks at specific policy actions. These actions are bold and innovative but were carefully tempered by the political realities perceived by each of the parties at the time of adoption. The agreed actions are summarised in Box 1 but the text of the Plan is well worth studying in detail.³³ Each action is accompanied by a timeframe for implementation.

Notable features of the BS-SAP include its emphasis on integration of pollution control efforts with those of the Danube River, the adoption of a system of economic instruments to regulate existing sources of pollution (and to avoid new ones), enhanced protection status for sensitive coastal and marine habitats, intersectoral planning and management of coastal regions and greatly improved transparency and public participation.

Box 1. The Black Sea Strategic Action Plan: 20 major points

- Adoption of a new institutional framework for the Black Sea, building on the achievements of BSEP and including the creation of a project implementation unit within the Secretariat of the Istanbul Commission.
- Encouragement of a basin-wide approach to certain policy areas.
- Implementation of profound fiscal reform – the implementation of the polluter-pays principle for pollution source control by 1999 – through the adoption of permit and licensing procedures that address common Water Quality Criteria for specific types of water use.
- Abatement of priority hot spots by the year 2006 – public progress reports in 2000 and 2005.
- Development of specific plans for waste water treatment plants for sewage in all coastal cities by 2000.
- Adoption of measures to control pollution from vessels using the ‘Port State Control’ approach with meaningful incentives and penalties.

³³ See Mee [2000].

- Implementation of packages of measures for dumping, transboundary movement of hazardous waste, emergency response, etc.
- Publication of five-yearly 'State of the Black Sea' reports based upon a joint monitoring system and regular surveys of land-based sources of pollution.
- Introduction of a regime for the joint control of fisheries based upon a quota system for capture and the rehabilitation of key ecosystems that act as nursery grounds.
- Development of a new Protocol on Black Sea Biological and Landscape Diversity.
- Design of a comprehensive package of investments in conservation areas (wetlands and marine ecosystems).
- Introduction of compulsory Environmental Impact Assessments, Environmental Audits and Strategic Environmental Impact Assessments with harmonised criteria.
- Development of a regional strategy for Integrated Coastal Zone Management with associated legal instruments by 1999.
- Economic development in the areas of sustainable aquaculture and environmentally-friendly tourism.
- Increased attention to public participation, based upon a comprehensive package including local authorities, NGOs, private sector, Regional Environmental Centres, schools, etc.
- Enhanced transparency through rights of access to information and improved public awareness.
- Continuation of the BS-SAP process at the national level through the development of National Black Sea Strategic Action Plans.
- Organisation of five-yearly donor meetings including the development of blended packages of investment based upon revisions of the NBS-SAPs.
- Completion of a feasibility study of the Black Sea Environmental Fund which could be supported by regionally-applied economic instruments and would address incremental costs.
- Regular and transparent revision of progress on implementation and the updating of the SAP objectives.

The actions agreed to control pollution are a good example of the Plan's pragmatism: In adopting the BS-SAP, countries agreed to a system of

harmonised water quality objectives which are reviewed every five years. Simply expressed, these objectives describe the desired quality of water for each use of the sea and rivers, including the use as a natural system. Each country, on the basis of its own legislation then introduces a discharge permitting system (and associated economic instruments) for polluters which enables it to meet the objectives and to obtain necessary revenues from permits, fees and penalties, levied on the polluters. Permit holders are clearly informed that the terms of the permits will be reviewed, and probably tightened, after five years. This provides the double benefit of achieving successive improvements in environmental health and in providing an incentive to install improved pollution control technology. The water quality objectives themselves will be set on the basis of common research and monitoring programmes coordinated through the institutional network of the Istanbul Commission.

The BS-SAP is completed by three small chapters entitled: *IV. National Black Sea Strategic Action Plans*; *V. Financing the Strategic Action Plan and*, *VI. Arrangements for Future Cooperation*. These demonstrate the point that the BS-SAP is a dynamic and flexible document, which is process-oriented. The National Black Sea Strategic Action Plans, in particular, were designed to provide a nationally-driven mechanism for ensuring that the BS-SAP is properly implemented at a local level. This is further supported through the Plan's strong commitment to public participation, including greater public awareness and transparency.

Implementation. Implementation of the BS-SAP is currently well behind schedule. A recent report of the Black Sea Commission³⁴ clearly indicates that the governments are not meeting the deadlines they set for themselves. Progress had only been made in 29 of the 55 substantial articles of the Plan. Some 25 of these had been achieved with the help of donor support. The term 'progress' is used quite generously and does not imply that milestones have been fully met. There are many reasons for this situation including the delays in completing the institutional arrangements described earlier and the continuing economic difficulties confronted by many of the countries. The fact remains, however, that even basic requirements for pollution management such as a reliable monitoring system, are not being implemented, despite continued support from the international community. This is reason for considerable concern.

³⁴ Black Sea Commission [2001].

Fortunately, there are some areas where substantial progress has been made. All six countries completed some form of National Black Sea Strategic Action Plan for example. In the case of Ukraine, this resulted in the State Programme on Protection and Rehabilitation of the Black Sea and the Azov Sea, which has now been approved by the Parliament. The National Plans are an important step in the process of consolidating international agreements into the national policy framework. Some of the BSEP Activity Centres have also made important progress, resulting in a regional system for Port State Control (enabling the more effective implementation of MARPOL), a draft Protocol on Landscape and Biodiversity Conservation, a system for harmonised water quality objectives and a draft regional contingency plan for combating oil pollution. For their part, Black Sea NGOs have continued to organise celebrations of International Black Sea Day (on the 31st October each year), and there is evidence that this movement is growing in strength at the municipal level. In summary, it is reasonable to say that the BS-SAP has provided the impetus for a wide range of activities that would have otherwise not occurred. Leveraging political support for the integration of the Black Sea Commission Secretariat and persuading donors to back a basin-wide programme to limit eutrophication probably represent its most significant achievements to date.

3.5 The Black Sea Commission takes over

The Black Sea Commission Secretariat has only been in place for 18 months at the time of writing this paper. During this short period, there has already been a remarkable acceleration in the implementation of the Bucharest Convention and the steps to complete or reform its Protocols. The Secretariat has assumed formal responsibility for implementing the BS-SAP and will incorporate the Black Sea Environmental Programme within its structure. A symptom of progress is that recent meetings of the Commission are reporting positive in-country developments for protecting the Black Sea rather than dwelling on procedural obstacles as was the case in the past. The Secretariat has inherited the difficult task of restoring and maintaining political momentum at a time of competing priorities and increasingly ambivalent attitudes towards environmental protection. The process is starting with a new Ministerial Conference in June 2002, coupled with a new substantial package of support from the international community. The Ministerial Conference will have the difficult task of reprogramming the agenda for implementing the BS-SAP without backsliding on its commitments.

4. Emerging Challenges and Opportunities for Protecting the Black Sea Environment

Joint institutional arrangements and the development of common policies between Black Sea countries are important tools for protecting the region but they will not work in isolation. The present section examines this situation from two perspectives, that of the Black Sea in a wider geographical context and that of the integration of stakeholders at a local level.

4.1 A basin-wide approach

The key problem of eutrophication cannot be resolved without integrating the nutrient reduction strategies of all 17 Black Sea basin countries, even though some of them are landlocked and may feel no responsibility towards the Black Sea nor enjoy the benefits of its restored health. To the best of our knowledge,³⁵ some 14% of total nitrogen reaching the Black Sea is from Bulgaria, 27% from Romania, 12% from Ukraine, 10% from the Russia Federation, less than 1% from Georgia, 6% from Turkey and about 30% from the non-coastal countries (Austria, Belarus, Bosnia and Herzegovina, Croatia, Czech Republic, Federal Republic of Yugoslavia, Germany, Hungary, Moldova, Slovakia and Slovenia). In the case of phosphorus, the figures are Bulgaria, 5%; Romania, 23%; Ukraine, 20%; Russia, 13%; Georgia, 1%; Turkey, 12% and 26% for the remaining countries; a similar story to that of nitrogen. The importance of showing these numbers is to illustrate that nobody is 'innocent', not even the Georgians whose low percentage input reflects the current collapse in the coastal economy, probably a temporary feature.

As illustrated above, at the time of the 1995 study, the largest single contributor of nutrients was Romania. Romania's entire territory drains into the Black Sea, mostly through the Danube. The industrial and agricultural practices adopted during the former political regime paid little regard to environmental protection, especially during the 'green revolution'. Now that the economy of Romania is market-based, many subsidies on fertilisers have been removed and large animal production complexes are closing. The decrease in fertiliser use is beneficial to the environment but unless alternative and cost-effective agricultural practices are adopted, there will be enormous social problems of unemployed farm workers unable to compete with cheap food exports from places where cheaper production techniques are applied. A similar

³⁵ See Topping et al. [1998].

situation prevails in neighbouring Moldova³⁶ where large animal complexes have also closed but where small land-holders now have excessive numbers of animals literally in their back gardens, in very unsanitary conditions. Human health is already declining in these places and shallow wells, the main local water supplies, are polluted. There are no simple solutions to these problems without fundamental changes in land tenure patterns and agricultural systems. And such changes require investments.

Over 50% of the dissolved nutrients reaching the Black Sea arrive via the Danube River. The Danube river basin has its own management regime that includes a Convention, the International Convention for the Protection of the River Danube and an Action Plan.³⁷ The Danube Pollution Reduction Programme (a GEF-funded project) has helped to define new strategies for reducing pollution, including nutrients, in the entire Danube Basin. Similarly, in the Dnieper River (shared by Ukraine, Belarus and Russia), a GEF-supported programme is developing a new Action Plan. If there are to be effective reductions in the flux of nutrients entering the Black Sea, it is important that a basin wide approach is developed in which the objectives of the different river basin projects with respect to protection of the Black Sea are matched with the needs of the coastal countries for implementing the Black Sea Action Plan. This does not imply the creation of a new 17-country programme, but rather the provision of a forum for the various programmes to agree on some common policies.

A first move in this direction was the creation of an ad hoc working party in December 1997, between the Danube and Black Sea Commissions. The group freely exchanged scientific and policy information between experts from all parts of the Danube basin and the Black Sea coast. It agreed³⁸ to recommend to the Parties of the two Conventions to take measures to maintain the discharge of nutrients to the Black Sea at or below the levels recorded in 1996. Empirical models³⁹ have suggested that, if sustained, this level of inputs should reduce or eliminate hypoxia on the northwestern shelf of the Black Sea and provide a favourable environment for recovery of the benthic ecosystem. Furthermore, this

³⁶ See TACIS [2000].

³⁷ See Environmental Programme for the Danube River Basin (EPDRB) [1995].

³⁸ See International Commission for the Protection of the Black Sea and International Commission for the Protection of the Danube River (ICPBS/ICPDR) [1999].

³⁹ Mee [2001].

group foresaw the need to monitor the recovery of the Black Sea very carefully to determine the effectiveness of this measure.

Unlike the Istanbul Commission, the International Commission for the Protection of the Danube River became very active immediately following entry into force of the Convention in 1998. This was partly due to reliable funding from the upper riparian countries (Germany and Austria) and from the European Commission. The wider international community has already warmed to the proposal of the ad hoc group and a new phase of closely coordinated well financed Danube and Black Sea GEF projects for nutrient reduction was approved in April 2001.

The new GEF project consists of two consecutive phases of two and three years respectively. Throughout this period there will be three parallel closely coordinated projects: 1) regional project to support nutrient reduction and ecosystem restoration activities in the Black Sea (total funding \$9,555,000); 2) regional project of similar dimensions for the Danube; and 3) World Bank Strategic Partnership for the Black Sea basin with a total funding of \$70 million. The regional projects will work with the two Commissions to support strategic research, continued process of legislative reform, a small grants programme to enhance stakeholder involvement and various initiatives to improve compliance, monitoring, evaluation and cross-sectoral participation. The strategic partnership will provide direct grants in the region of \$5 million each to investment projects that directly or indirectly result in a substantial reduction in nutrient emissions. Provision of the grants is contingent on their leverage of additional funds and on the country in question paying its dues to the appropriate Commission. The grants will provide a unique opportunity to support projects such as agricultural policy reforms and wetland protection and restoration. The entire package represents the biggest single investment in international waters in the ten-year existence of the Global Environment Facility. Other donors have joined the programme and there will be parallel projects from the European Union's TACIS programme, loans from the World Bank and EBRD and smaller projects from donors in the US, the Netherlands, and the UK to join existing efforts from Denmark and Canada.

All of this represents a huge commitment from the international community, but will it work? Cutting nutrient emissions, particularly nitrogen, is a very costly enterprise. Costs tend to rise almost exponentially with successive reductions (i.e. each time the nutrients from the same source are reduced by another 50%, the costs double). Carefully chosen initial projects can make substantial reductions at

relatively low cost. However, even the large amount of money mobilised by the international community will almost certainly not resolve the Black Sea's eutrophication problem. It will however create a number of demonstration projects with multiple benefits. For example, the agricultural reform projects will modernise and enhance agriculture in an environmentally sustainable manner, hopefully creating an incentive for replicate actions. Similarly, wetland restoration projects reduce flood risks, provide leisure areas and wildlife reserves as well as reducing nutrient fluxes. The underlying assumption in each case is that the countries are truly committed to sustainable development and have the vision of a healthy and productive Black Sea as one of the dividends of their efforts. If this assumption is wrong, the future of the Black Sea is very bleak indeed.

4.2 Integrating the stakeholders into sustainable development in the Black Sea

A valid criticism⁴⁰ of all previous programmes is that they have not effectively engaged a wide range of stakeholders along the Black Sea coast. The primary focus of the Bucharest Convention and the various GEF and European Union interventions has been on central governments. There were a few token projects at the municipal level as well as support to some NGO activities but, apart from annual celebrations of Black Sea day, these paid little attention to civil society. In most cases, the governments themselves did not request financial assistance for civil society projects. They endorsed the provisions of the BS-SAP regarding public participation but subsequently most countries did not translate the Plan into national languages to give it wide distribution.

Certainly, the entire region has a legacy of command-control environmental management. Stakeholder participation of the kind envisaged in the West is an alien concept. The reality however is that local administrations have considerable influence over important day-to-day planning decisions with direct environmental consequences and often lack advice or pressure from concerned individuals or groups with an understanding of environmental problems and their solutions. The consequence may be progressive loss of 'green' areas or human conflicts when a particular development gets underway.

This can be illustrated by some simple examples. In the Kizilirmak delta in Turkey, there are important wetland areas divided between several

⁴⁰ See, for example, Black Sea Commission [2001].

municipalities. A project undertaken by the Turkish Society for the Protection of Nature (DHKD) with funds from a private donor helped to raise the awareness of local people in one of the municipalities of the value of the wetlands and the importance of managing them in a sustainable fashion. The project offered practical solutions and, through a continuous stakeholder dialogue, empowered local people to make the solutions a reality. The adjoining municipality, however, had a strong hunting lobby. Beach areas were sold illegally for summer houses to associations of middle class professionals and garbage was dumped in wetland areas. Conflicts emerged between the two municipalities. The human and financial resources of the NGO were insufficient to resolve the conflicts and facilitate sustainable development.

A second example is from the Kinburn Spit in the Dnieper Delta region of Ukraine. A sharp decline in fishing yields from the Black Sea caused high unemployment among fishermen from former collectives. Following an investigation with older members of the local population, it was discovered that the lagoons on the spit had once been rich fishing areas. Using seed money from TACIS and the Black Sea Environmental Education Project, a Ukrainian NGO worked with students, teachers and parents from a local school to clear the clogged access channels to the lagoon. A healthy mullet population soon became established providing fish for the local people. Endangered Dalmatian pelicans also began to nest in the rehabilitated wetlands. Curiously, however, the local population showed no initiative or enthusiasm to maintain the channels clear for future years.

These two examples from culturally distinct settings have important commonalities:

- Local environmental action resulted from inspired leadership.
- Important progress was achieved with small seed money.
- The recognition that sustainable solutions require long-term campaigns for raising environmental consciousness.
- Each initiative had to be conducted within realistic geographical or 'community' boundaries.

Though the above points are a matter of common sense, they have often been ignored when designing projects to stimulate stakeholder participation. Donors for example expect rapid returns on their money. They often request proof of tangible environmental benefits in project cycles that may be as short as 18 months. The 'quick fix' culture does not

limit itself to capital investments. The reality however is that the process of empowering local people to seek sustainable solutions is one that takes many years to complete. To some extent, the gulf between donor expectations and reality may be bridged by 'training trainers' or providing support to those people who are identified as inspired leaders. Such an approach carries the risk of being seen as 'political interference' however.

The task of encouraging greater civil society participation in environmental protection is analogous to those campaigns that seek to improve public health by improved dental hygiene, condom use, etc. Since the benefits are not immediately obvious, several cycles of campaigning are required and younger people are more receptive than older ones. In the case of environmental protection, the benefits are probably even less tangible than the risk of caries or AIDS, and the campaigning needs to be for a longer duration and more creative in design, emphasising positive messages, rather than those that might contribute to existing fatalism. Very little has been achieved in this direction in the Black Sea region and the evidence can be clearly seen, for example by the immense amount of trash on beaches, beauty spots and many streets. Indeed, an aggressive campaign against littering would be a good starting point to creating a new public consciousness regarding behaviour and environmental ethics.

Several of the governments of the region have signed the Aarhus Convention, guaranteeing public access to environmental information. There is little evidence of proactive information campaigns however. Greater public awareness is a key to promoting action for protecting the environment, but it would be naïve to regard awareness campaigns as being sufficient. To be successful they must demonstrate viable options for sustaining the natural environment and human welfare. Campaigns that focus on changing the behaviour of individuals in society should also focus on positive examples and rewards, not just on scaling down command-control thinking to a local level. Expecting a personal and collective commitment by all individuals in society, however, may be unreasonable in the short term. This is particularly true in societies in which people are barely able to cover the material needs of their families, spend inordinate amounts of time confronting dehumanising bureaucratic obstacles, and often feel that individual action will be ignored or repressed.

Is the concept of action by empowered stakeholders entirely alien to the region? There are some remarkable examples of recent community-based

action, which suggest that the seeds of change are being planted. In the city of Zonguldak in Turkey, for example, a local community-based NGO, predominantly organised by local women, successfully took the Government to court over the direct discharge of fly ash to the Black Sea from the local thermoelectric power station. The station has now been equipped with the necessary treatment facilities. Near the Black Sea port of Novorossiysk, the construction of an oil terminal is planned on a site considered to be of great natural beauty. Partly as a result of efforts by the local NGO Aquatoria, the local public was mobilised and, in a public hearing, rejected the results of an official environmental impact assessment that supported the construction. Aquatoria was careful in its arguments: it sided with the local harbourmaster in suggesting that the development would be better sited in the existing port of Novorossiysk, rather than taking a harder line that would have exposed them to divisive arguments about interfering with national economic priorities or damaging local employment opportunities. In the event, however, the results of the public hearing were overruled and construction is proceeding. The stakes are high, as the terminal is a key element in Russia's oil export plans.

Despite these examples, the general reality is that few citizens or even local officials are aware of any international efforts to protect the Black Sea and in many cases have poor knowledge of the issues affecting the sea and its coastal zone. The public is not backing national or international efforts in most cases because they are not even aware of them or of the implications for their own quality of life. Until recently, in countries with a Communist regime, individual or collective action on environmental issues was insignificant unless conducted within the limits defined by the government or through the channels of the Communist Party itself. The situation was different in Turkey of course, but it should be remembered that Turkey had significant periods of military rule in the last two decades and these periods were not conducive to the development of a strong civil society. In the entire region, therefore, the 'environmental movement' is new. In a rather short period of time, non-governmental organisations have emerged, grown and gathered strength, though in many cases, they fragmented and faded. One of their problems is that many NGOs were, and remain, small groups of specialists or enthusiasts, trying to raise funds for their projects and seeing the world through their own technical perspective. This function sometimes fills a vacuum left by weak government agencies. There are very few genuine community-based NGOs, however. Many people are so preoccupied with

the demands of survival in a transition economy that they have little spare time to seek other avenues to assert their rights.

The current BSEP NGO Directory⁴¹ identifies less than 100 such organisations in the region. A Black Sea NGO forum was created in 1992 using GEF funds. The forum met on several occasions and served as a mechanism to disseminate information on donor-supported projects and materials. When external support diminished in 1997, the forum soon collapsed as it lacked a sense of common purpose and coherence and was unable to seek its own funding. At about the same time, a new organisation emerged, the Black Sea NGO network, again supported by external funding, mostly from the Netherlands. It remains to be seen whether the new organisation is more sustainable than the old one. To date, they have enjoyed consistent support from their members but not from the few NGOs that still cling to the hope of resuscitating the original forum.

The deficient sense of regional purpose of Black Sea NGOs is partly a consequence of the appalling communications infrastructure between many Black Sea countries. The recent workshop in Yalta, Crimea, Ukraine of the Black Sea Environmental Education Project⁴² serves to illustrate the point. The meeting brought together teachers from all Black Sea countries, except Georgia. For the Romanian teachers to travel the short distance between Constanta, just over 100 km from the Ukrainian border to Crimea, it was necessary to travel to Bucharest, fly to Chisinau (the capital of Moldova), then onwards to Odessa and then travel 11 hours by road to Yalta. There is no reliable border crossing between Romania and Ukraine. The journey cost over \$400 each and total travel time was over 24 hours, almost double the time taken by a participant from Boston, Massachusetts. Two teachers travelled from Sochi in neighbouring Russia by different means, rail and road. The rail journey took 27 hours. The road journey, some 900 km, took even longer as there was a delay of 10 hours waiting to pass the draconian border formalities and short ferry journey across the Kerch Straits from Crimea to Russia. Incidentally, the Georgian participant opted not to attend, as she felt insecure and unable to face the tedious and complicated journey alone. This example serves to illustrate the real challenges of bringing interest groups together. Given that teacher's monthly salaries are below \$100 in

⁴¹ See Black Sea Environmental Programme (BSEP) [1999].

⁴² The BSEEP is a project, funded through the Pew Fellows Programme in Marine Conservation, that works with a group of Black Sea teachers to encourage formal environmental education in schools in the region.

many countries, the likelihood of establishing a self-funded sustainable environmental education network is minimal. Raising funds for environmental education in the Black Sea region, however, is very difficult; it neither appears to be a priority for governments nor donors, despite much talk of intergenerational equity.

One of the problems facing the NGO movement in the region is that organisations tend to become dependent upon external funding since fund-raising opportunities from their own 'grass roots' are limited. This had the risk of distracting them from a community-centred function to a technical one.

The need for stakeholder involvement is not just a matter for NGOs however. A truly participatory approach must engage a wide range of community interests. There are a number of stakeholder groups emerging in the region that have proven to be receptive to a dialogue on environmental issues. Examples are chambers of commerce in those countries with a respected business community. In Turkey for example, the Black Sea Foundation is a powerful group representing business interests in coastal cities such as Trabzon and Samsun. Black Sea Harbourmasters have formed their own association including representatives from all six countries. The tourist industry has national associations in many Black Sea countries and some of these have willingly entered the dialogue surrounding BSEP. One of the most interesting and successful examples of an independent initiative was that of the Ecumenical Patriarch of the Orthodox Church, HAH Bartholomew II, who organised an action-oriented floating symposium on the Black Sea in 1997 between more than 300 religious leaders, scientists and politicians.⁴³ The Patriarch has expressed his concern for the environment and the Black Sea in particular on many occasions and has urged religious leaders of all faiths to take up the challenge. This 'greening of the priesthood' was followed by a residential training course for priests on environmental issues.

One of the keys to improving stakeholder participation at a local level is to facilitate an open and positive dialogue between a wide range of interest groups including municipal authorities, not just getting the converted environmentalists together in self-righteous isolation. But who is to facilitate this activity? The lack of committed leaders and facilitators are frequently the stumbling blocks to converting ideals into practical initiatives. In some cases local TV stations have assisted in this role. In

⁴³ See Hobson and Mee [1998].

Sevastopol, Ukraine, for example, the local inspector of pollution (of the Ministry of Environment) has chaired a regular live TV discussion about environmental issues, an enormous advance in a city plagued with problems of faulty sewage systems, poor water supply and polluting civil and military vessels. To some extent, the institution of 'International Black Sea Day', referred to earlier and which is annually celebrated throughout the Black Sea on 31 October, has also been important in catalysing the involvement of local authorities, donors, NGOs, business groups, schools and the media. The initiative focuses the often dispersed efforts of these groups on a single common objective. The fact that practical activities are being undertaken in many towns in six countries on the same day excites the imagination and gives a sense of international solidarity, which the media is quick to grasp and publicise.

There is no easy answer or clever formula for overcoming the apathy and lack of public participation that currently tend to make efforts for Black Sea protection ineffectual at a local level. There is a need to foster new environmental values in the region; valuing nature for its own sake and not just as a free commodity of limitless magnitude. It will take many years to make such a change. When a critical mass of people feel moved to action to defend environmental matters that they personally value, there may be a real change towards sustainability.

4.3 An economic reality check

The precarious economic situation in most Black Sea countries makes it very difficult for governments to invest in environmental projects. It is often possible nevertheless to achieve substantial environmental benefits as by-products of activities focused on other priority issues, such as promoting economic growth or improving human health. There are bitter realities to be faced when searching for such 'win-win' opportunities. The Black Sea Strategic Action Plan, for example, focuses attention on two such activities, tourism and aquaculture, which have a potential to promote economic growth but can be managed in a sustainable manner.

Many people in the Black Sea region talk wistfully of tourism offering a major untapped source of foreign revenue.⁴⁴ It is often hard to explain the reality in a way that does not offend. Particularly in the former Soviet countries, however, much of the current tourism infrastructure is dilapidated and ugly. Staff is poorly trained and officious, travel is uncomfortable, airport procedures are archaic and confusing and food

⁴⁴ See BSEP [1996].

standards are a lottery. With the notable exception of a few resorts in Bulgaria that have overcome these problems, there is little to attract most foreign tourists. The best short-term strategy for resorts is probably to compete for national tourists in the hope that they will spend money that might otherwise have travelled abroad. Those that do travel abroad will probably expect a higher standard back home. For the environment, the short-term scenario is not encouraging as it leaves little prospect of income for tackling such problems as sewage control or landscape protection. Currently, however, the warm summer waters of the Black Sea are its biggest tourist asset and long-term economic prosperity in the tourism sector is unlikely unless that asset is protected.

Many of the problems of the Black Sea can be ascribed by economists to 'free riding' or to a lack of 'internalisation' of environmental externalities.⁴⁵ The most significant 'free' use of the Black Sea and its tributaries is for the disposal of waste from human activities. Some of the pollution problems of the Black Sea result from a lack of investment in adequate treatment of effluents. Others such as the diffuse discharge of nitrogen and phosphorus compounds, are the result of more complex issues related to agricultural practices and poor pricing of fertilisers in a heavily subsidised and distorted national and international market.

The Black Sea Environmental Programme placed an initial emphasis on tackling point sources of pollution by trying to stimulate the necessary investments. At the early stages of the programme, shortly after approval of GEF funding in 1993, the World Bank took charge of developing a Priority Investment Portfolio that consisted of one project of undisputed urgency from an environmental perspective per country. Of these projects, only those in Georgia, Romania and Bulgaria were fully implemented and the remaining projects are still at various stages of approval, though pre-investment studies have been finalised. The reasons are many but one of the main lessons learned is that investments with an environmental benefit take a very long time to negotiate and the acceptance by governments of a portfolio is only one of the earliest steps.

The case of the landfill for municipal waste in Trabzon is a useful example to illustrate the practical constraints. The city of Trabzon in Turkey is squeezed between the mountainous hinterland and the Black Sea. Solid waste disposal has been a problem for many years and garbage collected from homes was simply placed on a conveyor belt and

⁴⁵ An *externality* occurs when an activity by one agent causes a loss of welfare to the other agent that is not compensated.

discharged into the sea. Turkish legislation was passed to prohibit this practice but did not offer practical alternatives; so the practice continued. As part of the Urgent Investment Portfolio, solutions to the problem were investigated. The only suitable landfill sites were behind the hills surrounding the city but transport costs of garbage to the new sites were quite high. The ability (and willingness to pay) these costs was tested through economic studies and public hearings. The reluctant change from relatively free disposal to the environmentally acceptable (and legal) option clearly required consensus-building and substantial capital costs. The local authorities eventually agreed to the proposals, but the national government was unwilling to include the project on the National Lending Portfolio. The reason for this appears to be a combination of competing demands for investment (with more immediate tangible benefits) and the political differences between the central and regional governments. The exercise, however, has served to convince local authorities to seek alternative funding sources.

This example demonstrates some of the practical constraints. Banks are not charitable foundations and are obliged to demonstrate the willingness of clients to borrow as well as their ability to repay the costs of loans. At the same time, the technical feasibility of projects can be evaluated from several perspectives, only one of which is its environmental benefit and relative cost-effectiveness.

The World Bank requires sovereign guarantees from finance ministries and these ministries may often have very different priorities than ministries of environment of municipalities. Central government treasuries have many customers to satisfy and are limited in the debt they can accumulate. This is where other IFIs (International Financing Institutions) with different conditionalities, or bilateral donors may be willing to become involved; sometimes acting together in 'packaged' loans. Such an approach was used to secure a package of some \$40 million for a new wastewater treatment plant for Constanta, Romania. The European Bank for Reconstruction and Development (EBRD), which does not require state guarantees but has its own exacting criteria, provided the main loan. The government of Denmark however decided to support a broader financing programme for wastewater treatment plants in smaller towns along the coast. As a result, Romania will largely solve its coastal sewage pollution problem. The concept of packaged loans is becoming increasingly popular, partly due to the PPC (Project Preparation Committee), a multi-donor group coordinated from the EBRD. The packages often include blends of commercial loans and

grants (for example for improving the enforcement of regulations), making the loans more attractive to the borrower.

In the past, IFIs have tended to favour 'end-of-pipe' projects that are perceived to have a lower risk. Wastewater treatment plants offer relatively rapid 'fixes' of problems but may not be the most cost-effective or holistic solution to many environmental problems. The Black Sea region is littered with defunct Soviet-era wastewater treatment plants. They ceased to operate because of inappropriate technology, poor maintenance or a lack of financial instruments (water and waste tariffs, licensing fees, etc.) to pay the cost of operation. Through hidden subsidies, treatment plants may have actually encouraged wasteful production processes. By supporting technological quick fixes, the IFIs could be perceived as encouraging a 'business as usual' philosophy to environmental protection. The overcapacity of Black Sea fishing fleets and its social, environmental and economic consequences provide another sad example of ill-conceived sectoral investment policies seeking quick returns.

Fortunately, the approach used in the 'World Bank Strategic Partnership' discussed earlier reflects a more sensitive approach towards Black Sea environmental protection. By supporting investments in such things as wetland protection initiatives and agricultural reform packages, it is possible to tackle the problem of eutrophication closer to its root causes and to achieve multiple benefits. There is undeniably a place for wastewater treatment plants but these can sometimes be financed through commercial loans from the private sector. Unfortunately, it is still quite difficult to attract small-scale donor support for relatively small sums of \$500,000-\$1 million needed to restore and upgrade many wastewater treatment plants that have not functioned for some years owing to the need for a major overhaul or missing pumps.

In most Black Sea countries there are major problems to finance measures to protect the environment, particularly the operation and maintenance cost of municipal utilities, such as waste collection and disposal. In some cases, local economies are so depressed that the users cannot afford to pay the full costs of utilities. Inspectorates of pollution may not be adequately empowered to enforce revenue-gathering charges and collect fines from industry, despite the importance given to the 'polluter-pays' principle in the Black Sea Strategic Action Plan. It is necessary to regard environmental protection as an indispensable part of a wider process of economic reform. As a separate agenda item, it will inevitably find its way to the bottom of the list.

5. European Integration and the Black Sea Environment

5.1 Prerogatives for change

The prospect of integration of at least three Black Sea countries as members of the European Union represents a huge geopolitical change in the Black Sea region. This change will have profound consequences for the Black Sea environment and the measures developed to protect it.

Though clearly one of Europe's major regional seas, the Black Sea is ignored in existing European Community Directives. The Water Framework Directive⁴⁶ (WFD), flagship of the Community water policy, does not even mention the Black Sea nor classify it amongst its ecoregions. Though this reflects the status quo (i.e. that no coastal states are members of the Community), it overlooks the fact that two member states (Germany and Austria) occupy a significant area of the Black Sea basin (the entirety of Austria drains into the Black Sea). The WFD adopts a catchment area approach and this implies that the Community already shares some responsibility for protecting the Black Sea. To quote article 35 of the Directive:

Within a river basin where use of water may have transboundary effects, the requirements for the achievement of the environmental objectives established under this Directive, and in particular all programmes of measures, should be co-ordinated for the whole of the river basin district. For river basins extending beyond the boundaries of the Community, Member States should endeavour to ensure the appropriate co-ordination with the relevant non-member States.

Certainly, the Commission has been very active in its support of the International Commission for the Protection of the River Danube and has consistently provided technical assistance to the Black Sea Environmental Programme through TACIS. Until very recently, however, it has been careful to avoid any statement that may be construed as a legal obligation to protect the Black Sea ecosystem.

With the future accession of Bulgaria, Romania and Turkey, this situation is changing radically. The European Commission, already accepted as an observer in the Black Sea Commission, will inevitably become a signatory. It will have direct influence on the policy-making process in the region. Experience from the neighbouring Mediterranean Action Plan

⁴⁶ European Commission [2000a].

(the body responsible for the Barcelona Convention for the Mediterranean) suggests that this influence can be both positive and negative. The positive side is that it brings the considerable experience of all member states to the table, new opportunities for financing and the legislative and policy framework of the Commission's Directives. The negative side is the reticence of Commission representatives to sanction any new initiatives that they feel may contradict Community policy. The Commission, for example, has yet to sign the new Protocols of the Barcelona Convention described earlier. Reference to them is omitted in the WFD.

5.2 Case studies of EC legal and policy instruments

A brief consideration of three key items of Community legislation will illustrate the potential effects of the accession process:

The Water Framework Directive. This key directive serves as a new framework for the implementation of a number of EC directives of direct relevance to the Black Sea. The framework is designed to give coherence to these directives and also to provide direct linkages to regional and sub-regional conventions and other agreements. It adopts an integrated catchment area management approach, setting geographical boundaries at watersheds defined as 'river basin districts' rather than following political borders. It moves away from previous notions of harmonised water quality objectives covering the entire Community, to a more pragmatic and scientifically sound approach.

The WFD expects member states to complete their plans for compliance by 2003. For those countries seeking accession, Bulgaria and Romania have already been modifying their environmental laws to comply with some of the directives covered by the WFD. Turkey is now following suit. Interestingly, Ukraine, on its own account has decided to follow the provisions of the WFD when reforming its own laws and regulations. For the Black Sea, there are some key elements in the overall strategy that, though difficult to implement, will make a huge contribution to solving environmental issues.

The reorganisation of water management into river basin districts (and receiving waters) will require root and branch reforms of the present institutional structure for compliance. It will also require new cooperative arrangements and the strengthening of existing ones.

The requirement to implement the Community Nitrates⁴⁷ and Phosphorus Directives should lead to reduced nutrient loads and hence facilitate the countries to attain the targets for nutrient control negotiated between the Danube and Black Sea Commissions. Having said this, it should be pointed out that in practice most member states have failed to comply with the directive, a matter of great concern within the Commission. Implementation of the directive should start with the designation of the Black Sea as a vulnerable receiving water. This will trigger a cascade of obligations, both to member states and those in the process of accession throughout the Black Sea catchment. Most of the obligations are concerned with agricultural reforms of the type envisaged in the new phase of GEF intervention.

The requirement to apply the new Community Bathing Water Directive⁴⁸ will change the currently ambiguous way of informing (or emphatically not informing) the public about conditions of Black Sea bathing waters and beaches. This will undoubtedly change the agenda of many coastal municipalities that hope to maintain and develop a tourist industry.

The implementation of the WFD will require a huge effort by the four countries that intend to follow its use as the basis of national legislation. The reform of legislation is relatively easy compared with the task of implementation and compliance, and a major sustained programme of assistance is needed to build the necessary capacity. Community support through the PHARE programme and subsequently the accession programme has focused on country-by-country support, often to the exclusion of cross-border assistance. Though a logical prioritisation, the approach taken strictly follows political boundaries and since 1996 has not supported the participation of accession countries in their implementation of the Bucharest Convention.

The above situation begs the question of what will happen to those countries (Russia and Georgia) that are developing their legislation along different lines to those of the WFD. In the case of Russia, the river basin approach has already been followed in projects such as the Lower Don, supported through a World Bank loan. It is true however that the old Soviet system of water quality standards is completely incompatible with that used in the West. There are moves to change this system but the recent ambiguous situation of Russian regulatory institutions has left much uncertainty on the way the process will develop. The situation of

⁴⁷ European Commission [1991].

⁴⁸ European Commission [2000b].

Georgia is different in that the main constraint is the virtual absence of national funding for the environmental sector and legislation is somewhere in between the old Soviet system and a more Western approach. In the medium term, the situation of Russia and Georgia should not hamper the successful implementation of the WFD in the Black Sea. The main rivers draining these countries to the Black Sea are entirely national and contribute a relatively minor share of pollutants. In the short term, the Bucharest Convention can be implemented quite successfully with the two different regulatory regimes; the difference between success and failure will be much more a matter of compliance than of the regulations themselves. To illustrate this point, it is worth recalling that there has been no comprehensive monitoring exercise in the Black Sea since the break-up of the Soviet Union in 1991.

The Habitats Directive. The 1992 EC Habitats and Birds Directive is the main element of legislation protecting biological diversity in the European Commission. It requires member states to propose areas for designation as Special Areas for Conservation (SACs, often termed Natura 2000 sites). Particular endangered species can also be granted a protected status. The process of implementation of the directive is well behind schedule but several countries have already listed their 'candidate SACs'. In addition to many categories of terrestrial habitats, the legislation recognises two submerged habitat classes for the marine environment, reefs and sandbanks. These loosely defined habitats cover the majority of potential protected areas. The main problem with the designation of SACs is that it is a national process and there are no special provisions for transborder situations. It is for this reason that the OSPAR Commission (the regional seas commission for the northeastern Atlantic region) has developed its own system of 'Marine Protected Areas'. This is formalised in Annex V to the OSPAR Convention and has been the subject of much debate and consensus-building. Marine Protected Areas may allow certain human activity (including some kinds of fishing) and may be transborder in nature. Most of the OSPAR countries are EU member states and are therefore subject to both OSPAR and Natura 2000 regulations. For the two non-member countries, Norway and Iceland, only national and OSPAR regulations apply. This is a situation that parallels the Black Sea. All six Black Sea countries will be subject to the new Landscape and Biological Diversity Protocol, currently in its final stages of preparation, and this will provide a vehicle for countries to declare national and transborder protected areas.

Following accession (or perhaps during the accession process), Bulgaria, Romania and Turkey will have to propose their own SACs to the

Commission. By this time, the ongoing OSPAR debate⁴⁹ should have set a precedent that will be directly transferable to the Black Sea. In principle, the existence of these two conservation instruments should be complementary and offer the basis for proper protection of habitats, such as the remaining Phyllophora beds in Ukraine or the bivalve reefs off the coast of Bulgaria.

The current situation of protected areas in the region is very poor and legislation is incompatible and often ineffective. The strictest protection is afforded by the Soviet concept of a *Zapovednik* or fully protected area. This rigorously excludes all human economic activity but is increasingly difficult to apply in the face of demand for access from the local population and, more to the point, financial interests from the emergent private sector. A recent case in the author's experience was the Ropotamo Nature Reserve in Bulgaria, a small and beautiful reserve on the Black Sea coast. The reserve includes a fully protected area surrounded by 'buffer zones' where human development is strictly regulated. The Ropotamo buffer zone includes the highest area of dunes in the Balkan peninsula, a habitat for at least seven species of plants cited in the Black Sea Red Data book. As the result of a 'legal loophole' of a previous government, one part of the buffer zone was sold to a property developer and the other side conceded to a hunting association. The entire reserve has only two wardens and the hunters place food close to the edge of the reserve in order to attract animals and shoot them. Currently, the mayor of the administrative district, together with a number of conservationists, is fighting in the high court to restore the buffer zones.

The above case would have been entirely different had the reserve been protected under the Habitats Directive. The directive would have given much greater power to sustain the reserve as part of a wider network. The current problem is that protected areas are being lost very quickly and there will be very few sites that can be declared as SACs by the time accession is completed. This, together with the fact that only half the countries are candidate members, is a good reason for the Black Sea to adopt its own Landscape and Biological Diversity Protocol.

In the former Soviet countries, the situation is similar. The system of protected areas is under great pressure from developers. Recently, for example, a unique stand of ancient forest was clear-cut for the Blue Stream gas pipeline that is being laid from Russia, under the Black Sea to

⁴⁹ For more information on this debate, see OSPAR (Convention for the Protection of the Marine Environment of the North-East Atlantic) [2001].

Turkey. Alternative routes avoiding the forest were dismissed in order to cut costs. Measures to protect near-shore sea grass beds are being rendered ineffective by unregulated trawling. Little by little, opportunities to protect fragile habitats are being lost, mostly as a result of ambiguous regulations, weak compliance and short-term thinking. The reality is that the Soviet concept of *Zapovednik* may also be inappropriate to areas with a high population density and competing demand for space. The alternative, integration of the human population in a participatory approach to nature protection, requires careful planning, understanding of cultural values and rigorous compliance. Accession of western Black Sea countries to the European Union will do little to foster this approach in the east. However, participation of EC technical specialists, co-financing and support of the new Black Sea Protocol would help to establish a stronger network that may make a genuine commitment to the protection and restoration of Black Sea habitats.

The Common Fisheries Policy (CFP). The CFP is an example of a policy instrument that has failed to achieve its objective to regulate European fishing in a sustainable manner. The recent Green Paper⁵⁰ on the CFP provides a frank description of the weaknesses of the current policy, particularly that the scientific advice on total allowable catches given by the Commission was not respected in the negotiated settlement with governments. This implies that governments were knowingly permitting catches beyond the safe biological limits for some species. The industry is riddled with hidden subsidies resulting in overcapacity – too many boats chasing too few fish. The paper also recognises the ecological damage caused by overfishing.

As a result of this policy failure, the Commission has initiated a process of urgent reform of the CFP. It states that ‘apart from these internal systemic weaknesses, there are also challenges that make reform necessary: the forthcoming enlargement of the European Union’.

The shape of the new CFP will not be determined until the end of 2002. Negotiations with stakeholders are difficult and often acrimonious. It is clear however that it will follow the FAO Code of Conduct for Fisheries, seek to reduce overcapacity and hidden subsidies and have a more ecological dimension. In the case of transborder water bodies including members and non-members, it will have to work closely with regional fisheries conventions.

⁵⁰ European Commission [2001a].

In the case of the Black Sea, there is no fisheries agreement covering all countries. The Black Sea Economic Cooperation (BSEC) recently established a fisheries sub-group to try to complete the negotiations on a new Convention. The sub-group, composed of senior representatives of Ministries of Agriculture, together with BSEC officials, decided that BSEC was not a suitable host organisation for any permanent inter-state fisheries body. This was because BSEC has a wider geographical mandate than the coastal Black Sea countries. For this reason, BSEC asked the Secretariat for the Bucharest Convention to take up the fisheries challenge. Potentially, this offers the advantage of a fisheries commission cohabiting with an environmental commission, but without additional resources it would stretch the existing secretariat beyond reasonable limits. At its 8th meeting (February 2002), the Black Sea Commission appears to have taken up the challenge and it will be interesting to see how this aspect of its work develops in the near future. It is just possible that, by including a broad range of stakeholders, it can avoid the same pitfalls as the original CFP. However, there is currently no scientific basis for setting quotas in the Black Sea – a full stock assessment has never been conducted.

There is also a debate on the ecological aspects of the potential new Black Sea Fisheries Convention. There is a need to make a clear distinction between measures that the industry should take to sustain itself and limit its environmental impact and those that should be taken to protect key habitats and species from all human pressures including fishing. The Biological and Landscape Diversity Protocol of the Bucharest Convention should be complementary to the new Fisheries Convention and an early dialogue should be established in order to avoid overlaps of responsibilities between the two instruments. In order to avoid regulatory failures, the new Fisheries Convention should contemplate a wide range of instruments including fisheries recovery zones ('no-take zones').

How will this development relate to the new CFP? The CFP will only affect those countries that have entered the accession process. In the case of Romania and Bulgaria, their share of the Black Sea fisheries is currently quite small. The real impact of the new CFP would not be felt until Turkey enters the group since it currently accounts for 90% of the Black Sea fisheries (in terms of monetary value) and has a large excess of fleet capacity. The Black Sea countries would be well advised to request observer status for the EC during the Fisheries Convention negotiations, as this will avoid future incompatibility of policy between the CFP and the Regional Convention. Similarly, Black Sea countries should be

formally invited to express their opinion on the EC Green Paper. Perhaps EC assistance should also be requested to support a full stock assessment in the Black Sea and to improve the understanding of the relationship between fish stocks and habitat.

A success story for MARPOL. With respect to the MARPOL Convention, whose special provisions remain unimplemented in the region 25 years after ratification, the pre-accession of Bulgaria and Romania has led to an unexpected recent development in the region. The new EC port waste Directive will impose even stricter controls than MARPOL. Harbour masters are concerned that the new provisions will increase some port charges and influence the trade to their ports. They have recently formed a Black Sea Ports Association, involving all six countries, and are calling for the new regulations to be applied in a uniform manner and for grants and credits to be given in order to equip their ports to appropriate standards. This is a good example of the positive regional impact that can result from the accession process.

5.3 Longer-term perspectives

The vision of a new Europe implies vast changes in the nature of production and the distribution of goods and services. It is difficult to foresee the eventual impact of an unreformed Common Agricultural Policy for example. The fertile plains of the lower Danube could become Europe's breadbasket. In such circumstances, there would be an enormous new pressure on the Black Sea from the kind of high-technology agriculture already employed in other parts of the Community. In devising new environmental policies for the region, it is important to consider these scenarios and take appropriate measures. Until now, most policy work has examined scenarios based on 'business as usual' or 'application of the EC Directives to existing production'. The real scenario may be 'entirely new business'! Such a tantalising economic perspective could give new opportunities for sustainable development if it is planned in a holistic manner. Entirely opportunistic development, however, could completely wipe out any advances achieved in environmental protection through the processes described in the present paper.

5.4 EC involvement in the Black Sea Commission

Until recently, the EC has been cautious not to become too heavily involved in the formal aspects of implementation of the Bucharest Convention. Its support was initially channelled through the PHARE multi-country programme for Romania and Bulgaria and the TACIS

programme for the countries of the former Soviet Union. It has not provided funding for work in Turkey. Total funding of the order of €12 million has been provided through these mechanisms for a number of projects to support the development and implementation of the Black Sea Strategic Action Plan. In addition, a smaller sum was provided by the Commission (DG-XI now DG-Environment) for the work of the BSEP Programme Coordination Unit. This funding was critically important for the survival of the programme at a time when other sources had become exhausted.

The Commission's support was much more effective for the TACIS countries than the PHARE countries. The Accession programme replaced PHARE and the multi-country programme was closed, effectively closing the door from 1995 to all EC support to Bulgaria and Romania to work with the other Black Sea countries. It is also unfortunate that the Commission had no mechanism to support the participation of Turkey, fuelling this country's sense of isolation. This difficulty to fund multilateral cross-border collaborative mechanisms is a serious flaw in the EC foreign aid programme and represents a serious lack of strategic thinking on longer-term cooperation in the expanded Community.

The Black Sea Commission itself has encouraged the European Commission to take a more active role in implementing the Bucharest Convention. From its signature in 1992, the Black Sea countries opened the Convention for signature by its neighbours, particularly those countries within the Danube. Signature by non-coastal countries was foreseen as an act of solidarity and bore neither financial obligations nor voting rights. No other country opted to enter into such arrangement and there is no evidence that the Black Sea countries promoted signature by non-coastal states. At the 7th Meeting of the Black Sea Commission (29-31 May 2001), a resolution was passed containing rules to establish permanent observer status and the EC was accepted as the first permanent observer.

An important recent development that partially responds to growing pressure for greater EU involvement has been the publication of the 'Communication from the Commission on Environmental Cooperation in the Danube-Black Sea Region.'⁵¹ This document provides a technical overview of the issues facing the basin and the evolving instruments for addressing them. It concludes that:

⁵¹ European Commission [2001b].

The environmental degradation of the Danube and Black Sea region requires urgent attention and can only be tackled through a joint effort of environmental rehabilitation, conducted at regional level. This much-required effort will become a prime tool to promote and then secure the sustainable development of the region.

Amongst the specific actions proposed by this welcome document are 1) an operational framework for cooperation in the entire region; 2) improved integration of Danube and Black Sea priorities into the EU cooperation policy, including sectoral integration and 3) more efficient financial assistance.

Regarding the first action (the operational framework), the vision of the EC is to take a 'more pro-active role' and become the 'driving force' of 'co-ordinated assistance'. Though broadly welcomed, there is concern that too aggressive a role from the EC might block important advances in cross-border cooperation. This has already occurred in the Mediterranean where the EC is a Contracting Party to the Barcelona Convention and has been unable to sign, ratify or promote measures that do not exactly correspond to its own Directives or future Directives.⁵² This can cause resentment in non-member countries. For the Black Sea Basin, the process of seeking a common platform has already begun with the formation of a Danube-Black Sea Task Force (DANBLAS), which was one of the outcomes of the EC-sponsored Ministerial Meeting held on 26 November 2001. DANBLAS met for the first time on 1 March 2002. Unfortunately, the mandate of the Task Force is restricted to the application of the WFD, thus excluding much of the broad-based intersectoral approach fostered in the Black Sea Strategic Action Plan. Its title also suggests that the other key transboundary basins (Dnieper, Dniester, Don) are excluded even though the riparian countries themselves are part of the Task Force. This raises the question of whether the objective of the Commission is to facilitate integrated basin-wide management or merely to ease the implementation of the WFD for accession countries. To its credit, however, the process may help to

⁵² One of the main problems is that in matters regulated by existing EC Directives, the EC Representative is entitled to vote on behalf of all the member states in the region. For non-member states this gives the impression of powerlessness against a 'cartel' from the north. If the EC were to become a Contracting Party to the Bucharest Convention following accession of, say, Bulgaria, Romania and Turkey, there would be a danger of an East-West division between an EC 'bloc' and a NIS (newly industrialised state) 'bloc'.

achieve a consensus on solving the problem of eutrophication, a problem that can only be solved by concerted action within the enlarged EU.

Hopefully, the European Commission will take this opportunity to become involved in a mechanism that will inevitably help them to reduce the image of creating a fortress Europe with a border that divides the Black Sea from East to West. The Commission may now regard accession of any of the Black Sea countries as an appropriate moment to sign the Bucharest Convention and its Protocols. They should already develop a strategy for incorporation of Black Sea issues in key policies such as the revised Common Fisheries Policy and the Water Framework Directive and not simply employ the new framework as a mechanism for 'shoehorning' existing policies into the new geopolitical reality.

The second and third actions (enhancing technical and financial assistance) should improve the standing of the Black Sea Basin within a broad range of EU technical assistance instruments and programmes (e.g. LIFE, PHARE, TACIS, and ISPA). It should also serve to 'mainstream' Black Sea issues in new co-operative agreements (such as those aimed at managing tributaries within the Basin). Most importantly, in the next review of the Common Agricultural Policy, the Commission will endeavour to include the prerogative to control Black Sea eutrophication by reducing nutrient discharges from agriculture.

6. Conclusion: Towards a Common Purpose

In many senses, the Black Sea is Europe's forgotten sea, swept aside from collective and individual consciences because there is always someone else to blame for its predicament. Situated at the end of one-third of Europe's drains, its health, or rather sickness, is a symptom of unsustainable development and social and political division.

A large number amongst the 16 million people dwelling on the Black Sea's shores care about this situation, although only a few feel empowered to take action. This situation is not hopeless however and a number of actions, mostly but not all supported by governments, have made a real difference to the prospects for the protection and recovery of this valuable system.

The present paper has examined the hypothesis that the gradual accession of at least half of the six Black Sea countries to the European Community will facilitate this sea's recovery. It has demonstrated that the accession process will accelerate the reform of regulatory instruments and encourage greater investment. If the European Commission takes a more

proactive stance, it will also help the Black Sea Commission to fulfil its responsibilities.

Having said this, there is also cause for concern. The EC has failed to regulate its own fishing industry in a sustainable manner. It has not managed to fully implement many of the Directives that are part of the accession process. Extension of the Common Agricultural Policy to the lower Danube countries may also introduce new stresses to the Black Sea ecosystem. The Commission has paid very little attention to improving public awareness of environmental issues and their solutions. Furthermore, an overly aggressive presence of the EC in regional bodies such as the Black Sea (environmental) Commission could create tensions between the new member states and non-member states that will sit around the table as equals.

For the Black Sea, it is timely for the European Commission to fully embrace the challenge ahead and to formalise a commitment to protecting this unique European water body. This will be an investment towards a sustainable future for the Community. The absence of any mention of the Black Sea in key instruments such as the Water Framework Directive or in policy papers on the reform of the Common Fisheries Policy is particularly short-sighted and regrettable. The important initiatives announced in the recent Commission Communication 615 on environmental cooperation in the Black Sea Basin [European Commission, 2001b] should redress the situation regarding the WFD but does not yet tackle the fisheries and biodiversity issues in the Black Sea itself. It is seen as an awakening of the EU consciousness that we hopefully lead to a new spirit of cooperation.

For the Contracting Parties to the Bucharest Convention, the time is ripe to re-examine this rather archaic instrument. Though uniquely important, the Convention follows sectoral thinking of the early 1970s and should be reformed to pursue a more holistic approach: 'joined-up thinking for joined-up issues'. For those who worked hard to foster and implement the existing Convention, there is a temptation to regard it as sacrosanct. This attitude would eventually guarantee its death warrant.

It is important to place the development of policy and legislation in a pragmatic perspective and to take care that all the energy of the very small number of regional technical experts is not spent on procedural arrangements and rhetoric. For every expert engaged in policy and law, at least another ten need to focus their energies on compliance, monitoring and public participation. New capacity has to be built, but a properly funded environmental authority with attractive professional salaries and

infrastructure must be included in the economies of all six Black Sea countries if the benefits of environmental protection are to be realised. Achievement of such a change will be one of the most difficult challenges of the coming decades.

The author remains optimistic about the future of the Black Sea. The flywheel of change is moving. It is our duty to oil it and help it on its way.

References

- Black Sea Commission [2001], *Implementation of the Strategic Action Plan for the Rehabilitation and Protection of the Black Sea: 1996-2001*, report of the BSC 7.5 to the 7th Session of the Commission.
- Black Sea Environmental Programme (BSEP) [1999], *Black Sea NGO Directory, 3rd Edition*, Black Sea Environment Programme, Istanbul.
- Black Sea Environmental Programme (BSEP) [1996a], *Black Sea Sustainable Tourism Initiative (Background report)*, Istanbul.
- Black Sea Environmental Programme (BSEP) [1996b], *Strategic Action Plan for the Rehabilitation and Protection of the Black Sea*, Istanbul, 31 October.
- Black Sea Foundation [1991], 'Proceedings of the Black Sea Symposium', Istanbul, 16-18 September.
- Brubaker, Douglas [1993], *Marine Pollution and International Law: Principles and Practice*, Belhaven Press, London and Florida.
- Environmental Programme for the Danube River Basin (EPDRB) [1995], *Strategic Action Plan for the Danube River Basin, 1995-2005*, Environmental Programme for the Danube River Basin, Vienna.
- European Commission [2001a], Green Paper on the Future of the Common Fisheries Policy, COM(2001) 135 final.
- European Commission [2001b], Communication from the Commission on Environmental Cooperation in the Danube-Black Sea Region, COM(2001) 615 final, Commission of the European Communities, 30 October, Brussels.
- European Commission [2000a], Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy, *Official Journal of the European Communities* L 327.
- European Commission [2000], Communication from the Commission to the European Parliament and the Council on Developing a New Bathing Water Policy, COM(2000) 860 final.
- European Commission [1991], Council Directive concerning the protection of waters against pollution caused by nitrates from agricultural sources (91/676/EEC).
- GESAMP (IMO/FAO/UNESCO-IOC/WMO/WHO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine

- Environmental Protection) [1997], *Opportunistic settlers and the problem of the ctenophore Mnemiopsis leiydi invasion in the Black Sea*, Rep.Stud.GESAMP, (58).
- Hey, Ellen and David Freestone (eds.) [1995], *The Precautionary Principle and International Law*, Kluwer Law International, The Hague, London, Boston.
- Hey, Ellen and L.D. Mee, [1993], 'The Ministerial Declaration: An Important Step', 23 *Environmental Policy and Law* 2.
- Hobson, S. and L.D. Mee (eds) [1998], *The Black Sea in Crisis. Religion, Science and the Environment*, World Scientific, London and New York.
- International Commission for the Protection of the Black Sea/International Commission for the Protection of the Danube River (ICPBS/ICPDR) [1999], *Eutrophication in the Black Sea: Causes and effects*, Summary report by the Joint ad-hoc Technical Working Group established in January 1988 between ICPBS and the ICPDR, based on the studies by Black Sea scientists and the discussion of the 'Group', UNDP Danube Programme Coordination Unit, Vienna.
- Ivanov, L. and R.J.H. Beverton [1985], *The fisheries resources of the Mediterranean, Part two: Black Sea*. Etud.Rev.CGPM/Stud.Rev.GFCM.
- Jackson, J.B.C. et al. [2001], 'Historical fishing and the recent collapse of coastal ecosystems', *Science* 293.
- Kos'yan, R.D. and O.T. Magoon (eds) [1993], 'Coastlines of the Black Sea', *Proceedings of the 8th Symposium on Coastal and Ocean Management, Coastal Zone '93*, Coastlines of the World, American Society of Civil Engineers.
- MacLennan, D.N., T. Yasuda and L.D. Mee [1997], *Analysis of the Black Sea Fishery Fleet and Landings*, Black Sea Environmental Programme, Istanbul.
- Mee, L.D. (ed.) [1997], *Black Sea Transboundary Diagnostic Analysis*, Black Sea Environmental Programme (BSEP), United Nations Publications, New York, August.
- Mee, L.D. [2001], 'Eutrophication in the Black Sea and a Basin-Wide Approach to Its Control,' in B. von Bodungen and R.K. Turner

- (eds), *Science and Integrated Coastal Zone Management*, Dahlem University Press.
- Mee, L.D. [2000], *How to save the Black Sea – Your guide to the Black Sea Strategic Action Plan*, BSEP, Istanbul (available in English, Russian, Ukrainian, Georgian and Romanian).
- Mee, L.D. [1998], *International cooperation in the Regional Seas*, International Centre for Water Studies, Amersfoort.
- Mee, L.D. [1992], 'The Black Sea in crisis: The need for concerted international action', *Ambio* 21(4).
- OSPAR [2001], Convention for the Protection of the Marine Environment of the North-East Atlantic; 3^d Workshop on Marine Protected Areas in the OSPAR area, Fiskebäckskil, 11-14 June, summary record, MPA 01/8/1.
- Reynolds, A.E. [1987], 'The Varna Convention: A regional response to fisheries conservation and management', *Int. J. Est. Coast. Pol. Law*.
- TACIS [2000], *Summary report of the Prut Water Management Programme*, Vol. 1, European Community, Brussels.
- Topping, G., H. Sarikaya and L.D. Mee [1998], 'Sources of pollution to the Black Sea', in L.D. Mee and G. Topping (eds), *Black Sea Pollution Assessment*. Vol. 10, Black Sea Environmental Series, UN Publications, New York.
- United Nations Environmental Programme (UNEP) [1996], *Triennial Report on the Implementation of the Odessa Declaration*, UNEP, Geneva, September.
- Wilson, A.M. and M. Moser [1994], *Conservation of Black Sea wetlands: A review and preliminary action plan*, IWRB publication No. 33.
- Zaitsev, Yu P. [1992a], *Recent changes in the trophic structure of the Black Sea*, *Fisheries Oceanographer*, 1(2).
- Zaitsev, Yu P. [1992b], *Ecological state of the Black Sea shelf zone, Ukrainian coast: A review*, *Gidrobiolog. Zhurnal*, 28(4) (in Russian).

LIST OF ABBREVIATIONS

AIOC	Azerbaijan International Oil Company
AMBO	Albanian, Macedonian, Bulgarian Oil Corporation
API	American Petroleum Institute
ASEAN	Association of South East Asian Nations
bcm	Billion cubic metres (of natural gas)
bcmy	bcm per year
BEAC	Barents Euro-Arctic Council
bl	barrels
BlackSeaFor	Black Sea Naval Cooperation Task Group
bnbls	billion barrels
BP	British Petroleum
BSCA	Association of Black Sea Capitals
BSEC	(Organisation for) Black Sea Economic Cooperation
BSEC BC	BSEC Business Council
BSEEP	Black Sea Environment Education Project
BSEP	Black Sea Environmental Programme
BS-SAP	Strategic Action Plan for the Rehabilitation and Protection of the Black Sea
BSTDB	Black Sea Trade and Development Bank
BTC	Baku-Tbilisi-Ceyhan (pipeline)
CARDS	Community Assistance for Association, Democratisation and Stabilisation
CASP	Cambridge Arctic Shelf Programme
CBSS	Council of Baltic Sea States
CEPS	Centre for European Policy Studies
CERA	Cambridge Energy Research Associates
CFP	Common Fisheries Policy
CIA	Central Intelligence Agency

CIS	Commonwealth of Independent States
COMECON	Council for Mutual Economic Assistance
CPC	Caspian Pipeline Consortium
DANBLAS	Danube-Black Sea Task Force
DHKD	Turkish Society for the Protection of Nature
EAEC	EurAsian Economic Community
EBRD	European Bank for Reconstruction and Development
EC	European Community
ECOSOC	UN Economic and Social Council
EIB	European Investment Bank
EP	European Parliament
EPDRB	Environmental Programme for the Danube River Basin
EU	European Union
FAO	Food and Agricultural Organisation (of the UN)
FSU	Former Soviet Union
GEF	United Nation's Global Environment Facility
GESAMP	Group of Experts on the Scientific Aspects of Marine Environmental Protection
GIOC	State Oil Company of Georgia
GEF	Global Environmental facility
GUUAM	Georgia, Ukraine, Uzbekistan, Azerbaijan and Moldova
IBRD	International Bank for Reconstruction and Development (World Bank)
IBSC	International Black Sea Club
ICBSS	International Center for Black Sea Studies
ICPBS	International Commission for the Protection of the Black Sea
ICPDR	International Commission for the Protection of the Danube River
IFC	International Financial Corporation

IFI	International Financial Institution
IMF	International Monetary Fund
IMO	International Maritime Organisation
INOGATE	Interstate Oil and Gas Transport to Europe
INTAS	International Association for the promotion of cooperation with scientists from the New Independent States of the former Soviet Union
ISPA	Instrument for Structural Policies for Pre-Accession
LIFE	EC Financial Instrument for the Environment
LNG	Liquefied natural gas
LPG	Liquefied petroleum gas
MEDA	Mediterranean Assistance Programme
MLA	Multinational Lending Agency
mmbd	Million barrels
MoU	Memorandum of Understanding
mt	Million tonnes (of oil) per year
NATO	North Atlantic Treaty Organisation
NGO	Non-governmental organisation
NIOC	State Oil Company of Iran
OAS	Organisation of American States
OECD	Organisation for Economic Cooperation and Development
OPEC	Organisation of Petroleum Exporting Countries
OSCE	Organisation for Security and Cooperation in Europe
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic
PABSEC	Parliamentary Assembly of BSEC
PCA	Partnership and Cooperation Agreement
PERMIS	Permanent International Secretariat of BSEC
PETra	Pan-European Transport Area

PHARE	Poland/Hungary: Assistance for Restructuring Economies
PPC	Project Preparation Committee (multi-donor group coordinated from the EBRD)
PSA	Production Sharing Agreement
SAC	Special Areas for Conservation
SAPARD	Special Accession Programme for Agricultural and Rural Development
SECI	Southeast European Cooperative Initiative
SME	Small and medium-size enterprise
SPA	Supply and Purchase Agreement
TACIS	Technical Assistance for the Commonwealth of Independent States
TCGP	Trans-national gas pipeline (Central Asia-Caspian)
TDA	Transboundary Diagnostic Analysis
TRACECA	Transport Corridor Europe-Caucasus-Asia
ULCC	Ultra-Large Crude Carrier
UN	United Nations
UNCED	UN Conference on Environment and Development
UNCTAD	UN Conference on Trade and Development
UNEP	United Nations Environmental Programme
VLCC	Very Large Crude Carrier
VTS	Vessel Traffic Services
WFD	Water Framework Directive (of the EC)
WHO	World Health Organisation
WTO	World Trade Organisation

ABOUT THE CONTRIBUTORS

TERRY D. ADAMS

Senior Associate, Cambridge Energy Research Associates (CERA), and Director of the Caspian Energy Programme at the Centre for Energy Petroleum and Mineral Law and Policy, University of Dundee, Scotland. Dr Adams was the Founding President of the Azerbaijan International Oil Company (AIOC) from 1994 to 1998.

MICHAEL EMERSON

Senior Research Fellow, Centre for European Policy Studies (CEPS), Brussels, in charge of the CEPS Wider Europe programme. Mr Emerson was Head of Delegation of the Delegation of the European Community in Moscow, 1991-1996.

LAURENCE DAVID MEE

Professor of Marine and Coastal Policy at the University of Plymouth, UK. From 1993-1998 he was Coordinator of the Black Sea Environmental Programme, based in Istanbul, Turkey.

YANNIS PAPANIKOLAOU

Director-General of the International Center for Black Sea Studies (ICBSS). Dr Papanikolaou was Chief Economic Advisor to former Prime Minister of Greece Andreas Papandreou 1981-87, and has been a lecturer in economics at the London School of Economics (LSE) and Queen Mary's College (University of London).

MARIUS VAHL

Research Fellow, the Centre for European Policy Studies (CEPS), Brussels, where he works in the Wider Europe programme.

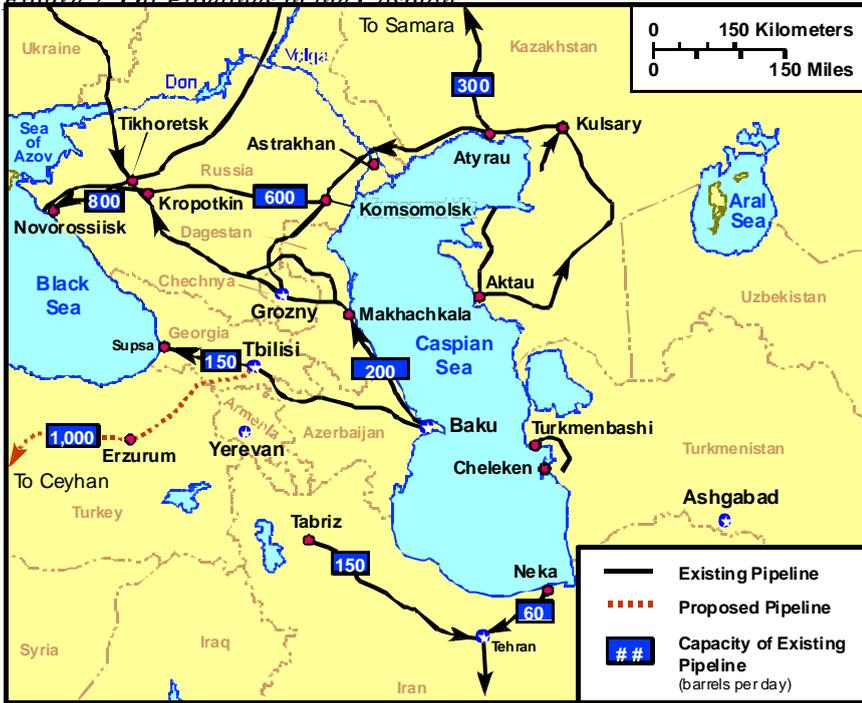
MAPS

Figure 1. Exploration in the Caspian



Source: Cambridge Energy Research Associates (CERA).

Figure 2. Oil Pipelines in the Caspian



Source: Cambridge Energy Research Associates (CERA).

Figure 3. Black Sea Oil Flows, 2000 (crude and products)



Notes: All figures in millions of tonnes annually. The figures for Romania and Bulgaria represent crude oil imports. Except for the volume of crude oil imported into the Black Sea, these imports are roughly the equivalent of Russian and Caspian crude; this drawing thus reduces total flow through the straits.

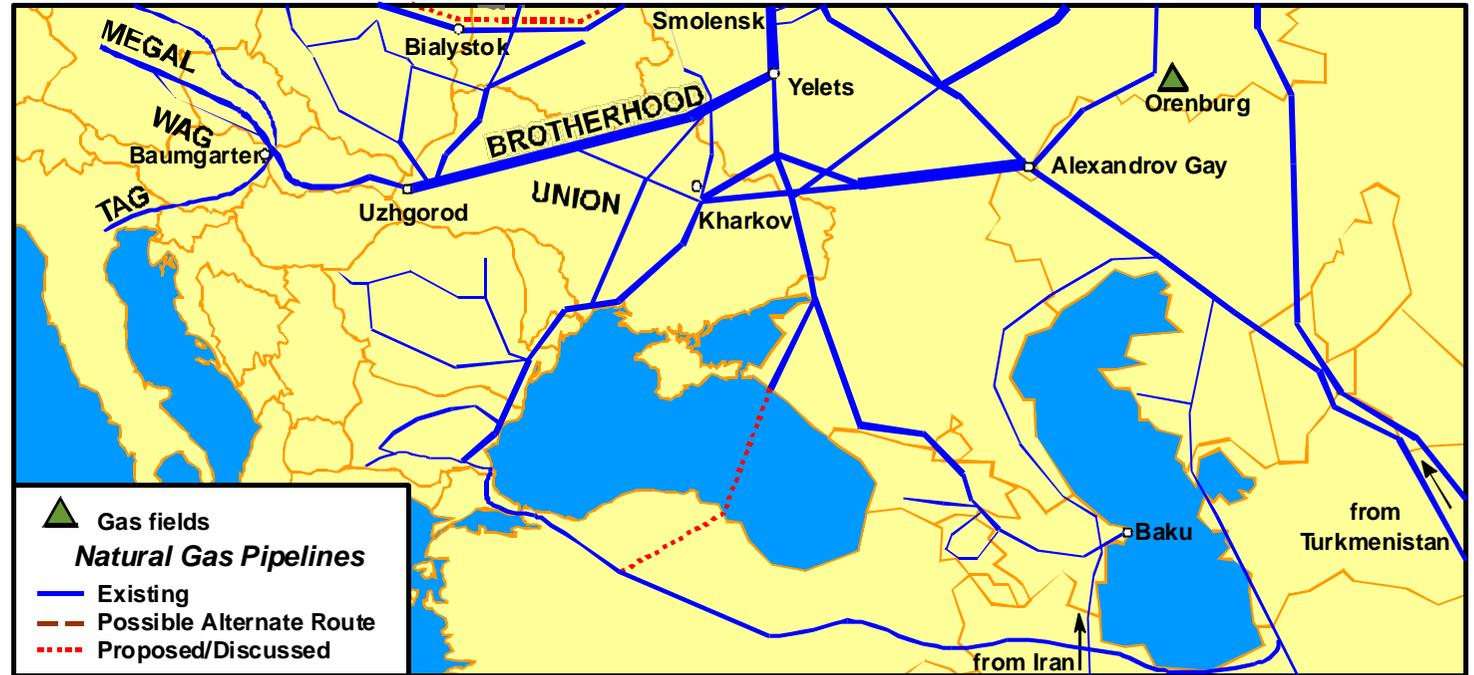
Source: Cambridge Energy Research Associates (CERA).

Figure 4. Bypassing the Bosphorus: Proposed options



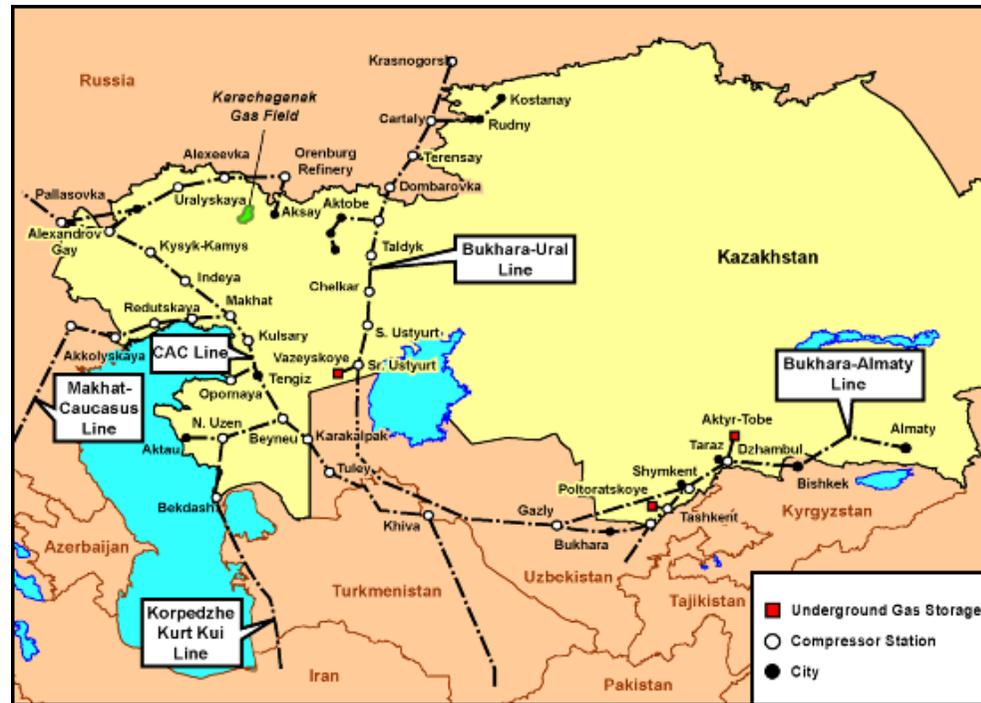
Source: Cambridge Energy Research Associates (CERA).

Figure 5. The Turkish market: Pivot for new gas geography?



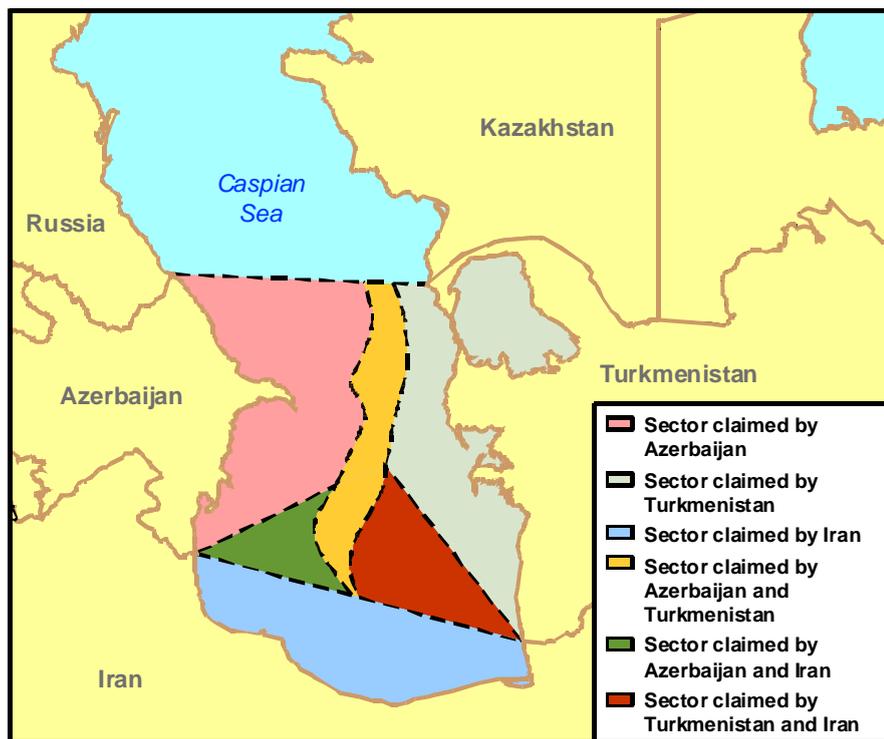
Source: Cambridge Energy Research Associates (CERA).

Figure 6. Central Asian gas pipelines



Source: Cambridge Energy Research Associates (CERA).

Figure 7. South Caspian disputed areas



Source: Cambridge Energy Research Associates (CERA).

Figure 1. The Black Sea basin

