

# Greening the Black Sea: Environment and Sustainable Development

Zefi Dimadama

*Panteion University Athens, Director General of ICBSS, Athens, Greece*

*Dimadama@ijep.com*

**Abstract** — Black Sea countries with an invaluable natural heritage are fragile to be threatened by numerous environmental challenges. The divergent, yet developing, economies of the region, the fragmented sectoral policies that are not compatible to environmental sustainability and the hierarchical government systems that lack of transparency and participation have concluded to the environmental degradation of the area. The need for new cooperative initiatives towards “greening” the Black Sea, through environmental and sustainable development policies, is emergent. This strategic policy implies the incorporation of the horizontal environmental perspective into all sectoral policies, with a view to achieve legal compliance, efficiency, legitimacy and regional cooperation.

**Keywords** — Black Sea area, sustainable development, environmental threats, greening sectoral policies, environmental integration, regional cooperation

## I. INTRODUCTION

### A. Black Sea environment: the state of the art

#### i. General features of natural environment

The Black Sea Region includes ten countries connecting two different continents: Europe and Asia. Only six countries have physical boundaries and direct access to the coast of the Black Sea (Russian Federation, Ukraine, Romania, Bulgaria, Turkey and Georgia), while the rest (Greece, Armenia, Azerbaijan and Moldova) are connected to it through historical, economic, environmental and social aspects.

The Black and the Azov Seas cover in total an area of 460.860 km<sup>2</sup>, constituting the ending point of some of the largest rivers of Europe (the Danube, the Dnieper, the Southern Bug, the Dniester and the Don)<sup>1</sup>.

The area is a crossroad of political, economic and societal cultures. In the present, it plays the role of an

economic, geo-political and trade hub, and it serves as a crucial energy trade corridor connecting Asia with Europe. On the other hand, the Black Sea region is characterised by extreme regional discrepancies and a number of problems and challenges such as migration, “frozen” conflicts, environmental degradation, and illegal trafficking.

Nevertheless, the Black Sea area constitutes a valuable natural asset of global importance. Its natural habitats, ecosystems and diversity of species of fauna and flora are particularly rich, but at the same time vulnerable to human interventions. Its natural ecosystems include rich forests (mainly in the West, South and East), steppes (in the North), high mountains (in the East, South and the Carpathians) and many wetlands, which provide shelter for numerous species of animals and plants. Apart from the maintenance of biodiversity, the area’s natural environment is crucial for the provision of goods for humans and their economic viability. Local populations are dependent on rivers for the supply of freshwater for consumption, industrial and agricultural uses. Forests provide a wide range of food, fuel and timber products, while fishery constitutes an inextricable part of the area’s economy and nutrition. Furthermore, the natural beauty of the Black Sea is a pole of attraction for tourists and therefore for new investments in the specific sector.

However, the environmental equilibrium of the Black Sea region is threatened by a series of challenges that have already started degrading the area’s features. The following section analyses the pressures on the natural environment and the direct or indirect impacts from human interventions on the area.

#### ii. Pressures and threats

The Black Sea has been a center of environmental concerns, due to its unique natural and economic value. Although this area did not follow the urbanisation and industrialisation patterns of other parts of Europe, which led to rapid environmental degradation, it still

<sup>1</sup> Heinrich Boll Stiftung, EU Regional Office, *Greening the Black Sea Synergy*, Brussels, June 2008, [http://assets.panda.org/downloads/black\\_sea\\_full\\_report.pdf](http://assets.panda.org/downloads/black_sea_full_report.pdf) (accessed September 29, 2010).

has to deal with severe environmental threats and future risks. These can be categorised into three basic types:

*a) Water resources and management*

The inflow of untreated sewage into the Black Sea constitutes a serious threat for local populations and their local economies. More than 170 million people live in the Black Sea basin, and the sewage of 17 countries flows directly into the sea coastal waters without any prior rectification<sup>2</sup>. This results to public health problems and substantial damage to ecosystems and the tourist industry.

The intensive agriculture of the past decades and the overuse of fertilizers and pesticides led to the over-fertilisation of the sea with nitrogen and phosphorus compounds<sup>3</sup>, mainly through rivers. This over-fertilisation, along with waste discharges from agricultural, domestic and industrial sources, is responsible for the phenomenon of “eutrophication”, which has turned the Black Sea into an oxygen-free and asphyxiated zone. It is estimated that the six neighboring countries to the coastline of the sea are accountable for the 70% of these substances flowing into the water, while the remaining 30% comes from the upper Danube<sup>4</sup>. Eutrophication is to be blamed for the vast alterations in the Black Sea ecosystems and the area’s balance disorder.

Another problem is the introduction of alien species, stemming from the ships that empty their ballast water into the Black Sea<sup>5</sup>. These species adapt quickly in their new environment, since they have no natural predators and they manage to displace or decrease the numbers of native populations.

Furthermore, over-fishing leads to the exhaustion of certain species and the drastic decline of catches, creating serious economic damage in the fishing industry. It is mainly driven from poverty (and the potential of quick profit) and the international increased demand for black caviar<sup>6</sup>. This drop in fish catches is also equally connected to the phenomenon of eutrophication and the sea pollution from untreated sewage and waste waters.

<sup>2</sup> Natia Bejanidze and Mariam Kekenadze, *The Black Sea Coast Sewage – Both an Ecological Problem and a Profit*, [http://www.inepo.com/english/uplFiles\\_resim/Compositetechologyproject.doc](http://www.inepo.com/english/uplFiles_resim/Compositetechologyproject.doc) (accessed October 4, 2010).

<sup>3</sup> Laurence D. Mee, *How to save the Black Sea, Your guide to the Black Sea Strategic Action Plan*, <http://www.undp.org/gef/new/blacksea.htm> (accessed October 4, 2010).

<sup>4</sup> Ibid.

<sup>5</sup> Ibid.

<sup>6</sup> *Greening Black Sea Synergy* (see footnote 1).

The last pollutant comes from the inadequate management of solid waste. This form of pollution originates either from the coastal cities, or from the ships sailing the sea. Either way, garbage ends up to the shores creating sources of pollution and degrading the aesthetics of the area (coastal zone, rural landscape, tourist developed areas).

*b) Coastal areas, forests and inland ecosystems*

The Black Sea region is not only threatened by the degradation of the marine environment, but the failure of forests preservation as well. The rich ecosystems of forests are deteriorated by illegal logging and fires, destroying valuable natural habitats.

The large number of towns around the Black Sea, 155 above 50.000 inhabitants<sup>7</sup>, is indicative of the high pressure on the coastlines generated by human settlements. Uncontrolled urban and industrial planning is responsible to a big degree for the deterioration of aesthetics of the coastal areas. Additionally, transport, infrastructures and tourism have contributed to erosion and the damage of ecosystems. The uncontrolled economic growth of the region as well as the population increase in the urban and rural coastal areas will obviously continue to be a threat to natural environment.

*c) Natural and technical risks*

Oil pollution threatens Black Sea’s coastal and marine ecosystems. This kind of pollution can be a result of accidental discharge from tankers carrying oil across the sea or from wasteful use or disposal on land. Almost half of the inputs of oil from land based activities are brought to the Black Sea via the Danube River<sup>8</sup>.

The former Soviet countries of the Black Sea region are characterised by the ongoing production and use of nuclear energy. Even after the calamitous nuclear accident of Chernobyl in Ukraine that caused catastrophic impacts on health, economy, society and environment of the surrounding areas, the remaining power plants in Armenia and Russia nowadays, do not meet the high safety standards set by the EU.

<sup>7</sup> Black Sea Basin ENPI CBC Programme, *Black Sea Basin Joint Operational Programme 2007-2013*, November 2007, [http://ec.europa.eu/europeaid/where/neighbourhood/regional-cooperation/enpi-cross-border/documents/black\\_sea\\_adopted\\_programme\\_en.pdf](http://ec.europa.eu/europeaid/where/neighbourhood/regional-cooperation/enpi-cross-border/documents/black_sea_adopted_programme_en.pdf) (accessed September 31, 2010).

<sup>8</sup> Black Sea Commission, *Implementation of the Strategic Action Plan for the Rehabilitation and Protection of the Black Sea (2002-2007)*, Publications of the Commission on the Protection of the Black Sea Against Pollution (BSC), 2009-1, Istanbul, Turkey, [http://www.blacksea-commission.org/\\_publ-BSSAPIMPL2009-CH2.asp](http://www.blacksea-commission.org/_publ-BSSAPIMPL2009-CH2.asp) (accessed September 31, 2010)

Political independence, ethnic and minority claims and divergent cultural identities are the main reasons of conflicts among certain regions in the Black Sea area. Due to ongoing hostilities, crime, corruption and poverty, environmental protection is certainly not the primary target of the governments. The economic survival of these populations usually lies in unsustainable developing practices, such as illegal over-logging and uncontrolled urban sprawl<sup>9</sup>, causing environmental degradation. It is also worth mentioning that areas involved in conflicts are obviously unsuitable for agriculture.

The Black Sea countries, however, are aware of the environmental problems and challenges due to the man-induced interventions to global climate. The problem is that they still have not adopted tools of environmental risks assessment and early warning prediction models and scenarios about potential environmental hazards and crisis management. Attached to the legacy of using oil, gas or nuclear energy, the Black Sea countries do not rely on renewable energy resources and they do not promote ecological security, in order to ensure long-term safety for the Black sea environment and its populations.

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. Consequently, there is a serious risk of losing valuable habitats and landscape and ultimately, the biological diversity and productivity of the Black Sea ecosystem<sup>10</sup>. In this regard, the adaptation to relevant international conventions becomes imperative<sup>11</sup> for all the countries of the region. However, formally signed international and regional conventions<sup>12</sup> by the Black Sea countries are only partly implemented (legal compliance), while policy

formation in most countries lacks of operational and effective measures and tools (evaluation, performance).

## **B. Sustainable development and regional cooperation**

Lack of coherence and synergy is a crucial problem, referring not only to the multiplicity of actions of the institutions of the Black Sea, but also a major concern of sectoral policies exercised at all levels (European, national, regional/local). However, there is not only the problem of fragmentation and lack of coordination of sectoral policies in the Black Sea area, but even more importantly, the compatibility of fragmented policy objectives with environmental concerns. Sectoral policies (transport, energy and climate change, security, regional policy et al.) have severe impacts on the environment. How far multi-level sectoral policies have integrated “environmental acquis” and whether they are compatible with environmental concerns, is an open issue.

The Black Sea area is characterised by divergent economies, which hamper the prospect of economic integration, but on the other hand, it becomes more and more clear that essential cooperation among them is crucial. These countries have left behind the economic decline after the Cold War and until the end of the 1990's and have passed to a new era after 2000. Per capita incomes have begun to grow resulting to an increased degree of prosperity, even though it seems to be unequally distributed among the Black Sea Countries. Their economic systems are today market-driven, while intra-regional dynamics are also improved. This is due to the development of a number of organisations, processes, and policies aimed at promoting cooperation and economic integration with increased flows of people, capital, goods and services across the region, as well as greater convergence with the EU<sup>13</sup>. All Black Sea countries experienced an economic recession in 2009 and it is rather unlikely to reach the growth rates prior to the crisis in the next year.

It should be mentioned that these countries are extremely different in terms of size, demographic numbers, development structure and political systems. Nevertheless, there is a number of issues that needs to be dealt collectively from all countries as a whole, aiming at regional cooperation and coordination at different levels (regional, cross-border, transnational). These include the critical relation with the sustainable development priorities of the EU and the linkage of regional policy with other relevant key policy sectors that seem today more crucial than ever: trade, energy,

<sup>9</sup> *Greening Black Sea Synergy* (see footnote 1).

<sup>10</sup> *Implementation of the Strategic Action Plan for the Rehabilitation and Protection of the Black Sea (2002-2007)*, (see footnote 8).

<sup>11</sup> *Black Sea Basin Joint Operational Programme 2007-2013*, (see footnote 7).

<sup>12</sup> Indeed, there are today numerous international conventions, signed by the governments of Black Sea countries, aiming at the conservation of biodiversity (Convention on Biological Diversity), the protection of wetlands (Ramsar Convention), the conservation of wildlife and natural habitats (Emerald Network) and others. Additionally, there are also conventions at regional or even smaller scale level, in relevance to the Black Sea area. Some of these are the Danube Convention for the protection of the river from pollution, the Carpathian Convention for the protection and development of the Carpathian Mountains and the Black Sea Convention for the conservation and integrated management of the area.

<sup>13</sup> Commission on the Black Sea, *A 2020 Vision for the Black Sea Region*, Bertelsmann Stiftung, May 2010.

transport, telecommunications and environmental protection.

The contemporary need to deal with environmental challenges and the consequences of climate change is a perfect incentive for joint and complementary actions. These should be met in the framework of achieving sustainable economic development, despite the different priorities of each state in the Black Sea area. The truth is that many regional processes exist, but implementation is lagging behind<sup>14</sup>.

The Black Sea is the object of numerous regional institutional structures and programmes. From economic and political organisations (like the BSEC) to EU-led or initiated programmes: the Danube Black Sea Task Force – DABLAS, the European Neighbourhood Policy, the Black Sea Synergy<sup>15</sup> and the EaP (Eastern Partnership). These programmes are dealing with the region's economic, political, social and environmental aspects. Nevertheless, it should be noted that national governments do not always have the institutional capacity to undertake such major programmes and big infrastructure projects. Several constraints emerge that include slow decision-making, poor financing, a lack of qualified expert staff, weak horizontal and vertical institutional coordination and the limited participation of private sector and civil society actors<sup>16</sup>.

Similarly, regarding the incorporation of environmental aspect in national and regional policies, the Black Sea countries' authorities experience major institutional and organisational weaknesses, often related to public administration practices inherited from the Soviet era<sup>17</sup>. Other limitations stem from the low environmental awareness of the public and economic agents, the absence of environmental governance, the lack of participation in policy-making and mainly from the common dominant perception of policy makers of these countries: that environmental protection will act as an impediment to economic growth and not as an essential component for social and economic prosperity.

In general terms, regional policies in the Black Sea countries are mainly driven from the goals of economic growth, neglecting severe environmental issues. It is

almost as economic development and environmental protection go in opposite directions. Moreover, the implementation of innovative tools is missing from national policy-making procedures, and therefore the possibility of a holistic aspect of sustainable development is diminished.

### C. Sustainability, Environment and Governance aiming at Greening the Black Sea

#### i Dimensions of environmental governance

The most crucial environmental problems and challenges of the Black Sea that were highlighted are:

- the intensive pressures, threats and future risks of the rich natural environment of the Black Sea need emergent environmental policy responses
- formally signed international and regional conventions are only partly implemented (legal compliance), while policy formation in most countries lacks of operational and effective measures and tools (evaluation, performance)
- fragmented sectoral policies (especially transport, energy, regional policy and big infrastructure projects) do not integrate environmental concerns, while new asymmetries and discrepancies occur

The aforementioned problems and challenges should be reexamined on the basis of the multi-level and multi-actor Environmental Governance, leading to more effective and integrative outcomes, aiming at greening the Black Sea development.

#### a. The search for "Strategic" Environmental Governance<sup>18</sup> and integrated cross-sectoral policies.

The integration of "environmental acquis" in the main core of sectoral policies, (from the initial stage of policy formation, up to decision making process and implementation) is an important step towards integration, based on sustainable development principles. Thus, Strategic Environmental Governance<sup>19</sup> can function as a "loose -coupling

<sup>14</sup> Commission of the European Communities, Communication from the Commission to the Council and the European Parliament, *Black Sea Synergy – A New Regional Cooperation Initiative*, Brussels, April 11, 2007, COM (2007) 160 final.

<sup>15</sup> *A 2020 Vision for the Black Sea Region*.

<sup>16</sup> *Black Sea Synergy – A New Regional Cooperation Initiative* (see footnote 33). Ladi Stella, *Good Governance and Public Administration Reform in the Black Sea Economic Cooperation (BSEC) Member States*, Xenophon Paper No 6, 37. ICBSS, December 2008.

<sup>17</sup> *Policies for a Better Environment, Progress in Eastern Europe, Caucasus and Central Asia*.

<sup>18</sup> Ivanova Maria and Roy Jennifer, *The Architecture of Global Environmental Governance: Pros and Cons of Multiplicity*, January 2007, [www.centerforunreform.org/system/files/Ivanova+and+Roy+GEG.pdf](http://www.centerforunreform.org/system/files/Ivanova+and+Roy+GEG.pdf), (accessed October 12, 2010).

<sup>19</sup> de Loë R.C., Armitage D., Plummer R., Davidson S. and Moraru L., *From Government to Governance: A State-of-the-Art Review of Environmental Governance, Final Report*. Prepared for Alberta Environment, Environmental Stewardship, Environmental Relations. Guelph, ON: Rob de Loë Consulting Services, 2009, <http://environment.gov.ab.ca/info/library/8187.pdf>, (accessed October 14, 2010).

mechanism", coordinating and integrating processes, institutions and actors in different policy fields. Of outmost importance is the synergy and cohesion among environmental policy, spatial planning, regional policy, transportation and energy policy<sup>20</sup>. Compatibility of different policy objectives, can lead to "Territorial Cohesion"<sup>21</sup> and better cross-sectoral regulation and co-operation of institutions, enabling actors to take initiatives enhancing efficiency. The main challenge for the Black Sea, an area with highly fragmented sectoral policy outcomes, is the strategic steering of individual policy sector's objectives and interests towards more interwoven paths of environmental integration.

Various EU-inspired trans-frontier regionalisms seek to foster greater integration by supporting actors and regions which cross the boundaries of EU member states (e.g. Interreg transnational and cross-border Programme, Black Sea Basin Joint Operational Programme 2007-2013, European Spatial Development Perspective). Concerning Environmental Governance in Black Sea, it is important to focus in the nested relations between local, regional, national, European and global actors and institutions and enhance their cooperation in effective and operational practices, across scales.

*b. The opportunities and the limits of "Strategic Choices" of Actors and Institutions in the framework of "Environmental Governance"*

Actors and Institutions in the framework of Environmental Governance have both opportunities and limits, while developing their "Strategic Choices". Dominant norms, values and beliefs are often very rigid, opposing institutional reforms. Environmental choices can have effective outcomes, if they are based on participation, accountability, transparency and legitimacy<sup>22</sup>. Given the fact of the multiplicity of actors and institutions in Black Sea, there is a need not only for better co-operation among them, but also for

opening the actions-arenas to new stakeholders (civil society and private sector), implementing realistically "Greening" practices, as good examples for knowledge and policy transfer.

*b. Integration and cohesion of actions towards "greening" through innovative environmental tools*

Effective environmental protection requires the consideration of environmental impacts of all sectoral policies at the national level. The need for a more holistic approach leads to a cross-sectoral policy integration, as a means to "green" all economic activities already at the planning stage.

The real challenge lies in the determination of environmental externalities deriving from development activities<sup>23</sup>. This goal can be merely achieved by the obligatory conduction of Strategic Environmental Assessments (SEA) and Environmental Impact Assessments (EIA), before the construction of large and medium sized projects, or as "ex ante" prerequisite for the implementation of policies and programmes. Especially transport policies should adopt the principles of sustainable development, taking into account the environmental, economic and social consequences of any transport infrastructure projects. Towards this direction, the Black Sea countries should harmonize their laws with the European legislation and achieve the technical and environmental EU standards. The implementation of SEA and EIA for the new transport works and plans is a way of avoiding or reducing the relative environmental impacts. Only the full evaluation of possible environmental impacts of projects and programmes in all sectors, will allow national governments to achieve long-term economic prosperity, sustainable development and territorial cohesion.

In addition, it should be noted that until today there is no formal environmental cooperation between the Black Sea countries. Despite the area's unquestionable value in resources and biodiversity and the common challenges that they have to deal with, there are still no official commitments. During the meeting of the working group on environmental protection on May 2010, in the framework of the Black Sea Economic Cooperation (BSEC) Action Plan for Cooperation in the field of environmental protection, there has been stated only a slow process in the implementation of the Action Plan. The truth is that the BSEC presents

20 Heinelt, H., Getimis, P., Kafkalas, G., Smith, R., & Swyngedouw, E. editors, *Participatory Governance in a Multi-Level Context: Concepts and Experience*, Leske and Budrich, Opladen, 2002.

21 See for example: CEC, *European Spatial Planning Perspective* (ESDP), 1999; G. Giannakourou, "Transforming Spatial Planning Policy in Mediterranean Countries: Europeanization and Domestic Change", *European Planning Studies* 13, 2 (2005):319-331.

22 Zefi Dimadama and Dimitrios Zikos, "Social Networks as Trojan Horses to Challenge the Dominance of Existing Hierarchies: Knowledge and Learning in the Water Governance of Volos, Greece", *Water Resources Management*, 24, 14, (2010): 3853-3870.

23 American Institute for Contemporary German Studies, *Environmental Diplomacy*, Washington D.C., November 18, 1998, <http://www.aicgs.org/documents/environmentaldiplomacy.pdf> (accessed October 12, 2010).

important steps towards the incorporation of environmental approaches in the economic and social development of its member states. However, despite the notable progress so far, the environmental problems are mainly tackled at the national level, even though they have transboundary impacts. Collective multi-level action can be triggered by the BSEC. Its institutional and diplomatic role is essential for the enhancement of horizontal actions for the environment, the allocation of financial resources and the management of projects that need sufficient political and technical support, if they are to succeed.

The countries of the Black Sea region need to implement multilateral environmental agreements and establish a more strategic environmental cooperation in the area. In this framework, multi-scale cooperation could be implemented in issues such as waste management, pollution or biodiversity preservation. For example, fisheries in the Black Sea constitute a cross-boundary issue. The assessment and the data collection of these fisheries are crucial in order to explore new sustainable ways of using these resources and ensure their viability. Another activity that should be promoted at the regional level is the involvement of Black Sea countries in international discussions on future action<sup>24</sup> regarding environmental matters.

In the framework of ecological security, the Black Sea countries should adopt shared initiatives, concerning the implementation of tools of environmental risks assessment, especially early warning prediction models and scenarios about potential environmental hazards and improvement of disaster and crisis management. The notions of ecological security, monitoring, risk analysis, management and long-term safety for the Black Sea environment and populations should be embraced, in order to attain a gradual reliance on renewable energy resources.

New interventions are also needed in regional policy implementation. Incentives should be given for green, innovative development and new investments. This includes the greening of enterprises by the implementation of environmental management systems, such as the EU Eco-Management Audit Scheme (EMAS)<sup>25</sup> or ISO 14001, which help companies and organisations to improve their environmental

performance. The same pattern can be followed in the public sector, in organisations of local government or in Universities. “Green Municipalities” or “green Universities” clusters could further act as examples of “good” environmental governance. Additionally, the notion of environmental management along with sound waste management, energy saving, recycling and water saving should also be embraced (“smart greening”).

Integrated coastal zone management is another crucial issue. It needs to be embodied in enforced legislation, in the attempt to achieve sustainability of coastal zones. This means that this process needs to integrate all policy areas, sectors and administrative levels.

The implementation of bilateral agreements among the Black Sea countries is the only way in order to coordinate actions towards a better balance of oil, gas and other alternative energy resources (renewable). Of course, this is a very difficult task to fulfill, given the high dependence of the Black Sea on fossil fuels. It is also imperative to take into account the complexity of international and changing interests among the EU, the Black Sea countries and the multi-national corporations, in order to have realistic policy recommendations in the energy sector. Another critical issue is the conformity to high safety standards regarding the nuclear energy power plants, due to the high risks that nuclear energy entails, not only for the sector of environment, but the safety of people as well.

The Black Sea countries should take full advantage of the opportunities offered by international and European agreements, protocols and legal frameworks. Especially Bulgaria and Romania as new member states of the European Union could play a crucial role in improving the institutional setting of the Black Sea countries and enforcing cooperation structures and initiatives<sup>26</sup>. Also Greece, an EU member state since 1981, can share valuable knowledge and expertise in the same direction. The EU already offers valuable guidance towards this goal through several institutions, such as the European Neighbourhood Policy. Nevertheless, this guidance does not constitute a clear integrated policy for the Black Sea countries, rather than scattered dimensions. Therefore, the EU should not address isolated thematic issues, but integrated environmental concerns into these cooperation fields. It should support cooperation actions around issues (e.g. climate change) that offer joint incentives and result in benefits to all parties, based on a thorough analysis of the regional political economy and the evolving global agenda<sup>27</sup>.

<sup>24</sup> *Black Sea Synergy – A New Regional Cooperation Initiative* (see footnote 33).

<sup>25</sup> *Getimis Panagiotis, Giannakourou Gina, Dimadama Zefi, “Eco-Management and Audit Scheme (EMAS) in Greece”, in Sustainability Innovation and Participatory Governance, edited by H. Heinelt and R. Smith, Ashgate: Adershot, 2003.*

<sup>26</sup> *Greening Black Sea Synergy.*

<sup>27</sup> *Manoli Panagiota, Reinvigorating Black Sea Cooperation: A Policy Discussion, Policy Report III, Commission on the Black Sea, (Bertelsmann Stiftung, Gutersloh, 2010).*

Additionally, even though the Black Sea countries are not compelled to incorporate the European legislation into their national laws, the harmonised environmental legislation among these countries based on the best practices on sustainable development from the European region, would count as a one more step towards their cooperation. More actions should include the coordination with other regional institutions and organisations, NGOs, civil society and other stakeholders supporting environmental reforms. These actions should have as a common goal the environmental protection, the promotion of clean, environmentally friendly and resource saving technologies and the establishment of a monitoring mechanism ratified by all countries for the data collection and ongoing evaluation of the Black Sea environment.

### c. *Financing of environmental governance*

Developing environmental governance requires a series of transitions in the Black Sea countries. They need to reform their public administration, tackle their weaknesses in qualified staff and technical support, open up to public participation, including NGOs, networks, scientific communities, business associations, chambers of commerce and local authorities, and enhance their legitimacy, effectiveness and efficiency. However, the achievement of the aforementioned goals entails the presence of another crucial ingredient: financing.

So far, financing the implementation of policies or projects in the Black Sea area comes mainly from external sources, such as the EU and the UN instruments (e.g. ENPI). Unfortunately, this tactics undermines the involvement of local actors and the capacity of regional cooperation<sup>28</sup>. On the other hand, existing programmes that promote regional cooperation with parallel concerns in environmental protection, such as the Black Sea Cross-Border Cooperation Programme, are too complex and costly for small NGOs<sup>29</sup>. New methods should be investigated, in order to simplify the procedures of grant applications and access alternative sources of funding. This would make much easier the participation of NGOs and civil society in such programmes.

The truth is that most of the Black Sea countries are facing severe economic difficulties. The issue of allocating national funds to environmental protection is simply depended on the degree of priority that is given to the environmental sector and whether or not this is

seen as a means to the future prosperity of a country<sup>30</sup>. Moreover, International Financial Institutions (IFIs), such as the European Bank for Reconstruction and Development, are often sceptical about the allocation of funds in big projects, in the fear of inability of paying back.

Generally, the funds for environmental protection and relative activities are quite limited, especially compared to funds for economic development. Financial mechanisms are fragmented and even duplicative<sup>31</sup> and mobilization of resources is insufficient.

## II. CONCLUSIONS

The environmental problems that were highlighted in this paper are the proof that there is an imperative need for “greening” the Black Sea area. Experience and best practices so far have demonstrated that there is a way. The EU is a strong ally in this effort, since it could work with Black Sea countries in order to develop strategies for sustainable development. The EU could also develop policies and legal frameworks for environmental protection. International funding should be mobilised for this purpose, including international funding mechanisms (e.g. Kyoto mechanism)<sup>32</sup>.

Apart from the European aid, the Black Sea area already has institutions to rely on, such as the Black Sea Economic Cooperation. The BSEC needs to be strengthened and in some cases adapted, with a view to enhance cooperation among countries and better address the challenges of environmental governance and sustainability in the Black Sea area.

Black Sea countries are diverse economically and environmentally, they have different aspirations, and are not able or willing to move at the same pace<sup>33</sup>. However, they still share positive or negative legacies and they can converge to some key priorities. Firstly, they need to set clear objectives about internal governance reforms, participatory processes and coordination among different sectoral ministries and departments. These reforms need to be built in accordance to environmental requirements. Legal compliance is essential, along with administrative and technical support of the relative departments and agencies and building of needed capacities. Implementation processes should be accompanied with the appropriate planning, financing and monitoring mechanisms, in order to achieve the environmental objectives. The empowerment of environmental

<sup>28</sup> *Reinvigorating Black Sea Cooperation: A Policy Discussion.*

<sup>29</sup> *Greening Black Sea Synergy.*

<sup>30</sup> *How to save the Black Sea, Your guide to the Black Sea Strategic Action Plan, (see footnote 3).*

<sup>31</sup> *Vision for Moving Forward.*

<sup>32</sup> *Greening Black Sea Synergy.*

<sup>33</sup> *Policies for a Better Environment, Progress in Eastern Europe, Caucasus and Central Asia.*

authorities, NGOs, civil society and other stakeholders would also support environmental reforms<sup>34</sup>.

Corporations' and industrial interests should be taken into serious consideration in the effort of finding common ground with environmental needs. On the other hand, polluters should be given incentives to improve their environmental performance, to train their staff and use cleaner and more "green" technologies. Environmental financing should be integrated into public expenditure frameworks, while any new possible sources of financing should be exploited (for example the Clean Development Mechanism defined in the Kyoto Protocol).

Environmental governance and sustainable development can be a vehicle overcoming inefficiencies towards "greening" the Black Sea.

#### REFERENCE

- [1] American Institute for Contemporary German Studies, *Environmental Diplomacy*, Washington D.C., November 18, 1998, <http://www.aicgs.org/documents/environmentaldiplomacy.pdf> (accessed October 12, 2010).
- [2] Bejanidze Natia and Kekenadze Mariam, *The Black Sea Coast Sewage – Both an Ecological Problem and a Profit*, [http://www.inepo.com/english/uplFiles\\_resim/Compositetechnologyproject.doc](http://www.inepo.com/english/uplFiles_resim/Compositetechnologyproject.doc) (accessed October 4, 2010).
- [3] Black Sea Basin ENPI CBC Programme, *Black Sea Basin Joint Operational Programme 2007-2013*, November 2007, [http://ec.europa.eu/europeaid/where/neighbourhood/regional-cooperation/enpi-cross-border/documents/black\\_sea\\_adopted\\_programme\\_en.pdf](http://ec.europa.eu/europeaid/where/neighbourhood/regional-cooperation/enpi-cross-border/documents/black_sea_adopted_programme_en.pdf) (accessed September 31, 2010).
- [4] Black Sea Commission, *Implementation of the Strategic Action Plan for the Rehabilitation and Protection of the Black Sea (2002-207)*, Publications of the Commission on the Protection of the Black Sea Against Pollution (BSC), 2009-1, Istanbul, Turkey, [http://www.blacksea-commission.org/\\_publ-BSSAPIMPL2009-CH2.asp](http://www.blacksea-commission.org/_publ-BSSAPIMPL2009-CH2.asp) (accessed September 31, 2010).
- [5] CEC, *European Spatial Planning Perspective (ESDP)*, 1999.
- [6] *Charter of the Organization of the Black Sea Economic Cooperation*, articles 8 and 9, [http://www.pabsec.org/resimler/dosyalar/31bseccharter\\_PN\\_r\\_HRMIP.doc](http://www.pabsec.org/resimler/dosyalar/31bseccharter_PN_r_HRMIP.doc), (accessed October 13, 2010).
- [7] Commission of the European Communities, Communication from the Commission to the Council and the European Parliament, *Black Sea Synergy – A New Regional Cooperation Initiative*, Brussels, April 11, 2007, COM (2007) 160 final.
- [8] Commission on the Black Sea, *A 2020 Vision for the Black Sea Region*, Bertelsmann Stiftung, May 2010.
- [9] de Loë R.C., Armitage D., Plummer R., Davidson S. and Moraru L., *From Government to Governance: A State-of-the-Art Review of Environmental Governance*, Final Report. Prepared for Alberta Environment, Environmental Stewardship, Environmental Relations. Guelph, ON: Rob de Loë Consulting Services, 2009, <http://environment.gov.ab.ca/info/library/8187.pdf>, (accessed October 14, 2010).
- [10] Dimadama Zefi and Zikos Dimitrios, "Social Networks as Trojan Horses to Challenge the Dominance of Existing Hierarchies: Knowledge and Learning in the Water Governance of Volos, Greece", *Water Resources Management*, 24, 14, (2010): 3853-3870.
- [11] EU Funded ECBSea Project, *Saving the Black Sea Together*, Kyiv, October 2009, [http://ecbsea.org/files/content/ECBSea\\_eng!!!.pdf](http://ecbsea.org/files/content/ECBSea_eng!!!.pdf) (accessed October 8, 2010).
- [12] European Environment Agency, *Europe's Environment: The Fourth Assessment*, Copenhagen, 2007, [http://www.eea.europa.eu/publications/state\\_of\\_environment\\_report\\_2007\\_1](http://www.eea.europa.eu/publications/state_of_environment_report_2007_1) (accessed October 7, 2010).
- [13] Getimis Panagiotis, Giannakourou Gina, Dimadama Zefi, "Eco-Management and Audit Scheme (EMAS) in Greece", in *Sustainability Innovation and Participatory Governance*, edited by H. Heinelt and R. Smith, Ashgate: Adershot, 2003.
- [14] Giannakourou G., "Transforming Spatial Planning Policy in Mediterranean Countries: Europeanization and Domestic Change", *European Planning Studies* 13, 2 (2005):319-331.
- [15] Haas Peter M., *Science Policy for Multilateral Environmental Governance*, February 2002, <http://www.unu.edu/inter->

<sup>34</sup> Stribis Ioannis, *Pooling Forces in Protecting the Black Sea Marine Environment: Actors and Actions*, ICBSS Policy Brief No. 17, October 2009.



- linkages/docs/IEG/Haas.pdf, (accessed October 15, 2010).
- [16] Heinelt, H., Getimis, P., Kafkalas, G., Smith, R., & Swyngedouw, E. editors, *Participatory Governance in a Multi-Level Context: Concepts and Experience*, Leske and Budrich, Opladen, 2002.
- [17] Heinrich Boll Stiftung, EU Regional Office, *Greening the Black Sea Synergy*, Brussels, June 2008, [http://assets.panda.org/downloads/black\\_sea\\_full\\_report.pdf](http://assets.panda.org/downloads/black_sea_full_report.pdf) (accessed September 29, 2010).
- [18] Ivanova Maria and Roy Jennifer, *The Architecture of Global Environmental Governance: Pros and Cons of Multiplicity*, January 2007, [www.centerforunreform.org/system/files/Ivanova+and+Roy+GEG.pdf](http://www.centerforunreform.org/system/files/Ivanova+and+Roy+GEG.pdf), (accessed October 12, 2010).
- [20] Manoli Panagiota, *Reinvigorating Black Sea Cooperation: A Policy Discussion*, Policy Report III, Commission on the Black Sea, Bertelsmann Stiftung, Gutersloh, 2010.
- [21] Mee Laurence D., *How to save the Black Sea, Your guide to the Black Sea Strategic Action Plan*, <http://www.undp.org/gef/new/blacksea.htm> (accessed October 4, 2010).
- [22] OECD, *Policies for a Better Environment, Progress in Eastern Europe, Caucasus and Central Asia*, 2007, <http://www.oecd.org/dataoecd/33/12/39274836.pdf> (accessed October 5, 2010).
- [23] Stribis Ioannis, *Pooling Forces in Protecting the Black Sea Marine Environment: Actors and Actions*, ICBSS Policy Brief No. 17, October 2009.
- [19]. Ladi Stella, *Good Governance and Public Administration Reform in the Black Sea Economic Cooperation (BSEC) Member States*, Xenophon Paper No 6, 37. ICBSS, December 2008.