



International Centre for Black Sea Studies  
Building a Sustainable Future for the Black Sea Area

# **“Environmental Hazards – Public Health in countries outside the European Union The Case of the Black Sea”**

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**Dr. Zefi Dimadama  
ICBSS Director General**

## Black Sea's environmental challenges

- *Water resources and management:* pollution, untreated sewage, eutrophication of the sea, over-fishing, inadequate management of solid waste
- *Coastal areas, forests and inland ecosystems:* poor forest protection, uncontrolled economic growth resulting to high pressures on coastal and inland ecosystems
- *Natural and technical risks:* oil pollution, nuclear power plants with no high safety standards, small reliance on RES Leakage and waste production (solid, liquid and gaseous) from oil and gas industry

# (1) Air Pollution

## - Urban Outdoor Air Pollution

Black Sea countries	Ambient air pollution in 2004 (Annual PM10 [ug/m3])	Ambient air pollution attributable deaths in 2008
Albania	58	251
Armenia	84	1.931
Azerbaijan	64	1.390
Bulgaria	59	4.413
Georgia	46	2.183
Greece	34	3.622
Moldova	41	1.555
Romania	76	7.400
Russia	25	68.827
Serbia & Montenegro	NA	2.302
Turkey	56	24.797
Ukraine	29	31.765
<a href="http://apps.who.int/gho/data/node.main.284?lang=en">http://apps.who.int/gho/data/node.main.284?lang=en</a>		
<a href="http://apps.who.int/gho/data/node.main.285?lang=en">http://apps.who.int/gho/data/node.main.285?lang=en</a>		
Annual mean concentration of particulate matter of less than 10 microns of diameter (PM10) [ug/m3]		

# (1) Air Pollution

## - Household (indoor) air pollution

Black Sea countries	% Population using solid fuels in 2012
Albania	38
Armenia	7
Azerbaijan	11
Bulgaria	12
Georgia	46
Greece	0
Moldova	11
Romania	21
Russia	2
Serbia	32
Turkey	4
Ukraine	3

<http://apps.who.int/gho/data/node.main.135?lang=en>

## Measures to be taken

- promotion of public transport, walking, and cycling (rather than transport relying on private motor vehicles)
- promotion of the use of renewable and clean fuels (e.g. not coal)
- improvements in the energy efficiency of homes, commercial buildings and manufacturing
- increasing awareness about the perils from ambient air pollution and its main sources
- use of effective monitoring to evaluate and communicate the impact of interventions

## (2) Solid waste generation

**Public Health Hazards may appear from the mismanagement of:**

Organic domestic waste

- Exposure to hazardous waste
- Waste from agriculture and industries
- Hospital and other medical waste

**Measures to be taken:**

- There is a need for greater government involvement, community participation and orientation with private sector involvement in waste management

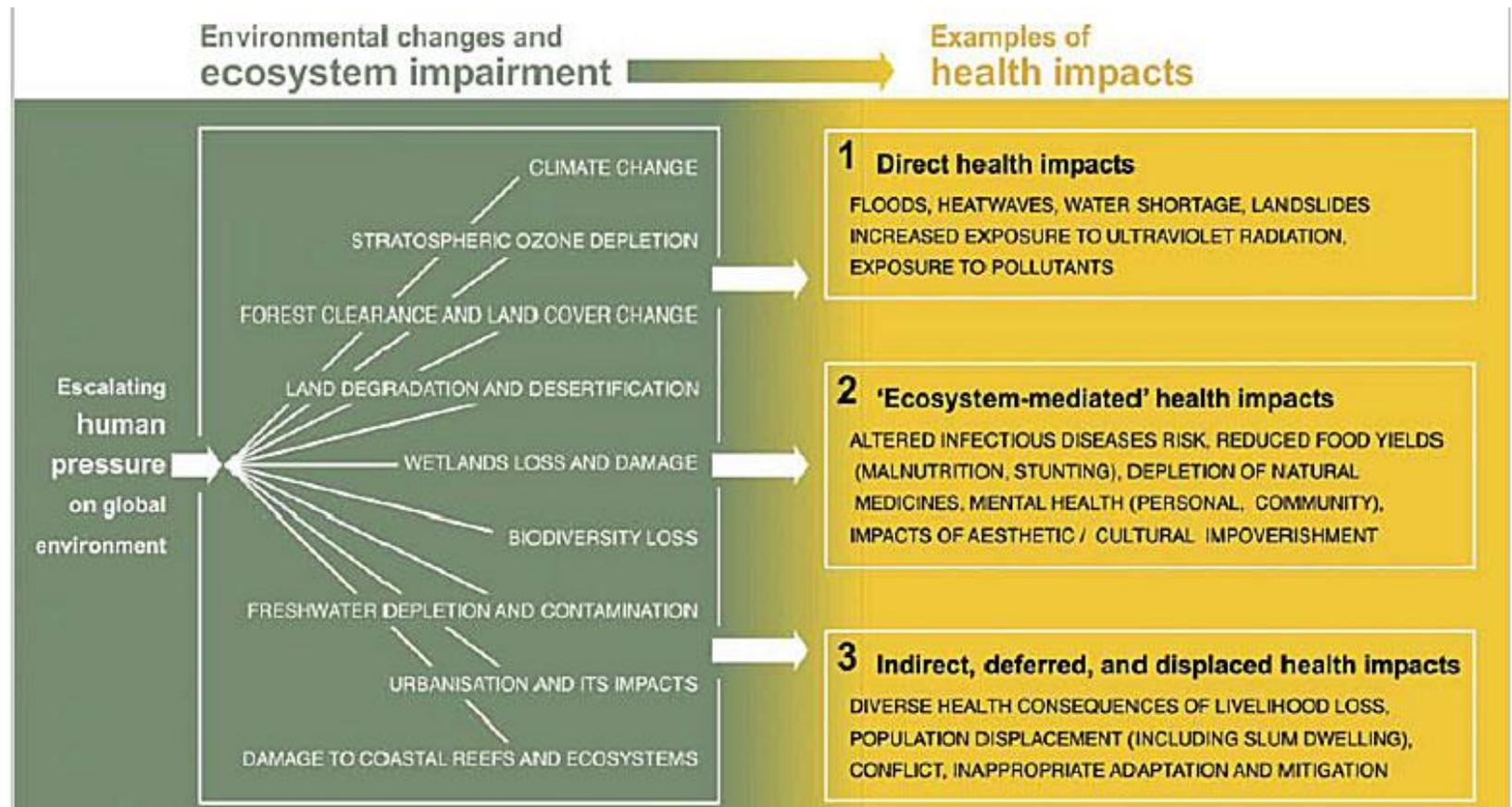
### (3) Water pollution

<b>Black Sea countries</b>	<b>Population using improved drinking-water sources 2011 (%)</b>	<b>Population using improved sanitation facilities 2011 (%)</b>
Albania	95	94
Armenia	99	90
Azerbaijan	80	82
Bulgaria	99	100
Georgia	98	93
Greece	100	99
Moldova	96	86
Romania	NA	NA
Russia	97	70
Serbia	99	97
Turkey	100	91
Ukraine	98	94
<a href="http://apps.who.int/gho/data/node.main.167?lang=en">http://apps.who.int/gho/data/node.main.167?lang=en</a>		

## Measures to be taken

- Minimisation of waste or pollutant generation
- Treatment prior to disposal of waste streams at source, and
- "in-situ" reduction or elimination of pollution

## (4) Climate change



# Environment related deaths in Black Sea countries

Black Sea countries	% of deaths attributable to the environment in 2004
Albania	20
Armenia	18
Azerbaijan	20
Bulgaria	17
Georgia	19
Greece	17
Moldova	19
Romania	18
Russia	21
Serbia	NA
Turkey	21
Ukraine	20

<http://apps.who.int/gho/data/node.main.162?lang=en>

# Measures to be taken

- Raise awareness
- Strengthen partnerships
- Promote and share scientific knowledge
- Strengthen health systems

## (5) Extreme weather

- Heatwaves (e.g. in 2010 striking Ukraine and western Russia)
- Flooding (many incidents causing deaths and calamities)
- Cold spells (e.g. in early 2012 when many people died in Russia, Ukraine, Romania and Bulgaria)

### ***Measures to be taken***

- development of tools to monitor and predict extreme weather events
- development of modelling health impacts
- integration of extreme weather health action plans into national climate-change adaptation strategies
- improvement of health systems' preparedness and response

# Role of ICBSS

## Who we are

- Private non-profit organization
- BSEC related body and its acknowledged think-tank
- Independent research and training institution

## What we do

Support and promote regional cooperation among BSEC countries through:

- The organization of **Bilateral Forums** for the promotion of dialogue in various fields (Energy, Trade, Sustainable Development, Entrepreneurship, STI etc.)
- Organization of various **scientific events** (e.g. the annual International Black Sea Symposium, Summer Schools, Round Table Discussions)
- Participation in the **deliberations of the BSEC decision- making** (consultative role)
- Participation in the **BSEC Working Groups** (on multiple fields such as Environment, Trade, Energy etc.)

# Knowledge and know-how transfer: ICBSS Web-GIS Observatory

Initiative for the establishment of an integrated mechanism, a WEB-GIS Observatory which gradually gathers and processes data related to sustainable development and environment aiming at:

- The development of a strategic tool that will provide information services, support policies and development programs for all interested actors of the Black Sea region
- The support of policy-makers who need to compare data and define similarities and/or differences among different countries and regions
- The promotion of cooperation and networking among the Black Sea countries
- The higher placement of environmental concerns and priorities in the agenda of policy-makers in all sectoral policies
- The establishment of an institutionalised network for the future

The Observatory will be further developed with the cooperation of the National Statistical Agencies of the Black Sea countries

# BSEC's Working Group on Healthcare and Pharmaceuticals

Adoption of a Plan of Action in Tbilisi (Georgia) in June 1996 targeting measures against contagious diseases, drug addictions and for the protection of vulnerable groups

Among others, the WG aims:

1. To seek ways and means of promoting closer and more beneficial cooperation among the Participating States in the fields of health care and pharmaceuticals.
2. To exchange information on health care and to encourage cooperation among data processing units
3. To provide assistance to the Participating States in developing an informed public opinion on matters of health care
4. To develop cooperation with specialized organizations within the United Nations and other international institutions in the field of protection of health.

# Conclusions

- Actions should be taken horizontally, including sectors such as energy, transport, agriculture and industry in close cooperation with the sector of health, in order to address effectively the environmental factors that menace public health
- The participation of multiple actors is imperative in order to end up to the most viable solutions for environmental health. Given the broad spectrum of environmental health, the private sector, associations, the research and academic community, NGOs, local authorities, media and many others seek to influence policy in this area.



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**Thank you for your attention!**

Dr. Zefi Dimadama  
ICBSS Director General  
Email: [dimadama@icbss.org](mailto:dimadama@icbss.org)

International Centre for Black Sea Studies (ICBSS)  
4 Xenophontos Str.  
10557 Athens, Greece  
Tel: +302103242321  
Fax: +302103242244  
Email: [icbss@icbss.org](mailto:icbss@icbss.org)