

Republic of Serbia
Ministry of Science and Environmental Protection
Environmental Protection Agency

ENVIRONMENT IN SERBIA

an indicator-based review



ENVIRONMENT IN SERBIA

an indicator-based review

Belgrade, 2007

ENVIRONMENT in Serbia: an indicator – based review

First edition

ISBN 978-86-84163-34-1

Publisher:

Serbian Environmental Protection Agency
11000 Belgrade, Ruže Jovanovića 27a

Editors:

Karadžić, B. and Mijović, A.

Authors:

Dedijer, A., Mitrović-Josipović, M., Radulović, E., Dimić, B., Marić, L., Krunic-Lazić, M., Špegar, G., Vidojević, D., Jovanović, M., Veljković, N., Jovičić, M., Redžić, N., Popović, S., Pajčin, N., Lekić, D., Popović, T., Mijović, A.

Proof reader:

Mišanović, J.

Translation:

Marinković-Jovanović, D.

Number of copies printed:

2000

Printed by:

CICERO – Izdavačko štamparsko preduzeće
11040 Belgrade, Jovana Žujovića 8

Acknowledgment:

UNDP has supported printing of this publication through funds provided by SIDA. European Agency for Reconstruction has also supported the preparation of this publication.

Disclaimer:

The views expressed in this publication are those of authors and do not represent those of the United Nations Development Programme (UNDP) nor Swedish International Development Cooperation Agency (SIDA).

CONTENTS

PREFACE.....	1
INTRODUCTION	3
SOCIO ECONOMIC GROWTH.....	7
DEMOGRAPHY	8
URBANISATION.....	11
ECONOMIC DEVELOPMENT.....	13
ENERGY	16
MINING	21
INDUSTRY.....	24
TRANSPORT	27
TOURISM	30
AGRICULTURE	32
FORESTRY	38
PROGRESS IN ENVIRONMENTAL MANAGEMENT IN SERBIA.....	43
CLIMATE CHANGE.....	45
CLIMATE SYSTEM	47
BASIC CLIMATE CHARACTERISTICS IN SERBIA	49
NATURAL AND HUMAN INDUCED CLIMATE CHANGE.....	51
VARIABILITY OF THE ANNUAL TEMPERATURE AVERAGES IN SERBIA	53
VARIABILITY OF THE ANNUAL PRECIPITATION AVERAGES IN SERBIA.....	55
AIR	59
AIR QUALITY MONITORING.....	61
SULPHUR DIOXIDE (SO ₂).....	64
NITROGEN DIOXIDE (NO ₂)	68
PARTICULATE POLLUTANTS	72
TROPOSPHERIC OZONE.....	80
ALLERGENIC POLLEN.....	82
WATER.....	85
WATER RESOURCES AND WATER QUALITY.....	87
USE OF FRESHWATER RESOURCES	90
BIOCHEMICAL OXYGEN DEMAND AND CONCENTRATION OF AMMONIUM IN RIVERS.....	92
NUTRIENTS IN FRESHWATER	94
BATHING WATER QUALITY.....	96
URBAN WASTE WATER TREATMENT	98
SOIL	101
ECOLOGICAL AND ECONOMIC VALUES OF SOIL.....	103
LAND USE IN SERBIA	105
SOIL CLASSIFICATION AND MAPPING.....	106
MONITORING OF SOIL FERTILITY	109
SOIL CONTAMINATION	116
SOIL EROSION.....	118

WASTE.....	121
WASTE MANAGEMENT.....	123
UNOFFICIAL AND OLD LANDFILLS AND DUMPS	129
INTERNAL AND TRANSBOUNDARY MOVEMENT OF WASTE.....	131
BIODIVERSITY	133
SPECIES DIVERSITY.....	135
ECOSYSTEM DIVERSITY	147
AREAS DESIGNATED FOR NATURE PROTECTION.....	150
ENDANGERED AND PROTECTED SPECIES	155
PROGRAMS OF BIODIVERSITY MONITORING	157
REINTRODUCTION PROGRAMS AND <i>EX SITU</i> CONSERVATION OF BIODIVERSITY.....	159
REFERENCES.....	161

PREFACE

Reliable information on impacts of the socio-economic growth on environment, ecosystems and, consequently, on public health is essential for framing and implementing sound and effective environmental policy measures and legislation. Therefore, the Serbian Government established in 2004 the Environmental Protection Agency, within the Ministry of Science and Environmental Protection. Serbian Environmental Protection Agency (SEPA) is dedicated to providing environmental information to policy-makers and the public, in order to support environment improvement in Serbia.

Cooperating with relevant Serbian authorities, Universities and Scientific Institutions, SEPA permanently upgrades the national data bank that contains information on all environmental components in Serbia.

The Agency uses the central data bank to publish periodic reports on the environment in Serbia. Reports are directed to decision makers (Republic Government and Republic Parliament), to international institutions, first of all to the European Environment Agency (EEA) and to the widest spectrum of public clients.

Reports that are directed to Republic Government represent a valuable tool for developing, adopting, implementing and evaluating environmental policy.

Since 2004, SEPA started to cooperate with EIONET (European Information and Observation NETwork), a partnership network of the EEA in order to fulfil reporting obligations that countries have towards international organisations. Contribution of Serbia in development of pan-European environmental data bank was symbolic in 2004. However, in 2006 Serbia achieved significant progress in cooperation with EIONET and EEA.

Harmonizing reporting obligations with EIONET standards (an indicator-based approach), SEPA prepared this document in order to describe the current state and trends of environmental variability in Serbia, and to assess a progress in legal and economic mechanisms that are focused to environment improvement and, consequently, to advancement of life quality of Serbian inhabitants

Branko Karadžić,
Director

Republic of Serbia
Ministry of Science and Environmental Protection
Environmental Protection Agency

INTRODUCTION

Continuous growth of human population, which is associated with both the urbanisation and development of the economy branches (mining, energy supply, industry, transport) generates a series of ecological problems at *local, regional or global* levels (EEA, 1998, 2003, 2005). Most important among them involve:

- climate changes
- depletion of stratospheric ozone (causing increased levels of ultraviolet radiation)
- loss of biological diversity
- risk of nuclear accidents
- acidification of water and land ecosystems
- increased levels of tropospheric ozone and other photochemical oxidants
- water, air and soil pollution
- waste generation
- risk of accidents in chemical industries

Efficient policy of natural resource management enables maximum economic growth with minimum degradation of the environment. Reliable data on both socio/economic growth and trends of environmental variability may help in developing, implementing and evaluating environmental policy, which is aimed at the lessening of the "economy-versus-ecology" conflict. Hence both national and international legislation specify obligations on

- monitoring (continuous and systematic surveillance of parameters that indicate air, water, soil and biodiversity quality) and
- periodic reporting,

in order to assess and to control human impacts on environment.

In 2004 the Serbian Government established the Environmental Protection Agency, within the Ministry of Science and Environmental Protection. Main priority of the Serbian Environmental Protection Agency (SEPA) is to collect and to process the data on all environmental components in Serbia, and to disseminate reliable information to policy makers and to widest spectrum of public. The Agency has developed a system for data

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_11015

