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NATIONAL REVIEW OF THE APPLICATION OF ENVIRONMENTAL INDICATORS

Submitted by [Bosnia and Herzegovina]

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EVALUATION OF FURTHER SIX INDICATORS FROM THE *UNECE INDICATOR GUIDELINES*

Indicator	A. Effective inter-agency cooperation mechanisms to produce the indicator	B. Data quality assurance and control procedures for the production of the indicator including international experience	C. Publication of the indicator in statistical compendiums and state-of-the-environment reports and other regular publications
Waste generation	LAW ON STATISTICS OF BOSNIA AND HERZEGOVINA - O.G. BiH 26/04, Annual Work Statistical Program	Regulation on waste statistics 2150/2002/EC	http://www.bhas.ba/ Statistical Thematic Bulletins "Environment, Energy , Transport"
Final waste disposal	LAW ON STATISTICS OF BOSNIA AND HERZEGOVINA - O.G. BiH 26/04, Annual Work Statistical Program	Regulation on waste statistics 2150/2002/EC	http://www.bhas.ba/ Statistical Thematic Bulletins "Environment, Energy , Transport"
Transboundary movements of hazardous waste	Competent authority: Federal Ministry of Environment and Tourism of BiH	Basel Convention on the Control of Transboundary Movement of hazardous Wastes and their disposal http://www.basel.int/	Statistical Thematic Bulletins "Environment, Energy , Transport"
Ambient air quality in urban areas	In accordance with European conventions of the European Software Federal Hydrometeorological Institute using a software package for the iMIS, processes the statistical value of pollution in the data. sends the data directly over the internet. http://acm.eionet.europa.eu/databases/country_tools/aq/eoi_to_airbase_status/index_html	Federal Hydrometeorological Institute carries out international reporting of air quality according to the AIRBASE at EEA EIONET portal, in accordance with European conventions	Federal Hydrometeorological Institute http://fhmzbih.gov.ba/TEKSTOVI/ZRAK/kvalitet%20zraka.pdf ; Ministry of Physical Planning and Environment of the Canton Sarajevo http://80.65.164.218/ ;
Threatened and protected species	Memorandum of Understanding between BiH National Museum as NRC for biodiversity and Natural Science Faculty in Sarajevo, Dpt. For Biology (RANSMO Project)	Bosnia and Herzegovina Fourth Report to the United Nations Convention on Biological Diversity, 2010 Biodiversity Targets National Assessments, www.cbd.int/doc/world/ba/ba-nr-04-en.doc
Trends in the number and distribution of selected species

Question A.	Effective inter-agency cooperation mechanisms to produce the indicator
<p><i>Please describe cooperation arrangements, if any, which have been established in your country to collect the necessary data for the indicator. These may involve statistical agencies, ministries of water management, agriculture, transport, interior, environment, economic development and energy, hydro-meteorological services and agencies on geology, as appropriate. The description should cover problems met, solutions found and possible further steps envisaged or needed.</i></p>	

Question B.	Data quality assurance and control procedures for the production of the indicator
<p><i>Please describe data quality assurance and control procedures for the production of the indicator. The description should cover problems met, solutions found and possible further steps envisaged or needed. References should be made to any international methodologies and guidelines that are followed to ensure data quality and control.</i></p>	

Question C.	Publication of the indicator in statistical compendiums and state-of-the-environment reports
<p><i>Please present the evidence of the indicator publication in statistical compendiums and state-of-the-environment reports and other regular publications (titles, names of the publishing houses, cities and years of the publications, languages, number of copies published, Internet addresses, and whether time-series data was published on the indicator.</i></p>	

<p><i>The description of the indicators is available online at: www.unecce.org/env/documents/2007/ece/ece.belgrade.conf.2007.inf.6.e.pdf.</i></p>

Time series data on the indicators for 1990-2010, Table 1. Waste generation: (Bosnia and Herzegovina)

	Unit	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Waste generation by source														
5	Agriculture, forestry and fishing (ISIC 01-03)	1000 t/year										N.A.	N.A.	N.A.
6	Mining and quarrying (ISIC 05-09)	1000 t/year										40,656.6	50,782.7	
7	Manufacturing (ISIC 10 - 33)	1000 t/year										3,563.4	3,077.6	
8	Electricity, gas, steam and air conditioning supply (ISIC 35)	1000 t/year										1,059.0	1,563.6	
9	Construction (ISIC 41 - 43)	1000 t/year										N.A.	N.A.	N.A.
10	Other economic activities excluding ISIC 38	1000 t/year										N.A.	N.A.	N.A.
11	Municipal waste	1000 t/year										1,367.1	1,493.1	1,521.9
12	Of which (of row 11) hazardous waste	1000 t/year										N.A.	N.A.	N.A.
13	Of which (of row 11) from households	1000 t/year										850.6	996.2	1,155.9
14	Total waste generation (5 + 6 + 7 + 8 + 9 + 10 + 11)	1000 t/year										46,646.1	56,916.9	
15	Of which (of row 14) hazardous waste	1000t/year										756.4	1,018.0	
Population and GDP														
17	Population of the country	Million										3.8	3.8	3.8
18	Municipal waste per capita (11/17)	kg/capita										356.0	389.0	396.0
19	GDP constant prices (2005)	USD million										15,270	15,923	16,837
20	Industrial (manufacturing) waste per unit GDP (7/19)	kg/ 1000 USD										69.4	98.2	
21	Total waste per unit of GDP (13/19)	kg/ 1000 USD										0.1	0.1	
22	Hazardous waste per unit of GDP (14/19)	kg/1000 USD										3.1	3.6	

Notes:

This table asks for data on the total amount of waste (both non-hazardous and hazardous), generated by various economic activities and by households. The breakdown follows the International Standard Industrial Classification of all Economic Activities (ISIC Rev.4).

(URL: <http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=27>).

The table refers to all primary waste originating from the mentioned sectors including waste for recovery and recycling, but excluding direct internal recycling and re-use. Waste from secondary sources should be excluded.

The amount reported under 'Total waste generation' should be equal to the sum of the waste amounts reported under the various economic activities and household waste. Waste generated by an economic activity includes all kinds of waste generated by economic units within this activity. If data are not collected according to ISIC, please provide data for household waste generation (line 13) and total waste generation (line 14). If data do not cover all waste sources, please leave the total waste generation cell blank (line14). Waste generated by ISIC 38 (waste collection, treatment and disposal activities; and materials recovery) is from secondary sources, i.e., residual materials from recovery and disposal operations such as incineration and Separately, the table describes the total amount of hazardous waste generated during the individual year.

If the requested data are not available, please leave the cell blank. If the requested variable is not applicable (the phenomenon is not relevant) to the country or the value is less than half the

Final data of the statistical survey "Waste from production activities", the reference year 2010, will be completed by the end of February 2012

List of definitions

Waste: Materials that are not prime products (i.e., products produced for the market) for which the generator has no further use for his own purpose of production, transformation or consumption, and which he discards, or intends or is required to discard.

It excludes material directly recycled or reused at the place of generation (i.e., establishment) and waste materials that are directly discharged into ambient water or air as wastewater or air pollution.

(Waste from) **Agriculture, forestry and fishing:** All waste from agricultural, forestry and fishing activities. Manure used as fertilizer is excluded (i.e., only excess manure which is disposed of should be included). This category refers to ISIC divisions 01 to 03.

(Waste from) **Manufacturing:** All waste from manufacturing activities. This category refers to ISIC divisions 10 to 33.

(Waste from) **Electricity, gas, steam and air conditioning supply:** All waste from electricity, gas, steam and air conditioning supply. Waste from the production of nuclear energy should be excluded. This category refers to ISIC division 35. **Radioactive waste is not included in this category.**

(Waste from) **Construction:** All waste from construction activities. This category refers to waste generated in ISIC division 41 to 43.

(Waste from) **Other economic activities excluding ISIC 38:** All waste from all other economic activities not specified before and excluding ISIC division 38. This category refers to waste generated in ISIC divisions 36, 37, 39, and ISIC 45 to 99.

Municipal waste: Municipal waste, collected by or on behalf of municipalities, by public or private enterprises, includes waste originating from: households, commerce and trade, small businesses, office buildings and institutions (schools, hospitals, government buildings). It also includes bulky waste (e.g., white goods, old furniture, mattresses) and waste from selected municipal services, e.g., waste from park and garden maintenance, waste from street cleaning services (street sweepings, the content of litter containers, market cleansing waste), if managed as waste. The definition excludes waste from municipal sewage network and treatment, municipal construction and demolition waste.

(Waste from) **Households:** Waste material usually generated in the normal functioning of households.

Hazardous waste: Hazardous waste refers to the categories of waste to be controlled according to the Basel Convention on the control of transboundary movements of hazardous waste and their disposal (Article 1 and Annex I).

Management of waste: Collection, transport, treatment and disposal of waste, including after-care of disposal sites.

Recycling: Any reprocessing of waste material in a production process that diverts it from the waste stream, except reuse as fuel. Both reprocessing as the same type of product, and for different purposes should be included. Recycling within industrial plants i.e., at the place of generation should be excluded.

Composting: A biological process that submits biodegradable waste to anaerobic or aerobic decomposition, and that results in a product that is recovered and can be used to increase soil fertility.

Incineration: The controlled combustion of waste with or without energy recovery.

Landfilling: Final placement of waste into or onto the land in a controlled or uncontrolled way. The definition covers both landfilling in internal sites (i.e., where a generator of waste is carrying out its own waste disposal at the place of generation) and in external sites.

Controlled landfilling: Final placement of waste into or onto the land in a controlled landfill site.

Other waste treatment: Any final treatment or disposal different from recycling, incineration and landfilling. Physical/chemical treatment, biological treatment, releasing into water bodies and permanent storage are included here.

Non hazardous industrial waste: Manufacturing waste (ISIC 10 - 33) excluding hazardous waste

Time series data on the indicators for 1990-2010, Table 2a. Final waste disposal: Management of municipal waste: (Bosnia and Herzegovina)

	Unit	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
	Municipal waste													
4	Municipal waste collected	1000 t/ year										1,181.89	1,362.59	1499
5	Municipal waste managed	1000 t/ year										1,220.10	1,422.51	1516.4
6	Of which recycling	1000 t/ year										NA	NA	NA
7	Of which composting	1000 t/ year												
8	Of which incineration without energy recovery	1000 t/ year												
9	Of which incineration with energy recovery	1000 t/ year												
10	Of which landfilling on a controlled site	1000 t/ year										1,296.70	1,421.98	1514.4
11	Of which landfilling on a non- controlled site	1000 t/ year												
12	Of which other disposal (specify in the footnote, please)	1000 t/ year										0.14	0.15	0.5
13	Of which hazardous waste	1000 t/ year										N.A.	N.A.	N.A.

Note: Definitions are presented in sheet t1a. In case different definitions are applied in the country, specify, please. Please explain the category "Other disposal". Please insert any additional information necessary for explanation of figures presented. **In line 13, fill in figures from t1, row 12, if such data is available. In the case that data on municipal waste collection is available in cubic meters rather than in tons, fill this table in terms of 1000 cubic meters per year.**

"Other disposal"- operations aimed at final management of waste that cannot be recovered, comprising mostly different waste processing peocedures and waste landfilling. Amount of waste presented is way of managing of waste on landfill.

Time series data on the indicators for 1990-2010, Table 2b. Final waste disposal: Management of non-hazardous industrial waste: (Bosnia and Herzegovina)

	Unit	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
4	Total amount generated	1000 t/ year										44,522.50	50,767.50	
5	Of which recycling	1000 t/ year										NA	NA	
6	Of which composting	1000 t/ year										NA	NA	
7	Of which incineration- without energy recovery	1000 t/ year										NA	NA	
8	Of which incineration with energy recovery	1000 t/ year										NA	NA	
9	Of which landfilling on a controlled site	1000 t/ year										NA	NA	
10	Of which landfilling on a non- controlled site	1000 t/ year										NA	NA	
11	Of which other disposal (specify in the footnote, please)	1000 t/ year										NA	NA	

Note: Definitions are presented in sheet t1a. In case different definitions are applied in the country, specify, please. Please explain the category "Other disposal". Please insert any additional information necessary for explanation of figures presented. **Non-hazardous industrial waste is calculated using the data from Table 1: Row 14 - row 15 - row 11 + row 12. In the case that the data on the hazardous part of municipal waste is not available, use formula Row 14 - row 15 -row 11 with comment that hazardous part of municipal waste is "double-counted".**

Statistics conducted a new annual statistical survey: "Management of industrial waste". The first data will be published in March 2012, reference 2010.

Time series data on the indicators for 1990-2010, Table 3. Transboundary movements of hazardous waste : (Bosnia and Herzegovina)

	Unit	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
5	Import of hazardous waste	1000 t/ year			0	0	0	0	0	0	0	0	0	
6	Export of hazardous waste	m3			1830	6295	7094.3	6560	6660	4447.4	4980.6	3145	4870	
7	Import - export	1000 t/ year			1830	6295	7094.3	6560	6660	4447.4	4980.6	3145	4870	
8	Total hazardous waste treated in the country	1000 t/ year			0	0	0	0	0	0	0	0	0	
9	Of which recycling	1000 t/ year												
10	Of which incineration	1000 t/ year												
11	Of which landfilling	1000 t/ year												
12	Of which other disposal (specify in footnote, please)	1000 t/year												

Notes:

Please use the definition of hazardous waste in accordance with the Basel Convention **on the Control of Transboundary Movements of Hazardous Wastes and their Disposal**. If data according to the Basel Convention are not available, amounts can be given according to national or any other international definition, but should be labelled accordingly. Other definitions are presented in sheet t1a. In the case that different definitions are applied in the country, specify, please. Please explain the category "Other disposal". Please insert any additional information necessary for explanation of figures presented. **When filling this table, data from national reports of your country to the secretariat of Basel Convention could be used; see <http://www.basel.int/countries>. Row 8 is calculated according to the following formula: Row 15 from table t1 + row 5 from this table - row 6 from this table.**