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NATIONAL REVIEW OF THE APPLICATION OF ENVIRONMENTAL INDICATORS

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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	C. Publication of the indicator in statistical compendiums and state-of-the-environment reports
BOD and concentration of ammonium in rivers	**Agency of Env. and Forestry is in juridiction of Ministry of Env. and Forestry.There is a Contract between Ministry of Env. and the other Institutes to collect the data monitoring as Institute of Puplic Health, Ins. Energy and Water, Institute of Geology AEF is responsible for establishing the national list of environmental indicators**	**ISO 17025 Agency of Env. and Forestry is accreditated and use ISO methods for analysis of Waters .**	**Indicators was published for the first time in the Environmental State Report 2008, Electronic address:wwwaefalbania.org**
Nutrients in fresh water	**It is a corporation between Ministry of Env. and Forestry and Ministry of Agriculture**	**….**	**….**
Nutrients in coastal seawaters	**….**	**…. ISO 17025 Agency of Env. and Forestry is accreditated and use ISO methods for analysis of Waters .**	**Indicators was published for the first time in the Environmental State Report 2008. Electronic address:wwwaefalbania.org….**
Area affected by soil erosion	**….**	**….**	**….**
Pesticide use	**….**	**….**	**….**

Consumption of ozone-depleting substances	**It is a Project in corporation of Ministry of Environment and Forestry,Concumption of ozone-depleting substances, Montreal Protocol**	**….**	**….**

Question A.	Effective inter-agency cooperation mechanisms to produce the indicator

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.

Question B.	Data quality assurance and control procedures for the production of the indicator

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.

Question C.	Publication of the indicator in statistical compendiums and state-of-the-environment reports

Please present the evidence of the indicator publication in statistical compendiums and state-of-the-environment reports (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.

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

Time series data on the indicators for 1990-2010, Table 1. Biochemical oxygen demand (BOD_5) and concentration of ammonium in rivers: *Albania*

Name of river	**Drini**												
Distance to mouth or downstream frontier (km)	225												
	Unit	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sampling frequency - average	Per sampling period										6	3	3	3
BOD_5 (S SH EN 1899 – 1: 2002)	Mg of O_2 /liter										1,11	0,99	0,96	2,34
Ammonium (ISO 7150/1)	µg of N/liter										17,5	20	19	29

Name of river	**Mati**												
Distance to mouth or downstream frontier (km)	78,6												
	Unit	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sampling frequency - average	Per sampling period										6	3	3	3
BOD_5	Mg of O_2 /liter										1,06	1,74	1,32	1,29
Ammonium	µg of N/liter										18,7	37,5	38	19,7

Name of river	**Vjosa**												
Distance to mouth or downstream frontier (km)	131												
	Unit	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010

Sampling frequency - average	Per sampling period										5	3	3	3
BOD_5	Mg of O_2 /liter										1,26	1,62	1,3	0,87
Ammonium	µg of N/liter										18	22	20,6	24,8

Notes:
Countries are asked to report on at least three large rivers in order to have a balanced representation of water quality. Data for more rives can be filled if the country decides to do so. Data should represent the

Glossary:
BOD_5: Biochemical oxygen demand – amount of dissolved oxygen required by organisms for the aerobic decomposition of organic matter present in water. This is measured at 20 degree Celsius for the period of
Ammonium: Ion NH_4^+.

Time series data on the indicators for 1990-2010, Table 2a. Nutrients in freshwater - rivers: *Albania*

Name of river	Drini												
Distance to mouth or downstream frontier (km)	225												
	Unit	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sampling frequency - average	Per sampling period										6	3	3	3
Phosphates as P ISO 6878	µg/liter										15	16	15	29
Nitrates (NO3) ISO 7890/3	µg/liter										160	175	180	250

Name of river	Mati												
Distance to mouth or downstream frontier (km)	78,6												
	Unit	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sampling frequency - average	Per sampling period										6	3	3	3
Phosphates as P	µg/liter										15	19	20	26,7
Nitrates (NO3)	µg/liter										192	180	182	667

Name of river	Vjosa												
Distance to mouth or downstream frontier (km)	131												
	Unit	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sampling frequency - average	Per sampling period										6	3	3	3
Phosphates as P	µg/liter										18	19,5	20.5	26

Nitrates (NO3)	µg/liter										70	110	113	371

Note:
Note: Average values of concentrations for sampling period should be filled in. Please specify if the sampling period concerns the whole year or the seasonal period. Countries are asked to report on at least two aquifers in order to have a balanced representation of ground water quality. Data for more aquifers can be filled if the country decides to do so. Please fill in one sheet for each selected aquifer. For each aquifer, data from at least one measuring station should be filled in. Data for more measuring stations can be filled if the country decides to do so. If available, the map showing the location of measuring stations should be added. Type of measuring station should be presented in compliance with national legislation (including explanation) Analytical method for determining nitrates should be compliant with ISO 7890-3: 1988; if different method is used, please specify.

Time series data on the indicators for 1990-2010, Table 3. Nutrients in coastal seawaters: *Albania*

Name of coastal zone	Saranda												
	Unit	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Number of selected sampling points (from which average concentrations are calculated)							2	2	2	2	2	2	2	
Sampling frequency – mean	Per year						4	4	4	4	4	4	4	
Number of analyses - average	Per year						8	8	8	8	8	8	8	
Total phosphorus as P – Summer	µg/liter							12,5	16	6	91,5	21	19	22
Total nitrogen as N - Summer	µg/liter													
Total phosphorus as P – Autumn	µg/liter							22,5	17,5	7	69	10,5	18	19
Total nitrogen as N - Autumn	µg/liter													
Total phosphorus as P – Winter	µg/liter							15	16,5	5	64	7	9,5	23,5
Total nitrogen as N - Winter	µg/liter													
Total phosphorus as P – Spring	µg/liter							20	17	11,5	37	7,5	14	8,5
Total nitrogen as N - Spring	µg/liter													

Notes:

Average values of concentrations from all selected sampling points for summer, winter, autumn and spring period should be filled in. In the case of high number of sampling points on the coastal zone, the countries should select at least five representative points for the calculation of average concentrations to have a balanced representation of water quality. Data for more sampling points can be used for the calculation of average concentrations if the country decides to do so. Please fill in one sheet for each coastal zone. If available, the map showing the location of sampling points should be added.
Methods of measurement should be specified. It is recommended that analytical method for determining nitrates should be compliant with ISO 7890-3: 1988 and analytical method for determining phosphates should be compliant with ISO 6878: 2004. Preferably, reference methods as agreed upon in the Joint monitoring program established within the framework of the OSPAR Convention (http://www.ospar.org).

Time series data on the indicators for 1990-2010, Table 4. Area affected by erosion: *Albania*

Areas affected by water erosion														
	Unit	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total agricultural land	Km^2			699	699	699	699	699	699	699	698	697	696	
No affect (tolerable)	Km^2													
Share in total agricultural land	%													
Light affect	Km^2													
Share in total agricultural land	%													
Moderate affect	Km^2													
Share in total agricultural land	%													
Strong affect	Km^2													
Share in total agricultural land	%													
Extreme affect	Km^2													
Share in total agricultural land	%													
Total affect	Km^2													
Share in total agricultural land	%													
Areas affected by wind erosion														
	Unit	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total agricultural land	Km^2													
No affect (tolerable)	Km^2													
Share in total agricultural land	%													

Light affect	Km^2													
Share in total agricultural land	%													
Moderate affect	Km^2													
Share in total agricultural land	%													
Strong affect	Km^2													
Share in total agricultural land	%													
Extreme affect	Km^2													
Share in total agricultural land	%													
Total affect	Km^2													
Share in total agricultural land	%													
Total areas affected by erosion (water and wind)														
	Unit	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total agricultural land	Km^2													
No affect (tolerable)	Km^2													
Share in total agricultural land	%													
Light affect	Km^2													
Share in total agricultural land	%													
Moderate affect	Km^2													
Share in total agricultural land	%													
Strong affect	Km^2													

Share in total agricultural land	%														
Extreme affect	Km^2														
Share in total agricultural land	%														
Total affect	Km^2														
Share in total agricultural land	%														

Glossary:
Erosion: Water and wind erosion is measured as net loss of soil (in tons per hectare per year).
Erosion – Classification (the same for both water and wind erosion):
No affect (tolerable): Net loss lower than 6 tons/hectare/year
Light affect: Net loss 6.0 – 10.9 tons/hectare/year
Moderate affect: Net loss 11.0 – 21.9 tons/hectare/year
Strong affect: Net loss 22.0 – 32.9 tons/hectare/year
Extreme affect: Net loss higher than 33 tons/hectare/year
Note: If your country applies classification for the severity of erosion different from that presented above, provide the data according to the national classification and give the detailed explanation of the national system. If data for 1990 or other year is not available, fill in "n.a.".

More information:
Assessment and Reporting on Soil Erosion, Technical Report 94/2003, European Environment Agency 2003, http://www.eea.europa.eu/publications/technical_report_2003_94

Time series data on the indicators for 1990-2010, Table 5. Pesticide use: *(Albania)*

Substance	Unit	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Insecticides – consumption	ton													
Herbicides and desiccants – consumption	ton													
Fungicides and bactericides – consumption	ton													
Plant regulators – consumption	ton													
Rodenticides – consumption	ton													
Others (e.g. mineral oils) – consumption	ton													
Total consumption (all pesticides)	ton													
Total arable and permanent cropland	1000 hectare			419	400	395	399	385	400	397	387	400	402	
Pesticide use per unit of land	Kg/hectare													

Note:

Data should relate to pesticide consumption in agriculture, forestry and gardening. Otherwise, kindly indicate if data refer to sales, distribution or imports for use in particular sectors. If data for 1990 or other year is not available, fill in "n.a.".
Data should be expressed in active ingredients (A.I.). Therefore, calculate the volume of A.I. contained in individual products and then include it in the relevant group in table 3. Alternatively, the data may be reported by: consumption in commercial products; sales; distribution or imports for use in the agricultural sector.

Glossary:	
Insecticide:	Pesticide used against insects
Herbicide:	Pesticide against unwanted plants (weed)
Desiccant:	Hygroscopic substance that induces or sustains a state of dryness
Fungicide:	Pesticide for the control of fungi and oomycetes
Bactericide:	Pesticide for the control of bacteria
Plant regulator:	Pesticide that retards the growth of plants
Rodenticide:	Pesticide for the control of rodens

Active Ingredients: A pesticide product has two main components: the Active Ingredient(s) and the inert (other) ingredient(s). The active ingredient is the specific compound designed to adversely effect a pest. Pesticide active ingredients are generally not applied in their pure form, but are usually included in formulations with inert ingredients that improve their storage, handling, application, effectiveness, or safety. Content of active ingredient is obviously presented either in pesticide product documentation or on the pesticide product packaging.

More information:

Comprehensive information on pesticides can be found at the FAO page http://www.fao.org/agriculture/crops/core-themes/theme/pests/en.

The detailed list of pesticides including chemical substances and example of trade names of commercial products can be found at http://www.fao.org/economic/ess/ess-agri/ess-resource-meth/en (Questionnaires, Pesticides, 2010, Annex I)

Time series data on the indicators for 1990-2010, Table 6a. Consumption of ozone-depleting substances (calculated levels in tons of substances):
Albania

Substance	Unit	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
CFCs	ton					55,32	36,59	36,57	14,34	15,2	4,4	2,2	0	
Halons														
Other fully halogenated CFCs														
Carbon tetrachloride														
Methyl chloroform														
HCFCs														
HBFCs														
Bromochloromethane														
Methyl bromide														

Note:

Calculated levels of consumption mean production plus imports minus export of controlled substances. However, any export of controlled substances to non-Parties (to the Montreal Protocol) is not to be subtracted in calculating the consumption level of the exporting Party. If data for 1990 or other year is not available, fill in "n.a.". Consumption is not to be multiplied by ODP.

Glossary:

CFCs: Chlorofluorocarbons (CFC-11, CFC-12, CFC-113, CFC-114 and CFC-115)
Halons: halon 1211, halon 1301 and halon 2402
Other fully halogenated CFCs: CFC-13, CFC-111, CFC-112, CFC-211, CFC-212, CFC-213, CFC-214, CFC-215, CFC-216, CFC-217
HCFCs: Hydroclorofluorocarbons
HBFCs: Hydrobromofluorocarbons
ODP: Ozone depleting potential

Time series data on the indicators for 1990-2010, Table 6b. Consumption of ozone-depleting substances (calculated levels in tons of ODP):
(Albania)

Substance	Unit	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
CFCs	Ton of ODP													
Halons														
Other fully halogenated CFCs														
Carbon tetrachloride														
Methyl chloroform														
HCFCs														
HBFCs														
Bromochloromethane														
Methyl bromide														
Total														

Note: Values presented in Table 6a should be multiplied by appropriate values of ODP, as presented in the next sheet.

ODP Values of the Most Important ODS

Note: Only the ODP values of the most important ODS are listed below. Other ODS are rarely used and thus of little significance for reporting and assessing compliance. For a complete list of ODP values of controlled substances refer to the Annexes of the Montreal Protocol.

Group of substances	Substance	ODP
Annex A, Group I	CFC-11	1.0
	CFC-12	1.0
	CFC-113	0.8
	CFC-114	1.0
	CFC-115	0.6
Annex A, Group II	Halon-1211	3.0
	Halon-1301	10.juin
	Halon-2402	06.juin
Annex B, Group I	CFC-13	1.0
	CFC-111	1.0
	CFC-112	1.0
	CFC- 211 – CFC-217	1.0
Annex B, Group II	Carbon tetrachloride	01.janv
Annex B, Group III	Methyl chloroform	0.1
	HCFC-21	0.04
	HCFC-22	0.055
	HCFC-31	0.02

Annex C, Group I	HCFC-123	0.02
	HCFC-124	0.022
	HCFC-133	0.06
	HCFC-141b	0.11
	HCFC-142b	0.065
	HCFC-225	0.07
	HCFC-225ca	0.025
	HCFC-225cb	0.033
Annex E, Group I	Methyl bromide	0.6

Source: 1997 Update of the Handbook for the International Treaties for the Protection of the Ozone Layer, Montreal Protocol, Annexes A, B, C and E

More information:
Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer, Eighth edition, UNEP 2009 (in English), http://ozone.unep.org/Publications
Handbook on Data Reporting under the Montreal Protocol, UNEP 1999 (in English and Russian); http://ozone.unep.org/Data_Reporting/Data_Reporting_Tools.