ANNEXES

INVENTORY OF TRANSBOUNDARY RIVERS AND LAKES

This inventory contains major transboundary rivers, including their major transboundary tributaries, discharging into the basins of the following seas: the White Sea, the Barents Sea and the Kara Sea; the Sea of Okhotsk and the Sea of Japan; the Aral Sea and other transboundary surface waters in Central Asia; the Caspian Sea; the Black Sea; the Mediterranean Sea; the North Sea and Eastern Atlantic; and the Baltic Sea. The inventory also includes lakes located within the basins of these seas. The selection of water bodies included in this inventory and analysed in this first Assessment was made on the basis of submissions by the concerned countries and reflects countries' priorities.

The first order rivers are presented **in bold.** The assessment of water bodies *in italics* was not included in the present publication due to lack of available information.

TRANSBOUNDARY WATERS IN THE BASINS OF THE BARENTS SEA, THE WHITE SEA AND THE KARA SEA

Basin/sub-basin(s)	Total area (km²)	Recipient	Riparian countries	Lakes in the basin
Oulanka	…[1]	White Sea	FI, RU	…
Tuloma	21,140	Kola Fjord > Barents Sea	FI, RU	…
Jacobselv	400	Barents Sea	NO, RU	…
Paatsjoki	18,403	Barents Sea	FI, NO, RU	Lake Inari
Näätämö	2,962	Barents Sea	FI, NO, RU	…
Teno	16,386	Barents Sea	FI, NO	…
Yenisey	2,580,000	Kara Sea	MN, RU	…
- Selenga	447,000	Lake Baikal > Angara > Yenisey > Kara Sea	MN, RU	
Ob	2,972,493	Kara Sea	CN, KZ, MN, RU	
- Irtysh	1,643,000	Ob	CN, KZ, MN, RU	
- Tobol	426,000	Irtysh	KZ, RU	
- Ishim	176,000	Irtysh	KZ, RU	

[1] 5,566 km² to Lake Paanajärvi and 18,800 km² to the White Sea.

TRANSBOUNDARY WATERS IN THE BASINS OF THE SEA OF OKHOTSK AND THE SEA OF JAPAN

Basin/sub-basin(s)	Total area (km²)	Recipient	Riparian countries	Lakes in the basin
Amur	1,855,000	Sea of Okhotsk	CN, MN, RU	…
- Argun	164,000	Amur	CN, RU	…
- Ussuri	193,000	Amur	CN, RU	Lake Khanka
Sujfun	*18,300*	*Sea of Japan*	*CN, RU*	…
Tumen	33,800	Sea of Japan	CN, KP, RU	…

TRANSBOUNDARY WATERS IN THE BASIN OF THE ARAL SEA AND OTHER TRANSBOUNDARY SURFACE WATERS IN CENTRAL ASIA

Basin/sub-basin(s)	Total area (km²)	Recipient	Riparian countries	Lakes in the basin
Amu Darya	…[1]	Aral Sea	AF, KG, TJ, UZ, TM	Aral Sea
- Surkhan Darya	13,500	Amu Darya	TJ, UZ	
- Kafirnigan	11,590	Amu Darya	TJ, UZ	
- Pyanj	113,500	Amu Darya	AF, TJ	
-- Bartang	…	Pyanj	AF, TJ	
-- Pamir	…	Pyanj	AF, TJ	
- Vakhsh	39,100	Amu Darya	KG, TJ	
Zeravshan	…[1]	Desert sink	TJ, UZ	
Syr Darya	…[1]	Aral Sea	KZ, KG, TJ, UZ	
- Naryn	…	Syr Darya	KG, UZ	
- Kara Darya	28,630	Syr Darya	KG, UZ	
- Chirchik	14,240	Syr Darya	KZ, KG, UZ	
-Chatkal	7,110	Chirchik	KG, UZ	
Chu	62,500	Desert sink	KZ, KG	
Talas	52,700	Desert sink	KZ, KG	
Assa	…	*Desert sink*	*KZ, KG*	
Ili	413,000	Lake Balqash	CN, KZ	Lake Balqash
Murgab	46,880	Desert sink	AF, TM	
- Abikajsar	…	*Murgab*	*AF, TM*	
Tejen	70,260	Desert sink	AF, IR, TM	

[1]The basin area is difficult to determine, see the assessment in the text.

TRANSBOUNDARY WATERS IN THE BASIN OF THE CASPIAN SEA

Basin/sub-basin(s)	Total area (km²)	Recipient	Riparian countries	Lakes in the basin
Ural	231,000	Caspian Sea	KZ, RU	…
- Ilek	…	Ural	KZ, RU	…
Atrek	27,300	Caspian Sea	IR, TM	…
Astara Chay	*242*	*Caspian Sea*	*AZ, IR*	…
Kura	188,000	Caspian Sea	AM, AZ, GE, IR, TR	Lake Jandari, *Lake Kartsakhi, Araks Arpachay Baraji reservoir, Araks Govsaghynyn reservoir*
- Iori	5,255	Kura	AZ, GE	
- Alazani	11,455	Kura	AZ, GE	
- Debet	4,100	Kura	AM, GE	
- Agstev	2,500	Kura	AM, GE	
- Potskhovi	1,840	Kura	GE, TR	
- Ktsia-Khrami	8,340	Kura	AM, GE	
- Araks	102,000	Kura	AM, AZ, IR, TR	
-- Akhuryan	9,700	Araks	AM, TR	
-- Arpa	2,630	Araks	AM, AZ	
-- Vorotan (Bargushad)	5,650	Araks	AM, AZ	
-- Voghji	1,175	Araks	AM, AZ	
-- Kotur (Qotur)	…	*Araks*	*IR, TR*	
Samur	7,330	Caspian Sea	AZ, RU	…
Sulak	15,200	Caspian Sea	GE, RU	…
- Andis-Koisu	4,810	Sulak	GE, RU	…
Terek	43,200	Caspian Sea	GE, RU	…
Malyi Uzen	13,200	Kamysh-Samarsk Lakes	KZ, RU	*Lakes of Kamysh-Samarsk*
Bolshoy Uzen	14,300	Kamysh-Samarsk Lakes	KZ, RU	

TRANSBOUNDARY WATERS IN THE BASIN OF THE BLACK SEA

Basin/sub-basin(s)	Total area (km²)	Recipient	Riparian countries	Lakes in the basin
Rezvaya	740	Black Sea	BG, TR	…

Danube	801,463	Black Sea	AL, AT, BA, BG, CH, CZ, DE, HU, HR, MD, ME, MK, IT, PL, RO, RS, SK, SI, UA	Lake Iron Gates I and II, Lake Neusiedl
- Lech	*4,125*	*Danube*	*AT, DE*	…
- Inn	*26,130*	*Danube*	*AT, CH, DE, IT*	…
- Morava	*26, 578*	*Danube*	*AT, CZ, PL, SK*	…
- Raab/Raba	*10,113*	*Danube*	*AU, HU*	…
- Vah	*19,661*	*Danube*	*PL, SK*	…
- Ipel/Ipoly	5,151	Danube	HU, SK	…
- Drava and Mura	*41,238*	*Danube*	*AT, HU, HR, IT, SI*	…
- Tisza	157,186	Danube	HU, RO, RS, SK, UA	…
- Somes/Szamos	16,046	Tisza	HU, RO	…
- Mures/Maros	30,195	Tisza	HU, RO	…
- Sava	95,713	Danube	AL, BA, HR, ME, RS, SI	…
- Velika Morava	37,444	Danube	BG, ME, MK, RS	…
- Timok	4,630	Danube	BG, RS	…
- Siret	47,610	Danube	RO, UA	…
- Prut	27,820	Danube	MD, RO, UA	Stanca-Costesti Reservoir
Kahul	…	Lake Kahul	MD, UA	*Lake Kahul*
Yalpuh	…	Lake Yalpuh	MD, UA	*Lake Yalpuh*
Cogilnik	6,100	Black Sea	MD, UA	…
Dniester	72,100	Black Sea	UA, MD	…
- Yahorlyk	*…*	*Dniester*	*UA, MD*	…
- Kuchurhan	…	Dniester	UA, MD	…
Dnieper	504,000	Black Sea	BY, RU, UA	…
- Pripyat	114,300	Dnieper	BY, UA	…
Elancik	*900*	*Black Sea*	*RU, UA*	…
Mius	*6,680*	*Black Sea*	*RU, UA*	…
Don	422,000	Black Sea	RU, UA	…
- Siversky Donets	98,900	Don	RU, UA	…
Psou	421	Black Sea	RU, GE	…
Chorokhi/Coruh	22,100	Black Sea	GE, TR	…
- Machakheliscka li	369	Chorokhi/Coruh	GE, TR	…

TRANSBOUNDARY WATERS IN THE BASIN OF THE MEDITERRANEAN SEA

Basin/sub-basin(s)	Total area (km²)	Recipient	Riparian countries	Lakes in the basin
Ebro	85,800	Mediter. Sea	AD, ES, FR	...
Rhone	98,000	Mediter. Sea	CH, FR, IT	Lake Emosson, Lake Geneva
Roia	*600*	*Mediter. Sea*	*FR, IT*	...
Po	74,000	Mediter. Sea	AT, CH, FR, IT	Lake Maggiore, Lake Lugano
Isonzo	3,400	Mediter. Sea	IT, SI	
Krka	2,500	Mediter. Sea	BA, HR	
Neretva	8,100	Mediter. Sea	BA, HR	
Drin	17,900	Mediter. Sea	AL, GR, ME, MK, RS	Lake Ohrid, Lake Prespa, Lake Skadar
Vijose	6,519	Mediter. Sea	AL, GR	
Vardar	23,750	Mediter. Sea	GR, MK	Lake Dojran
Struma	18,079	Mediter. Sea	BG, GR, MK, RS	
Nestos	5,613	Mediter. Sea	BG, GR	
Maritza	52,600	Mediter. Sea	BG, GR, TR	
- Arda	...	Maritza	BG, GR	
- Tundja	...	Maritza	BG, TR	

TRANSBOUNDARY WATERS IN THE BASINS OF THE NORTH SEA AND EASTERN ATLANTIC

Basin/sub-basin(s)	Total area (km²)	Recipient	Riparian countries	Lakes in the basin
Glama	42,441	North Sea	NO, SE	...
Klaralven	11,853 [1]	North Sea	NO, SE	...
Wiedau	1,341	North Sea	DE, DK	...
Elbe	148,268	North Sea	AT, CZ, DE, PL	...
Ems	17,879 [2]	North Sea	**DE, NL**	...
Rhine	197,100 [3]	North Sea	AT, BE, CH, DE, FR, IT, LI, LU, NL	Lake Constance
- Moselle	28,286	Rhine	BE, DE, FR, LU	...
- Saar	7,431	Moselle	FR, DE	...
- Vechte	2,400	Swarte water > Ketelmeer > Ijs-selmeer > North Sea	DE, NL	...
Meuse	34,548 [4]	North Sea	BE, FR, NL	...
Scheldt	36,416 [5]	North Sea	BE, FR, NL	...
Yser	[6]	North Sea	BE, FR	...
Bidasoa	*500*	*Eastern Atlantic*	*ES, FR*	...
Mino	17,080	Eastern Atlantic	ES, PT	Frieira reservoir
Lima	2,480	Eastern Atlantic	ES, PT	Alto Lindoso reservoir
Douro	97,600	Eastern Atlantic	ES, PT	Miranda reservoir
Tagus	80,600	Eastern Atlantic	ES, PT	Cedillo reservoir
Guadiana	66,800	Eastern Atlantic	ES, PT	...
Erne	4,800	Eastern Atlantic	GB, IE	...
Foyle	2,900	Eastern Atlantic	GB, IE	...
Bann	5,600	Eastern Atlantic	GB, IE	...
Castletown	*400*	*Eastern Atlantic*	*GB, IE*	...
Fane	*200*	*Eastern Atlantic*	*GB, IE*	...
Flurry	*60*	*Eastern Atlantic*	*GB, IE*	...

[1] Basin area until Lake Värnern.
[2] Area for the Ems River Basin District.
[3] Area for the Rhine River Basin District.
[4] Area for the Meuse River Basin District.
[5] Area for the Scheldt River Basin District.
[6] The Yser is part of Scheldt River Basin District.

TRANSBOUNDARY WATERS IN THE BASIN OF THE BALTIC SEA

Basin/sub-basin(s)	Total area (km²)	Recipient	Riparian countries	Lakes in the basin
Torne	40,157	Baltic Sea	FI, NO, SE	
Kemijoki	51,127	Baltic Sea	FI, NO, RU	
Oulujoki	22,841	Baltic Sea	FI, RU	
Jänisjoki	3,861	Lake Ladoga	FI, RU	
Kiteenjoki-Tohmajoki	1,595	Lake Ladoga	FI, RU	
Hiitolanjoki	1,415	Lake Ladoga	FI, RU	
Vuoksi	68,501	Lake Ladoga	FI, RU	Lake Pyhäjärvi and Lake Saimaa
Juustilanjoki	*296*	Baltic Sea	FI, RU	Lake Nuijamaanjärvi
Rakkonlanjoki	215	Baltic Sea	FI, RU	
Urpanlanjoki	*557*	Baltic Sea	FI, RU	
Saimaa Canal including Soskuanjoki	*174*	*Baltic Sea*	*FI, RU*	
Tervajoki	*204*	*Baltic Sea*	*FI, RU*	
Vilajoki	*344*	*Baltic Sea*	*FI, RU*	
Kaltonjoki (Santajoki)	*187*	*Baltic Sea*	*FI, RU*	
Vaalimaanjoki	*245*	*Baltic Sea*	*FI, RU*	
Narva	53,200	Baltic Sea	EE, LV, RU	Narva reservoir and Lake Peipsi
Salaca	*2,100*	*Baltic Sea*	*EE, LV*	
Gauja/Koiva	8,900	Baltic Sea	EE, LV	
Daugava	58,700	Baltic Sea	BY, LT, LV, RU	Lake Drisvyaty/ Drukshiai
Lielupe	17,600	Baltic Sea	LT, LV	
- Nemunelis	4,047	Lielupe	LT, LV	
- Musa	5,463	Lielupe	LT, LV	
Venta	14,292[1]	Baltic Sea	LT, LV	
Barta	…	Baltic Sea	LT, LV	
Sventoji	…	Baltic Sea	LT, LV	
Neman	97,864	Baltic Sea	BY, LT, LV, PL, RU	Lake Galadus
Pregel	15,500	Baltic Sea	LT, RU, PL	
Prohladnaja	*600*	*Baltic Sea*	*RU, PL*	

Vistula	194,424	Baltic Sea	BY, PL, SK, UA	
- Bug	39,400	Vistula	BY, PL, UA	
- Dunajec	4726.7	Vistula	PL, SK	
-Poprad	2,077	Dunajec	PL, SK	
Oder	118,861	Baltic Sea	CZ, DE, PL	
- Neisse	*…*	*Oder*	*CZ, DE, PL*	
- Olse	*…*	*Oder*	*CZ, PL*	

[1] For the Venta River Basin District, which includes the basins of the Barta/Bartuva and Sventoji rivers.

LIST OF COUNTRY CODES

AFGHANISTAN	AF
ALBANIA	AL
ANDORRA	AD
ARMENIA	AM
AUSTRIA	AT
AZERBAIJAN	AZ
BELARUS	BY
BELGIUM	BE
BOSNIA AND HERZEGOVINA	BA
BULGARIA	BG
CHINA	CN
CROATIA	HR
CYPRUS	CY
CZECH REPUBLIC	CZ
DENMARK	DK
ESTONIA	EE
FINLAND	FI
FRANCE	FR
GEORGIA	GE
GERMANY	DE
GREECE	GR
HUNGARY	HU
ICELAND	IS
ISLAMIC REPUBLIC OF IRAN	IR
IRELAND	IE
ITALY	IT
KAZAKHSTAN	KZ
DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA	KP
KYRGYZSTAN	KG
LATVIA	LV
LIECHTENSTEIN	LI
LITHUANIA	LT
LUXEMBOURG	LU
THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA	MK
MALTA	MT
MOLDOVA	MD
MONACO	MC
MONGOLIA	MN
MONTENEGRO	ME
NETHERLANDS	NL
NORWAY	NO
POLAND	PL
PORTUGAL	PT
ROMANIA	RO
RUSSIAN FEDERATION	RU
SAN MARINO	SM
SERBIA	RS
SLOVAKIA	SK
SLOVENIA	SI
SPAIN	ES
SWEDEN	SE
SWITZERLAND	CH
TAJIKISTAN	TJ
TURKEY	TR
TURKMENISTAN	TM
UKRAINE	UA
UNITED KINGDOM	GB
UZBEKISTAN	UZ

ACRONYMS

AOX	Adsorbable organic halogen compounds
BGS	British Geological Survey
BOD	Biochemical oxygen demand
BOD_{21}	Biochemical oxygen demand for 21 days
BOD_5	Biochemical oxygen demand for 5 days
BOD_7	Biochemical oxygen demand for 7 days
COD	Chemical oxygen demand
COD_{Cr}	Chemical oxygen demand, using potassium dichromate ($K_2Cr_2O_7$) as oxidizing agent
COD_{Mn}	Chemical oxygen demand, using potassium permanganate ($KMnO_4$) as oxidizing agent
DDT	Mixture of isomers of dichloro-diphenyl-trichloro ethane
EECCA	Eastern Europe, Caucasus and Central Asia
EU	European Union
GEF	Global Environment Facility
HCB	Hexachlorobenzene
HCH	Hexachlorocyclohexane
HHQ	Absolute maximum water discharge
HQ	Maximum water discharge
INWEB	International Network of Water-Environment Centers for the Balkans
IRBD	International River Basin District according to the definition of the WFD
MAC	Maximum allowable concentration (in case of oxygen: minimum required concentration)
MHQ	Average maximum water discharge
MNQ	Average minimum water discharge
MQ	Average water discharge
NQ	Minimum water discharge
p.e.	Population equivalent
PAH	Polycyclic aromatic hydrocarbons
PCBs	Polychlorinated biphenyls
POPs	Persistent organic pollutants
Q_{av}	Average water discharge
Q_{max}	Maximum water discharge
Q_{min}	Minimum water discharge
RBD	River Basin District according to the definition of the WFD
SEE	South-Eastern Europe
SHMU	Slovak Hydrometeorological Institute
SYKE	Finnish Environment Institute
TNMN	Transnational Monitoring Network
TOC	Total organic carbon
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNESCO	United Nations Educational, Scientific and Cultural Organization
WFD	Water Framework Directive
WWAP	World Water Assessment Programme
WWDR	World Water Development Report

UNITS OF MEASUREMENT

ha	Hectare
t	Metric tonne
kg	Kilogram
g	Gram
mg	Milligram
µg	Microgram
m	Metre
m^3	Cubic metre
km	Kilometre
km^2	Square kilometre
l	Litre
ml	Millilitre
s	Second
h	Hour
a	year
°C	Degree Celsius