### • 国別環境情報整備調査、'93.10.25-10.31

### 3.5 NGOの活動

ブルガリアでは、NGOは国の環境政策に影響を与えるほど大きな役割を果たしている。 NGOのほとんどは改革以後設立され、その活動は急速に拡大し、会員の数も増えたが、現在 は会員数も減少傾向にあり、NGOと環境省およびNGO間でのコミュニケーションは殆どな されていない。

最も知られ、影響力のあるNGOは Bcoglasnostである。 Bcoglasnostは70の支部を持ち、その活動メンバーは15,000~17,000人、支援者は約50万人とされている。Bcoglasnost は1989年4月に設立され、おもな活動目的はブルガリアの生態の状況に関する情報の収集、分析とその結果を配布することである。その他には、The Wilderness Fund、The Bulgarian Society for Conservation of the Rhodope Mountains、The Bulgarian Society for the Protection of Birds 等があり、各々の分野で重要な役割を果たしている。

The Bulgarian Society for Conservation of the Rhodope Mountains は1990年に設立され、Rhodope 山近くの町に10の支部を持ち、約1,500人の会員をようし、Rhodope山の自然および文化的な財産の保護を主目的としている。

The Wilderness Fund は、1989年10月に設立され、生物学的多様性に関する12-15 人の専門家で構成された小さな組織で、自然保護区域の拡大をしようとしている。その他の活動としては、The Bulgarian Green Party と供に、ブルガリアの自然保護法のドラフトを作成している。さらに、絶滅に瀕した生物種の現地調査および対策の実施、バルカン諸国 (Albania, Yugoslavia, Greece and Bulgaria) の生物学的多様性会議を組織しようとしている。

### 4. 環境行政

### 4.1 環境行政機関

### 4.1.1 環境省の機能と組織

現在のブルガリアは1989年に社会主義体制から民主化への移行はしたものの、まだ旧体制の制度がそのまま受け継がれたものも多く、環境汚染の改善も余りはかどっていない。国家経済の沈滞や国営企業の民営化の遅れは環境対策の大きな障壁になっていると云える。ブルガリアの最初の環境法は1960年代に成立しており、大気、水と土壌の汚染防止と自然環境保護法が発布されている。

その後これ等は改訂されて基準値や排出規制だけではなく土地や水源の保護についても規 制される様になった。

重要な法律としては鉱山や採石場規制、森林の保護、水の供給管理、健康管理、開墾地や 牧場の保護、地域開発の管理、禁猟地、原子力の利用やブルガリアの領海権等がある。

一般基準は非常に厳しかったが、その実施能力はどの部門においても弱体であった。環境 省は新環境基準を設定しこれを施行していくことを考えている。

環境省は図4.1.1に示す組織であり環境行政に次ぎの権限を有する。これは官報100/1992 (添付資料)で告示されたブルガリア環境保護法に規程されている。

- ・許認可の発行
- ・ 法律の制定
- ・データベースの情報整備
- 大気・水の監視
- 廃棄物許可の監視
- ・工場の投棄監視
- 河川の水質管理
- ・自治体や工場からの排水許可

環境省の職員はソフィアの中央省内に 130人、16地方検査局に 500人を擁している。

1992年2月以降環境省は中央研究機関を分析試験室及び情報センターとして承認し、監視セクション、分析セクションと情報管理セクションの3セクションを置いた。モニタリングは20の汚染物質に限定しており、サンプルはセンターで分析され記録される。

この様に環境省の管理体制は整備されているものの、組織内での業務が重複したり、担当 責任の所在が混同したりということがまだ生じているようである。

### 4.1.2 地方機関の役割

環境省に所属する地方検査局は担当区域を河川の流域、都市部や郡部で分けられている。 検査局の主要業務には次のものがある。

- 日常の環境監視
- ・自治体や工場及び指定された水源地でのサンプリングポイントの汚染源の調査
- ・試験室を所有し、指定された項目の日常分析を行う
- 自治体や工場に対し排出許可を出す。
- ・汚染の許容レベルを設定しそれを越える場合は科料を徴収する。実際には殆どのものが 許容限界を越えているので税金で標準制裁として徴収され、更にそれを越えるものに追

徴していると云われている。

### 4.1.3 環境管理関連機関

ブルガリアの環境管理には他の東欧諸国と同じく環境省と連携して種々の機関がそれぞれ の担当範囲でこれにたずさわっている。

国内水委員会 (National Water Council) は水源利用を管理している。

厚生省は水供給システムと飲料水質基準を設定し、家庭への給水水水質の管理には特別の機能を持っている。厚生省の管理下にある健康予防と国立衛生管理局は環境整備、職業健康管理、伝染病、栄養管理、学童健康などについての機関を持っている。またこの管理局は大気、水、土壌の質の資料を収集しており、食品衛生や職場環境の管理に責任を持っている。

森林や保護地区の管理は森林委員会に属し、鉱物資源の採掘管理は地質・鉱物資源委員会に属し、原子力の管理は原子力委員会の指導をうける。国の予算に限界があるので建設供給の調整を行っている。

### 4.2 環境影響評価制度

環境管理の基本となる評価制度が1992~1993年にかけて整備され今後の管理行政の指標が制定されたが、まだその適用の例は極く限られたものであると云われている。

環境保護法としてブルガリアLaw 24が官報 No. 100/1992で公示され、この中に環境影響評価制度の概要が規定されている。評価制度の施行細則がLaw 24 Cとして法令No. 1/1992 で公示されている。

内容はECのそれに準じたもので環境汚染防止の面から非常に厳しいものであり、現在の重度の汚染の回復と、自然保護の徹底を期しているが、実際の適用にあたってはまだまだ問題が 山積みしている。

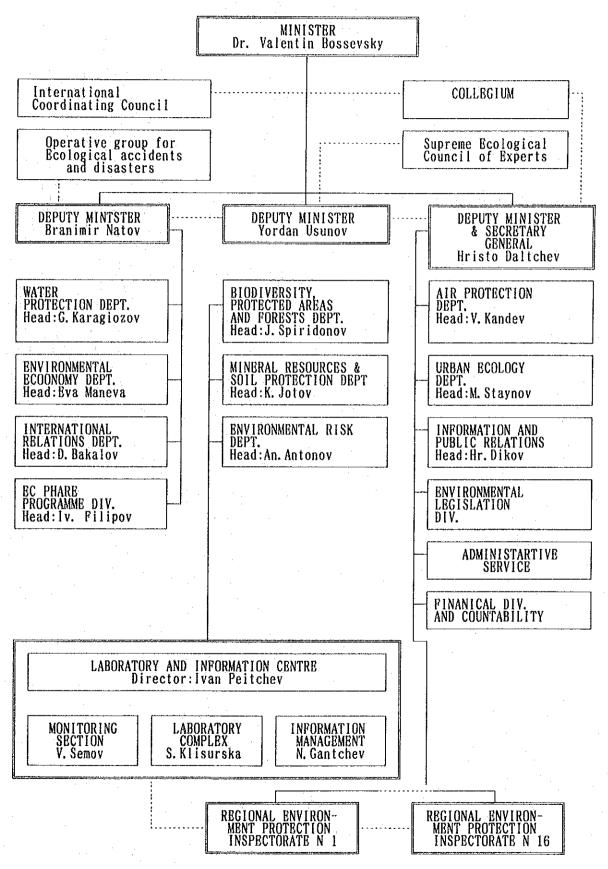
当面は新規の計画に適用し、既存のものに対しては転換期の処置として応分の考慮が払われ ている模様である。

高硫黄燃料の使用による重工業からの排煙、下水処理整備の容量不足から未処理下水の放流、 鉱山、製錬所からの重金属排水等はまだ十分な対策もとられず操業を継続している現状である。

このような工業汚染だけでなく農薬、化学肥料の使用管理も十分ではなく土壌汚染も著しく進行している。

参考資料として収録してある上記Law 24の原文については、環境保護法と環境影響評価を参 考資料編に添付している。

図4.1.1 環境省組織図 MINISTRY OF BNVIRONMENT OF BULGARIA



出典:ブルガリア環境省(1994)

### 資料編

### 目 次

### 調查団関連情報

1. 調査団員名簿	 53
2. 調査日程及び面会者リスト	 54
2. 調査日程及び面会者リスト	 59
	٠
参 考 資 料	
l スロヴァキア共和国	
1. National Council of Slovak Republic Act(Law) o Impact Assessment (1994年3月現在国会審議中) I ルーマニア	67
1. 保護地域のリスト 2. Order No.619 of 21, 09, 1992P	03
The Elaboration Procedure and Minimum Contents Studies and Analysis	14
ブルガリア共和国	
<ol> <li>Environmental Protection Act(Gazette No. 100/10,</li> <li>Regulation No. 1 of 28 December 1992(Environmen</li> </ol>	65
Assessment)	78

### 譋査団関連情報

### 調査目的

国際協力において、環境配慮の強化と環境保全プロジェクトの拡充が重要になってきており、途上国の環境に関する基礎情報の整備が重要課題の一つとなっている。よって、今回は東欧 3 ヵ国(スロヴァキア共和国、ルーマニア、ブルガリア共和国)の環境問題の現況、環境行政の仕組み、環境法等の環境関連情報を体系的に収集、整理し、同国に対する協力案件の形成並びに適切な環境配慮を行った事業の計画及び実施に資する。

### 1. 調査団員名簿

	氏	名	担当業務	所	属
(1)	雲見	昌弘	総 括	国際協力事業団	企画部環境・女性課課長
(2)	本多	実	公 害		ィックコンサルタンツ ナル水資源環境部
(3)	平田	五郎	都市環境	株式会社パセッ	<b>,</b>
(4)	細野	道明	自然環境	株式会社パシフ インターナショ	ィックコンサルタンツ ナル地域環境部

# 2. 調査日程および面会者リスト

(1) スロヴァキア調査日程および面会者リスト

	·			
画 份 地		午前:杉本充邦、北原恭子,高橋正義(東欧支援企画調查員) 午後:同上、Dr. Irene L. Murphy(Environmental Consultants)	Mr. Jan Smolen(Director, Environmental Projects Dept.), Mr. Busan Wunder(Deputy Director, Environmental Project Dept.), Mr. Bohuslav Bazuch(Waste Management Dept.), Mrs. Daniela Michalikova (Legislation Dept.), Mr. Dusan Bomba(ElA Dept.), Mr. Yalana Hudcouska(Territorial Dept.), Mrs. Zuzana Kasanicha(Environmental Development Dept.), Mr. Lubomir Ziak(Air Protection Dept.), Mrs. Danka Yassikova(Water Protection Dept.), Mr. Yan Yaniga(Environmental Policy Dept.), Mr. Vladimir Belovicc(Risk Factor and Industrial Accidents Dept.), Mr. Martiz Fodor(Slovak Environmental Agency), Mrs. Mary Arudtsen(Legal Advisor)	Dr. Ivan Dusa(Director, Information and Monitoring Dept.), Dr. Villiam Klescht(Nature and Landscape Protection Dept.), Dr. Kamil Vrana, Dr. Jozef Hodermarsky, Dr. Ladislav Andor (Division of Geology), Dr. Jan Janiga(Environmental Policy Dept.), Mr. Lubomir Ziak(Air Protection Dept.)  Mr. Juraj Lalik(Environmental Protection Manager)  Mr. Milan Kovac(Director)
訪 問 先	移動(Tokyo-Wien) JICAオーストリア事務所佐藤幹治所長 と調査日程の打合せ	JICAオーストリア事務所	午前:移動(Wien-Bratislava) 午後:Ministry of Environment in the Slovak Republic	午前: Ministry of Environment of the Slovak Republic
団	町	×	¥	*
ЯП	1994 2 月21日	2月22日	2 月23日	2 月24日

	<u> </u>		1	T
画	Bzazicek Vladimir(Environmental Dept.) Mr. Augustin Jambor(Direcor, Water Management Dept.), Norbert Halmo (Water Management Dept.), Stefan Palacka(Director, Plant Production	Dept.) Dr. Pavol Bielek(Deputy Director) Mr. Ivan Voloscuk, Mr. Vladimir Hudek, Mrs. Vlasta Kornerova, Dr. Kamil Vrana, Mr. Strom Zivota		
訪 問 先	午前:Bratislava市役所 Ministry of soil	午後:Soil Fertility Research Institute NGO	Blatislava近郊視察	
盟	4		+	
田田	9 0 0 0	H 67 L 7	2月26日	

(2) ルーマニア調査日程および面会者リスト

面 会 者		広崎豊(専門調査員)、Mr. Noriaki Obayashi( Administration Attache)	藤田俊美(公使)、好井正信(一等書記官)	Mr. Ioan-Radu Stratulat Mr. Radu Dumitrescu(Pubic Service Dept.)	Mr. Iodua Luca(International and Public Relation Dept.), Dr. Petre Marcuta (Monitoring Dept.), Mr. George Mihai Pretorian(Head, Environmental Regulation Dept.), Mr. Serena Adler(Expert) Mr. Calin Georgescu, Mr. Bogdan Paranici, Mrs. Ioana Petrescu, Mr. Eduard Petrescu(The Ecologist Youth of Romania), Mr. Ion Oltean(Master Forum), Mr. Nicu Galdean(The Ecological Group for Collaboration), Mr. Ciprian Stanciu(Floarea Reginei), Mr. Dan Cruceru(The Carpathian-Danube Center for Geoecology) Mrs. Arutrannd Harthmann(Resident Representative)	Mrs. Liliaana Mara(Director, Water Dept), Dr. Filimon Carcea(Conseller), Mr. George Romanca(Expert), Dr. Cornelin Neguleseu(Deputy Scientific Director), Mrs. Luminita Stefanescu(Head, Sladge and Waste Dept.)	
訪 問 先	Blatislava近郊視察	午前:移動(Blatislava-Bucurest) 午後:在ルーマニア大使館員と調査 日程の打合せ	午前:在ルーマニア日本国大使館	午前:Ministry of Public Works and Territorial Planning 午後:Bucurest市役所	午前:Ministry of Water, Forest and Bnvironmental Protection 午後:NGO	Ministry of Water, Forest and Environmental Protection	移動:(Bucurest-Wien)
出	ш	III.	×	¥	K	<b>₩</b>	+1
月日	2月27日	2 月28日	3月1日	3月2日	3月3日	3月4日	3月5日

(3) ブルガリア調査日程および面会者リスト

移動:(Bratislava-Praha) 午前:在チェッコスロヴァキア日本国 大使館 午後:移動(Praha-Sofia) 在ブルガリア大使館員と調査 日程の打合せ 午前: Ministry of Regional Develop and Construction 午後: 環境省	3)	
チェッコスロヴ 東館 動(Praha-Sofia ガルガリア大使 望の打合せ istry of Regi i Construction 適省	Ī	
nistry of Region d Construction 域省	ァキア日本国 ) 館員と調査	上村俊一一等書記官 渋田一正二等書記官、松永聡専門調査員
	onal Development	Mr. Plamen Nikiforov(Head, Water Sector Dept.), Mr. Dobrin Braganov (International Relations Dept.), Mr. Dimitre Iliev(Public Utilities Dept.) Mr. Antonov Angel(Head, Environmental Risk Dept.), Mr. Ljubomir Profirov(Biodiversity and Protected Area Dept.), Mrs. Krassimira Tzretkova( Environmental Regislation Dept.), Mr. Mihail Staynov(Head, Urban Ecology and Waste Management Dept.), Mr. Teodor Ivanov(Air Protection Dept.), Marieta Stoimenova(Water Protection Dept.), Mr. Koljo Jotov(Head, Land and Soil Protection Dept.), Mr. Stefanov(Air Protection Dept.), Mr. Hristo Dikov(Head, Public Relations Dept.), Mrs. Vanja Grigorova(Coordinater EIA), Mr. Bakalov, Mrs. Paskaleva (International
午前:Sofia市役所 環境省 午後:Sofia市汚水処理場 Sofia-Istok Power	馬 r Station	Mr. Oguyan Bogoev(Environmental Dept.), Mr. Ivoslov Ilosinov Dr. Ilya Natchkov(Coordinaotr, Danube River Programme) Mr. Blagoy Blagoev(Vice Director) Mr. Boyan Gueorguiev Nikoltchev(Director)
午前:Rila自然公園視察 午後:NGO(Ecoglasnost)		Mr. Atanas Paskalev, Mr. Anthony Tonchevski, Dr.Irene L. Murphy(Environmental Consultants)
午前:大使館報告 午後:Iskar川汚染状況視察	3条	松永聡専門調査員
移動(Sofia-Wien)		

	I	Γ	
柳			
ব্ধ		.	
			]
屉			
KES			
	:-		
	:		
	怒		
	台事		
米	, 7\m		
40	佐郎		•
	<b>務</b> 用		
E	万年	: !	
	ト雑り		
訪	JICAオーストリア事務所佐藤幹 所長へ現地調査結果報告		(
	A 現地	ien-	Tokyo)
	L N N N N N N N N N N N N N N N N N N N	<b>*</b>	T(
	J 所	移動	
開口	+1	Ш	町
	ш	ш	Ш
Ш	FL)	月 6日	A 7 E
Щ	3月	က	3 H

### 4. 収集資料リスト

### 国内収集資料

No.	6 卷	発行 (著者)	発行年度	シーペ
3mm/	NATIONAL REPORT OF THE CZECH AND SLOVAK FEDERAL	ns Cc	1992	142
		$\sim$		
ପଦ	民主化に移行する共産諸国への環境保全対策協力の調査研究(II) ENVIRONMENTAL ACTION PROGRAMME FOR CENTRAL AND	(財)機械振興会、経済研究所	平 <b>及</b> 5 1993	206
	(Environment and Health in Central and Eastern Europe)		000	
প্র	ENVIRUNMENTAL ACTION PROGRAMME FUR CENTRAL AND EASTERN EUROPE		1993	
3	ENVIRO GUIDE SLOVAKIA 1993	Ministry of the Environment of	1993	23
		the Slovak Republic		
မ	<u> </u>	JICA	1993	47
	IN EASTERN EUROPE: BULGARIA, ROMANIA, SLOVAKIA			
<u>-</u>	BULGARIA ENVIRONMENT STRATEGY STUDY	World Bank	1992	191
∞	ROMANIA ENVIRONMENT STRATEGY PAPER	World Bank	1992	122
တ	ルーマニア、プロジェクト形成調査(資料編)	国際協力事業団	1993	
10	ルーマニア、プロジェクト形成調査(調査結果資料)	国際協力事業団	1993	112
9~~( F~~(	企画調査ルーマニア出張収集資料 4	国際協力事業団	1993	84
12	THE STUDY ON THE SOLID WASTE MANAGEMENT FOR	JICA	1993	143
	THE TERRITORY OF THE SOFIA GREATER MUNICIPALITY			
13	世界地理、ヨーロッパ皿	朝倉書店	1979	465
14	ハンガリー、スロバキア鉱工業プロジェクト選定確認調査報告書	国際協力事業団鉱工業開発調査部	1993	91
15	ルーマニア、ガラチ製鉄所環境、省エネ対策計画事前調査報告書	国際協力事業団	1993	75
16	Information Bulgaria, A Short Encyclopedia of the People's	The Bulgarian Academy of Science	1985	976
	Republic of Bulgaria			
17	ルーマニア国、ポーランド国調査報告書	農用地整備公団	平成4	209
18	ブルガリア、経済、貿易の動向と晃通し	WEIS	1990	49
5	DANUBE INTEGRATED ENVIRONMENTAL STUDY	HASKONING	1994	
20	PRIORITY ECOLOGICAL PROJECTS	Ministry of Environment in Bulgaria		
21	COUNTRY REPORT FOR THE COURSE IN INDUSTRIAL	Ing. Libomir Ziak	1993	∞
	POLLUTION CONTROL FOR BASTERN EURUPBAN COUNTRIES			

### スロバキアでの収集資料

No No	4 格	発行(著者)	発行年度	» ا ا
22 23	WASTE MANAGEMENT PROGRAM IN SLOVAK REPUBLIC NATIONAL COUNCIL OF SLOVAK REPUBLIC ACT ON ENVIRONMENTAL IMPACT ASSESSMENT	Ministry of Environment Ministry of Environment	1993	F 00
24	- DITTO- ANNEX 1	Ministry of Environment		16
25	ENVIRONMENT LEGISLATION VALID BY DECEMBER 1993	Ministry of Environment		9
26	ENVIRONMENTAL REGULATION AND LAWS VALID IN THE SCOVAK REPUBLIC	Ministry of Environment		<b></b> 1
27	NATIONAL PARKS AND PROTECTED LANDSCAPE AREAS	Ministry of Environment	1992	
86	OF SLOVAKIA BKD DIA CAT 03	4	000	
2 63	DISTRIBUTION MAP OF NATIONAL PARKIT-SOO 000)	Winistry of Environment	1993	· ·
30	SYSTEM OF NATURE PROTECTION IN SLOVAKIA	, JO	1994	<del></del>
31	NATURE OF SLOVAKIA	of	1993	20
32	CERVENA KNIHA		1992	149
က က (	MONITORING OF ENVIRONMENT		1993	16
34	CONCEPTION FOR ENVIRONMENT MONITORING AT THE	0.		133
35	ENVIRONMENTAL MONITORING 1993 TERRITORY-OF SLOVAK REPUBLIC	Winistry of Environment	1993	68
36	REPORT ABOUT AMBIENT AIR QUALITY AND CONTRIBUTION	Ministry of Environment	1999	48
	OF INDIVIDUAL SOURCES TO AIR POLLUTION 1992			2
37	NATIONAL REVIEW OF DANUBE BASINSN SLOVAK REPUBLIC	Ministry of Environment	1993	
က်	ENVIRO GUIDE SLOVAKIA 1993	Ministry of Environment	1993	23
33	INSTITUTIONAL ARRANGEMENTS AND ENVIRONMENTAL	Ministry of Environment	1993	<b>60</b>
40	STRATEGIC GOALS OF ENVIRONMENTAL POLICY IN THE	Ministry of Environment	1003	<b>L</b>
:	SLOVAK REPUBLIC		0001	<b>-</b>
41	SLONAFT, ANNUAL REPORT 1992	SLONAFT	1992	24
42	WATER MANAGEMENT OF THE SLOVAK REPUBLIC	Ministry of Soil		· ————————————————————————————————————
43	BALEKNAL ENVIKUNMENTAL FACTURS AND THEIR IMPACTS ON THE SOLL AND ACPICHTIBAL PRODUCTION IN SLOWAKIA	Soil Fertility Research Institute		တ
44		Soil Fortility Research Institute	1001	76
45	OHROZENA PODA	Fertility Research	1991	2 L-0
4p	SUIL MAP	Soil Fertility Research Institute	1993	<del></del>

## ルーマニアでの収集資料

発行 (香者) 発行年度 人	発行 (著者) 発行年度																												
発行 (書者)  をルーマニア 日本大使館 在ルーマニア 日本大使館 Ministry of Public Works Ministry of Water, Forest and E ENVIRONMENTAL E ENVIRONMENTAL  E ENVIRONMENTAL  World Bank National Water Council ES IN THE UDY, Haskoning  ANUBE Danube Programme Coordination Unit Equipe Coustreau	名 称 カンスト条内 ルーマニア機能 在ルーマニア目本大使館 ルル 4-1981- LAM FOR MUNICIPAL SERVICE LAW NO. 4-1981- LAM FOR MUNICIPAL SERVICE THE STATE OF ENVIRONMENT IN ROMANIA SOIL CONTAMINATION WASTE MANAGEMENT WASTE MANAGEMENT WASTE MANAGEMENT WASTE MANAGEMENT WASTE MANAGEMENT THE EGLOGIST YOUTH OF ROMANIA THE WORLD BANK RESIDENT MISSION-ROMANIA THE WORLD TO WO. IV. NO. 2/1993 THE EGLOGIST YOUTH OF ROMANIA THE WORLD TO FROTECTED AREAS OF SANIA MINISTRY OF Water, Forest and SANIE MANAGEMENT LIST OF PROTECTED AREAS OF SANIA MINISTRY OF WATER COUNCIL MANTER QUALITY PRE-INVESTMENT STUDIES IN THE BANK MINISTRY OF WATER, FOREST WILDLIFE MANAGEMENT LIST OF PROTECTED AREAS OF SANIA MINISTRY OF WATER, FOREST WILDLIFE MANAGEMENT LIST OF PROTECTED AREAS OF SANIA MINISTRY OF WATER, FOREST WILDLIFE MANAGEMENT LIST OF PROTECTED AREAS OF SANIA MINISTRY OF WATER, FOREST WATER QUALITY PRE-INVESTMENT STUDIES IN THE BANKING OF SANIA MANUAL REPORT  MANUBE INTEGRATED ENVIRONMENTAL STUDY, REPORT PHASE I BANKIRG INTEGRATED ENVIRONMENTAL STUDY, REPORT PHASE I BANKIRG NAMENTAL PROGRAMME FOR THE DANUBE REPORT PHASE I BANUNE NAMENTAL PROGRAMME FOR THE DANUBE REPORT PHASE I BANUNE NAMENTAL PROGRAMME FOR WHAM 7? Equipe Constination UNIVER BASIN ANNUAL REPORT  RIVER BASIN ANNUAL REPORT	,	シーペ	22	43	က	53		<b>්</b>	<u>್</u> ಷ	16	1 E	. cc	8 4	35	Ç	-	12		167	-	d per	180	, r.	3	:		186	
発行 (著者)  E DALーマニア日本大使館 在ルーマニア日本大使館 在ルーマニア日本大使館 Ministry of Water, Forest Bnvironmental Protection E ENVIRONMENTAL  Morid Bank National Water Council Ministry of Water, Forest Environmental Protection USAID  Geological Institute Buropean Bank Haskoning Danube Programme Coordinat Unit Bquipe Coustreau	名 称      カレスト素内      カレスト素内      カーマニア標準     LAW WO. 4-1981, LAW FOR MUNICIPAL SERVICE     LAW WO. 4-1981, LAW FOR MUNICIPAL SERVICE     THE STATE OF ENVIRONMENT IN ROMANIA     SOIL CONTAMINATION     RECULATION IN FORCE CONCERNING THE ENVIRONMENTAL     RECULATION IN FORCE CONCERNING THE ENVIRONMENTAL     RECULATION IN ROMANIA     RECULATION IN ROMANIA     MASTE MANAGEMENT     MEDIUL, VOL. IV, NO. 2/1993     THE ECOLOGIST YOUTH OF ROMANIA     THE MORLD BANK RESIDENT MISSION-ROMANIA     THE WORLD BANK RESIDENT MISSION-ROMANIA     THE ROMANIA 1993     THE COLOGIST YOUTH OF ROMANIA     ROMANIA 1993     REPORT IN ROMANIA     ROMANIA 1993     REVERSE BASIN IN ROMANIA     ROMANIA 1993     ROMANIA	1	発行年度	· 1993	1993	1981	1993		1993			1993	1993		1994	1974		1994	1 - (	1993	1993		1999	1994	# ????	1993		1993	
名 称  L Z ト桑内  マニテ根観  NO. 4-1981, LAW FOR MUNICIPAL SERVICE STATE OF ENVIRONMENT IN ROMANIA  L CONTAMINATION  LL CONTAMINATION  LECTION IN FORCE CONCERNING THE ENVIRONMENTAL  RECTION IN ROMANIA  RECOLOGIST YOUTH OF ROMANIA  WORLD BANK RESIDENT MISSION-ROMANIA  ON WATER  ANIA 1993  ER QUALITY PRE-INVESTMENT STUDIES IN THE  ES BASIN IN ROMANIA  ANIAN MAP 1/1000000  LOGICAL MAP 1/1000000  GGY IN THE DANUBIAN COUNTRIES  UBE INTEGRATED ENVIROMENTAL STUDY,  ORT PHASE I  RRONMENTAL PROGRAMME FOR THE DANUBE  ER BASIN ANNUAL REPORT		八年 4 7 1 8	. 死仃(者者)	在ルーマニア日本大使館	在ルーマニア日本大使館	Ministry of Public Works	-	Environmental Protection	••	••			••		World Bank	National Water Council			Environmental Protection	USALD		Geological Institute	Buropean Bank	Haskoning	911711000001	Danube Programme Coordination	Unit	Equipe Coustreau	
		₽.	Û	17 ブカレスト家内							53 WASTE MANAGEMENT	54 MEDIUL, VOL. IV, NO. 1/1993	55 MEDIUL, VOL. 1V, NO. 2/1993		57 THE WORLD BANK RESIDENT MISSION-ROMANIA	58 LOW ON WATER						_		35 DANUBE INTEGRATED ENVIRONENTAL STUDY.	REPORT PHASE I			THE DANUBE FOR WHOM AND FOR WHAT	

## ブルガリアでの収集資料

Ministry of Environment, Bulgaria 1993 23  Sofia-Inte Private Agency 1992 23  Ministry of Environment 1969 17  Ministry of Environment 1981 1981 17  Ministry of Health and the 1992 17  Ministry of Environment, Health 1992 7  Ministries of Environment, Health 1992 7  Ministry of Environment, Health 1992 7  Ministry of Environment, Health 1992 7  Ministry of Environment 1999 1999 7  Ministry of Environment 1999 1999 7  Ministry of Environment 1999 1999 1999 1999 1999 1999 1999 19	発行 (著者)
1992 1969 1969 1981 partment 1986 t, Health 1992 y, Sofia 1979 tal 1989	Minis Sofia
the 1969 Inment 1969 Inment 1986 t, Health 1992 y, Sofia 1979 tal 1989	Ministry Ministry
1969 the	Ministry
the nment 1981  partment 1986  t, Health 1992  y, Sofia 1979  tal 1989	Kini
t, Health 1996 t, Health 1992 tal 1981 tal 1989	Mini Com
t, Health 1992 , Health 1992 y, Sofia 1979 tal 1989	Mini
, Health 1992 y, Sofia 1979 tal 1989	Win i
1991 y, Sofia 1979 tal 1989	and Wini
1991 y, Sofia 1979 tal 1989	and
1991 y, Sofia 1979 tal 1989	. ;
y, Sofia tal	
y, Sofia tal	W.
tai	Mini Tost
ection stry of Environment lasnost	College
Environment	P70
	-
Ecoglasnost	
	ဋ

### 参考資料

I スロヴァキア共和国

### National Council of Slovak Republic Act (Law) on Environmental Impact Assessment

### FIRST PART

### Initial Enactment

8 1

### Purpose of the Act

The purpose of the Act is to ensure a comprehensive, professional and public assessment of construction projects, facilities and other activities determined by this Act (referred to as activity) before the decision on their permission is made as well as an evaluation of proposals of some developmental policies and of generally binding legal regulations regarding to their assumed environmental impact.

**§2** 

### Subject and Scope of Assessment

1) Intentions to realize activities defined (referred to as intenition) n part A of Annex I of this Act are assessed.

2) Intentions to change an activity defined in part A of Annex I of this Act is subject to

assessment if:

a) it causes exceeding of threshold level determined in part A Annex I of this Act

(referred to as threshold level).

b) the activity which exceeds the threshold level causes that the sum of changes resulting in the increase of the scope of activities will exceed 50% of the threshold value during last 5 years or if the scope of activity will increase by at least 25% as a consequence of this change.

c) the activity for which the threshold value was not determined by part A of Annex I and if the sum of changes which cause the increase of the scope of the activity during last 5 years will exceed 50% of the originally assessed

scope of activities according to this Act.

- 3) If there are doubts whether it is a change according to par.2) it is up to Ministry for the Environment (referred to as Ministry) to decide. The proponent is the only participant of this process.
- 4) If it is a decision resulting from the screening according to §§ 10 and 11 of this Act, intention to realize an activity listed in part B of Annex I of this Act is subject to assessment. Similarly par.2 stands for the assessment of its change.
- 5) Ministry can determine in its decree in the assessment process according to §3, that activity or its change not listed in par.1), 2), 4) is subject to assessment mostly in cases if the activity should be realised in areas protected according to individual regulations or in significantly loaded areas.

**§3** 

1) Ministry will start the process according to §2, par.5) initiated by:

a) state administration authority which is responsible to issue a decision permitting the activity according to individual regulations (referred to as permission authority),

b) central state administration authority which is responsible for the assessed activity's section (referred to as competent authority),

c) juridical or physical person intending to realise the activity which should be assessed according to this Act (referred to as proponent).

assessed according to this Act (referred to as proponent).

- 2) Ministry can also start the assessment process according to §2 par.5 from its own stimulation.
- 3) The proponent is the only participant of the administrative hearing according to par. 1) and 2).

### \$4

(8) Assessed are the preparatory phase and activity realisation phase, the period during its execution and also a liquidation phase if this results from an nature of the activity regarding mainly:

a) the ecological bearing capacity of the affected area,

b) consequences of the common activity and probable accidents,

c) cumulative and synergetic effects according to different time horizons taking into consideration the irreversible effects,

d) prevention, minimisation, or compensation of the direct and indirect impacts of the activity on the environment,

e) the evaluation methods being used and completeness of information

f) comparison with the best technologies available.

### **§**5

### Aim of the Assessment

The aim of the assessment is mainly:

a) complex investigation, description and evaluation of direct and indirect environmental impacts of the intention

b) to determine measures which prevent or mitigate the environmental pollution and damage or which contribute to the sound intention impact on the environment.

c) to explain and compare advantages and disadvantages of submitted intention together with its alternatives (§7) in relation with the status of the intention not being realised.

### **§**6

### Joint Assessment

If there is a procedural or spatial link between different intentions, we can undertake their joint assessment.

### SECOND PART

### Impact Assessment.

### Intention

**§**7

1) The proponent will deliver the intention to Ministry in six copies. Ministry can ask

for more copies in substantiate cases.

2) The intention shall contain at least two alternatives of the activity (intention alternative) as well as the alternative of the state which would be actual when the intention is not realised (no alternative).

3) The intention contains mainly:

a) basic characteristics of the proposed activity,

b) basic data on the existing state of the environment of the territory where the activity should be realised and the territory which would be affected by the activity,

 c) basic data on the assumed environmental impacts of the intention, mainly land exploitation, energy and raw materials consumption, the degree of different

environmental factors pollution,

d) basic evaluation of advantages and disadvantages of proposed intention alternatives.

- e) measure proposals to mitigate or exclude adverse intention impacts on the environment.
- 4) The Annex II of this Act contains detailed requirements for intention
- 5) The documentation or its part which is elaborated for other reasons according to separate regulations can be submitted intention proposal if it meets requirements of this Act.
- 6) Within 2 weeks the intention which has not the required appropriateness will be returned back by Ministry to the proponent (developer) for completion and the Ministry determines the scope of the completion.
- 7) In substantiated cases the Ministry will call the proponent to submit other alternatives of the intention within the time limit according to par. 6).
- 8) In substantiated cases the Ministry can give up the requirement of the alternative solution of the intention if this is a proponent's request.

§8

- 1) Ministry will deliver the intention within two weeks to:
  - a) competent authority,

b) permission authority.

c) state administration authority whose binding standpoint, agreement, judgement or expression according to individual regulations conditions the permission of activity (referred to as affected authority),

- d) municipality where the intention should be realised and the municipality the territory of which will be affected by the activity (referred to as affected municipality).
- 2) In the case of doubt, if it is the affected municipality according to par.1d), it is up to Ministry to decide.
- 3) Ministry can determine that due to the great amount of affected municipalities the intention proposal will be available only in selected municipalities under Ministry's selection and Ministry will inform the other affected municipalities about this decision within the time limit according to par.1).
- 4) The affected municipality informs the public about the intention in an appropriate way within 1 week since intention proposal delivery and informs the public where and when the intention proposal is available for public. The intention proposal must be available to the public for at least 3 weeks since its delivery.
- 5) Competent authority, permission authority, affected authority and the affected municipality will deliver the written standpoint concerning the intention to Ministry within 6 weeks since its delivery, public can deliver the written standpoint concerning the intention proposal to Ministry within 5 weeks since the time when the public was informed about the intention proposal and up to 6 weeks since the delivery of intention proposal or announcement according to par.3) to the affected municipality.

### Participation of Civic Initiative and Civic Association

89

1) For the purposes of this Act, the civic initiative means at least 500 physical persons older than 18 years who will sign the joint standpoint concerning the proposed activity assessed according to this Act. The civic initiative is averted by the signed document with introduced name, surname, identification number, permanent address and signature of persons who support this joint standpoint.

The signed document together with the standpoint will be delivered to Ministry (§8

par.5 and §18 par.3)

- 2) The deputy of the civic initiative who is competent to act in its name and to accept documentation is a physical person who is introduced in the signed document as a deputy. If such statement is missing or is unclear, the deputy of the civic initiative is a physical person which is signed as a first one in the signed document. The deputy can define his substitute who substitutes him in the extent of authorisation.
- 3) Based on the written declaration delivered to Ministry we can substitute the deputy by other physical person. This declaration should be signed by the majority of civic initiative members. The same procedure is valid in case of civic initiative deputy's resign.
- 4) If the group of at least 250 physical persons older than 18 years establishes the civic association according to the separate regulation in order to support the standpoint of civic initiative or, directly, for the purpose of environmental protection concerning this activity which is assessed according to this Act and if this association submits the written standpoint according to §8 par.5 or §18 par.3 of this Act, it can also be a member of the administrative hearing during which it is decided on the permission of the activity assessed according to this Act.

### Screening

### \$10

- 1) In case of intentions determined in §2 par 4 of this Act, Ministry will conduct the screening concerning the intention and will decide whether the intention is going to be assessed according to this Act or not.
- 2) §7 par.2-5 of this Act stands for the appropriateness of the intention proposal during screening.
  - 3) Similarly §7 par.1,6,7 and 8 and §8 and §9 of this Act relates to the screening
- 4) During decision whether the proposed activity will be or will be not assessed according to this Act, Ministry takes into consideration mainly:

a) nature and scale of the activity

b) activity location, mainly its bearing capacity and protection provided by individual regulations.

c) the importance of expected impacts

d) written standpoints according to §8 par.5 of this Act.

### **§11**

- 1) Ministry will decide whether the activity will be or will be not assessed according to this Act or not within 1 month since deadline according to §8 par. 5 of this Act.
- 2) If Ministry does not decide within the period mentioned in par.1, it means that the activity will not be assessed according to this Act.
  - 3) Proponent is the only participant in the screening.
- 4) Legally binding decision whether the activity will be assessed according to this Act or not, will be delivered also to the competent authority, permission authority, affected authority, affected municipality, civic initiative and to the civic association by the Ministry (§9).
- 5) The affected municipality informs without undue delay the public about the decision according to par.4 at an appropriate place in a usual way.
- 7) General regulations on the administrative hearing relates to the screening phase, if this Act does not state different.

### Scoping and Time Schedule

### \$12

- 1) The complex investigation, description and evaluation of predicted impacts of the proposed activity together with comparison with the existing state of the environment at the place of its realisation and at the area of its predicted impacts (referred to as evaluation) will be referred in the Environmental Impact Statement (referred to as impact statement) by the proponent.
- 2) Scoping and its time schedule shall be determined by Ministry in co-operation of the competent authority and the permission authority and after the discussion with proponent. Ministry will deliver it to the proponent together with standpoints (§8 par.5) within 3 weeks since the deadline according to §8 par.5 of this Act, in the case of screening it is within 2 weeks since the decree according to §11 par.4 of this Act comes into force.
- 3) The Annex III of this Act determines the scoping taking into consideration the standpoints delivered according §8 par. 5 of this Act. Determined will be mainly:

a) which data listed in Annex III of this Act should be in the content of the

environmental impact statement,

b) alternatives to be elaborated and evaluated in more details,

- c) which criteria should be taken into consideration more seriously according to Annex III of this Act,
- d) which of the associated activities (§6) will be subject of the joint assessment,

e) number of copies of the impact statement

- 4) Time sequences and limits of the individual steps of evaluation will be determined in the time schedule.
- 5) The proponent, in co-operation with affected municipality without undue delay and in appropriate way informs the public about the scoping and about the time schedule.

### §13

- 1) In individual cases, if data mentioned in the intention proposal are sufficient in relation with the intention nature, scope and impacts, Ministry can after the agreement with competent authority and permission authority decide that it is not necessary to work out the environmental impact statement and will inform the proponent about this within time deadline according to §10 par.2
- 2) For the next evaluation procedure, the enactment of §§14 and 21 of this Act will be used in an appropriate way.

### **Environmental Impact Statement**

### \$14

Juridical and physical persons are obliged to provide to the proponent on his request all environmental information available achieved from the activity financed from state budget, if these information is necessary for the impact statement elaboration.

- 1) The proponent will work out the evaluation in the extent according to §12 of this Act and will submit the impact statement to Ministry. At the same time, the proponent announces the decision, standpoint, binding judgement or affected authority's opinion needed for permission of the activity he will apply for or he has applied for.
- 2) The impact statement which is not complete will be returned back to the proponent without undue delay to complete it. Ministry determines the scope of completion.
- 3) The proponent provides Ministry with additional information concerning the statement on its request.
- 4) The proponent submits to Ministry the impact statement in necessary number of copies for the subsequent assessment process [ § 12 par. 3 e].

### **§16**

- 1) Ministry will deliver the impact statement to the competent authority, permission authority and to affected municipalities without undue delay within three weeks in order to get their opinions.
- 2) If Ministry determines that impact statement will be available only in municipalities selected by Ministry (§8 par.3) due to a great amount of affected municipalities, it will inform about it also other municipalities within deadline according to par.1 and, at the same time, it will deliver them the final summary (part C point X of Annex III of this Act). Ministry will deliver the final summary also to affected authority, civic initiative and to the civic association (§9) within the above mentioned time limit.

### \$17

- 1) The affected municipality informs the public about the impact statement (§16 par.1) or final summary (§16 par.2) within one week since delivery and at the same time displays the final summary in an appropriate place for 1 months period at an appropriate place and will inform when and where it is possible to look into the statement, take notes and copy it on their own expenses.
- 2) The affected municipality will arrange the public meeting on impact statement in a co-operation with the proponent within the period of statement display according to par.1.
- 3) The affected municipality will inform the public about the date of meeting and will invite the Ministry, competent authority, permission authority and the affected authority.
- 4) The affected municipality in co-operation with the proponent will make a record from public meeting and will deliver it to the Ministry within 2 weeks since the date of public meeting.
  - 5) The affected municipalities may arrange the joint public meeting.

- 1) The competent authority, permission authority and affected municipality will deliver their written standpoints on the impact statement to the Ministry within 2 months since its delivery.
- 2) Public can deliver its written standpoint to the Ministry within 2 months since the date of publishing the final summary according to §17 par. I of this Act.
- 3) Affected authority, civic initiative and the civic association can deliver their written standpoint to the Ministry within 2 months since the delivery of final summary.
- 4) Ministry will not take into consideration written standpoints delivered after deadline according to par. 1-3.

### Review and Final Record

### \$19

- 1) Ministry will ensure the working out of the review based on the impact statement taking into consideration the delivered records (§17 par.4) and standpoints (§18) within 2 months since deadline according to §18 of this Act. This deadline can be exceeded in substantiate cases, maximum by 2 months.
- 2) Review can be elaborated only by qualified (authorised) physical and juridical persons (§43) determined by Ministry. Persons who participated in elaboration of the impact statement and of the intention can not elaborate the review.
- 3) Proponent is obliged to provide to the editor of the review on his request additional available data which are necessary for the elaboration of the review.
  - 4) Evaluate in the review are mainly:
    - a) the completeness of the impact statement,
    - b) standpoints according to §18 of this Act,
    - c) the completeness of the investigation of positive and negative impacts of the activity including their interference.
    - d) methods being used, evaluations and completeness of the input data,
    - e) proposal of the technical solution regarding the achieved degree of knowledge concerning the exclusion or limitation of pollution or environmental damage.
    - f) alternatives of activity
    - g) proposal of measures and conditions to eliminate and mitigate the adverse impacts of the activity.
  - 5) Review always contains the proposal of the final summary (§20)

- 1) Ministry, in co-operation with the competent authority, will work out the final record within 1 month since the review delivery according to §19 of this Act.
- 2) Ministry will show in the final record except of the overall evaluation of the impacts of the proposed activity whether it recommends its realisation or not, and under which conditions it does so, as well as the required scope of its monitoring and evaluation (§37).
  - 3) Details about the content of the final record are mentioned in Annex IV of this Act.
- 4) Ministry will deliver the final record in the term according to par 1 to the proponent, competent authority, permission authority, affected authority, affected municipality, civic initiative and to the civic association (§9).

### §21

The affected municipality that received the final record will publish it within 1 week since its delivery in an appropriate way and at a common place and will inform the public about the possibility to look at the record, take notes or to copy it on citizen's own expenses.

### Assessment of line constructions.

### **§22**

- 1) The assessment of impacts of traffic and other line constructions over 50 km long is realized in 2 phases.
- 2) Documentation for the first phase of the assessment represents a baseline study for the whole section of a line construction over 50 km long containing alternative solutions of the proposed route. The purpose of this phase is the choice of the optimum alternative of the route (corridor) of the line construction. Enactments of §7 21 of this Act are used for this phase of the assessment in the appropriate way.
- 3) During the second phase we assess the intention for line constructions less than 50km long. The starting point is the route (corridor) oof the line construction determined according to par.2. Enactments of § 7 21 of this Act stands for this phase of the assessment in the whole extent.

Decision-making on the Activity Permission

Without final record (§ 20) the permission authority can not issue a decision on the activity permission according to individual regulations resulting from the assessment, but it is not bound by the final record.

### **§24**

The permission authority will, according to individual directives, deliver the legally binding decision on the permission issued after the evaluation to Ministry and to the competent authority and at the same time will, in an appropriate way, publish the substantial content of the record together with accompanied reasons.

### THIRD PART

### Environmental Impact Assessment in a Transboundary Content

### **§25**

1) For the purposes of this Act:

a) the country of the impact origin is a country on the territory of which the proposed activity should be realised according to par. 2 and 3,

b) the affected country is a country which can be affected by significantly adverse environmental impact in the transboundary content resulting from the activity determined in par.2 and 3.

- 2) The assessment of the activity defined in Annex V of this Act with a significant environmental impact in a transboundary content is being processed according to the enactment of the first and second part of this Act with deviations listed in §§26-35 of this Act if this is in the compliance with international agreements by which Slovak Republic is bound, if it is not determined in different way.
- 3) Other activity with a significant impact in transboundary content which is not listed in Annex V of this Act is being processed according to par.2 if this the country of impact origin and the affected country have agreed so.
- 4) During the assessment whether the proposed activity has a significant adverse environmental impact in a transboundary content, the criteria mentioned in Annex VI of this Act are followed.
- 5) Par.2-4 refers only to situation when there is a guaranteed link and equality between the country of impact origin and an affected country.

### The Impact Assessment of Activities Realised on the Territory of Slovak Republic

### **§26**

- 1) The information on about the intention according to §25 of this Act will be announced to the affected country by Ministry without undue delay after the delivery of intention according to §7 of this Act.
  - 2) An information of intention contains mainly:

a) basic data on intention including the available information about a probable transboundary environmental impact,

b) the information about the type of activity permission which will be issued according to individual directives,

c) period to deliver an answer to the affected country's which is appropriate to a proposed activity.

### **§27**

1) If the affected country announces its interests to participate in the assessment of the activity, §§28-31 of this Act are followed.

2) If the affected country announces it has no interest to participate in the assessment of the activity or if it does not deliver the answer in the given time limit, the enactment of §§28-31 of this Act will not be used.

### `§28

1) The Ministry will deliver to the affected country without undue delay:

a) the data on intention with data concerning the scope defined in §7 par.3 and in Annex II of this Act if they have not been mentioned according to §26 par.2 of this Act,

b) information about the process of assessment including the time limit to submit

comments,

- c) requirement to provide information about probable environmental impacts of the activity on the territory of the affected country.
- 2) During the scoping and its time schedule according to §12 of this Act, the affected country's comments delivered within the period according to par.1b will be taken into consideration.

### §29

- 1) The Ministry will deliver the documentation on EIA according to §25 of this Act elaborated on the basis of Annex VII of this Act (referred to as documentation), to the affected country without undue delay and, at the same time, will invite the affected country for consultations.
- 2) If the affected country is interested, Ministry together with competent authority will arrange consultations, the proponent and permission authority are usually invited to these consultations.

## §30

- 1) The final record elaborated according to §20 of this Act shall contains, except of the appropriateness defined in Annex IV of this Act, also the appropriateness according to Annex VII of this Act as well as standpoints to comments of the affected country including the comments of its public.
- 2) Ministry will, without undue delay, delivers the final record and the decision on the activity permission issued according to individual directives to the affected country

### **§31**

Ministry can agree with the affected country that the requirement for the monitoring and evaluation should be included into the final record (§37) as well as conditions of the monitoring of impacts of the activity on the territory of the affected country.

If Ministry, during the assessment process according to the second part of this Act finds out, that impacts of the activity can exceed the state border, it conducts the procedure according to §§26-31 of this Act.

## The Impact Assessment Realised on the Territory of Other Country

## **§33**

- 1) If the country of impact origin announces to Ministry its intention listed in §25 par.2, 3 of this Act with significant expected impact on the territory of Slovak Republic, Ministry is obliged to answer to this announcement within the period determined by the country of impact origin. If the period is not limited, Ministry is obliged to answer without undue delay.
  - 2) Ministry will express in its answer its intention to participate in the assessment.

## \$34

- 1) Ministry will provide available information on expected activity having impact on the territory of Slovak Republic on the request of the country of impact origin if they are necessary for the preparation of the documentation by the country of impact origin.
- 2) After the delivery of documentation on environmental impact assessment from the country of impact origin the §§16-18 of this Act are followed. The Ministry can shorten the term for submission the requirement (§18) regarding rightful requirements of the country of impact origin.
- 3) The documentation from the country of impact origin and comments on the documentation according to par.2 are background materials for consultations between Ministry and the country of impact origin.
- 4) Ministry will publish the decision of the country of impact origin to permit the activity being assessed according to this Act after its delivery.

### §35

- 1) Everybody who finds out an intention to realise or a realisation of an activity having adverse impact on the territory of Slovak Republic is obliged to announce this to the Ministry.
- 2) Ministry will consider if this is an activity, which is subject to the assessment according to this Act and will follow the steps necessary for assessment according to this Act.

## FOURTH PART.

## The Evaluation of Drafts of Generally Legal Binding Directives and Substantial Development Policies

## **§36**

1) Drafts of:

a) substantial development policy mainly in the sphere of energy, mining, traffic.

agriculture and tourism,

b) physical planning documentation of the large territorial unit must contain an evaluation in relation with expected environmental impacts and at the same time, if it is necessary, also a proposal of measures to eliminate or mitigate these impacts.

- 2) Editor is obliged to discuss in advance this draft with Ministry regarding the mentioned impacts and proposed measures
- 3) Editor is obliged to discuss in advance the draft generally binding legal regulation with Ministry that can have an adverse environmental impact.

#### FIFTH PART.

## Joint, Temporary and Final Enactment

## §37

- 1) Everyone who executes the activity assessed according to this Act is obliged to ensure its monitoring and evaluation, mainly:
  - a) to systematically monitor and measure its impacts.
  - b) to check the meeting of conditions determined during the activity permission and to evaluate their efficiency,
  - c) to ensure the professional comparison of assumed impacts quoted in the impact statement with the real situation.
- 2) Scope and the term of the monitoring and evaluation according to par 1 will be determined by the permission authority during the process of the activity permission according to individual regulations taking into the consideration the final record of Ministry (§20 par 2).
- 3) If it is realised that the real activity impacts assessed according to this Act are worse than those mentioned in the statement, the one realising the activity is obliged to ensure measures to balance real impacts with assumed impacts listed in the impact statement in balance with conditions defined in the decision on the activity permission according to individual regulations.

1) The individual directives about governmental, economic and state service and commercial secrets are not influenced during the assessment according to this Act.

### **§39**

- 1) Ministry registers and keeps the environmental impact assessment documentation according to this Act during its actual period for at least 15 years since the end of the assessment of the activity according to this Act together with the intention, impact statement, review, final record and the decision on the activity permission and provides these information on the request regarding separate regulations defined in §38.
- 2) The proponent reserves its own agreement for the data providing on those parts of documentation which were elaborated on proponent's own expenses. Data are provided against the appropriate cost paid to the proponent.
- 3) The proponent registers the documentation concerning the assessment process within its actual period for at least 10 years since the end of the assessment process.
  - 4) Registration of documentation listed in par 1-3 is a subject to individual regulations.

## **\$40**

Information according to §14 and §39 par.1 of this Act are being provided by the payment and return back principle.

## **§41**

- 1) The proponent will cover the assessment costs according to this Act as well as costs of the review elaboration (§19).
- 2) All participating parts will cover their costs associated with public participation, civic initiative and civic association (further referred to party) during the assessment process according to this Act.
- 3) If there are doubts whether certain costs shall be covered by the proponent, it is up to the Ministry to decide.

### **§42**

Ministry can delimit some of its jurisdictions concerning the environmental assessment to the environmental protection district office in order to get better management of the state administration execution.

#### §43

1) The proponent arranges the elaboration of the intention and the impact statement.

- 2) The proponent can ask for their elaboration according to par 1 also a juridical and/or physical person listed by Ministry in an annual newsletter.
- 3) In the list, according to par.2, there are persons who achieved authorisation according to individual regulations as well as there are other experts from theory and praxis, after qualification by the Ministry. Applicants should pay a fee which is determined by Ministry in its decree. The fee is an income of the environmental fund of Slovak Republic.
- 4) Details about requirements to be listed in the newsletter according to par 2 and about its registration and exclusion will be defined by Ministry in generally binding legal regulations.

### **§44**

General regulations on the administrative hearing are not related to the assessment process with the exception of §2 par. 3 and 5, §3, §8 par.2, §10 and 11 and §41 par.3.

## \$45

1) Detailed explanation of §2 par. 5, §3, 7, 8, 10, 12, 19, 22, §25 par. 4, §36 and 39 of this Act will be defined by Ministry in generally binding legal regulation.

## **§**46

- 1) Enactment of §2 of this Act stands similarly for the assessment of such activity change which was permitted before this Act has come into force or was not assessed due to reasons listed in §47 of this Act.
- 2) Under the originally assessed scope (§2 par.2c) concerning activities listed in par.1 we understand the real scope of activity at the date of this Act coming into force.

## §47

Administrative hearing concerning the activity permission according to individual regulations which has started before the date of this Act coming into force is not affected by this Act.

### **§48**

§§ 20-26 of the Act on Environment No 17/1992 are cancelled and also their Annexes I-IV.

### **§49**

The Act comes into force on July, 1st, 1994.

Note: According to Anglo-American EIA terminology, phase "Intention" refers to the phase "Notification"

## List of Activities

## for Environmental Impact Assessment

Competent Authority: Ministry of Environment of the Slovak Republic

Extractive Industry

Item	Activities and installations	Limits: Part A (obligatory assessment)	Limits: Part B (screening)
1.	Extraction and dressing of coal, lignite, bituminous shale, ores and magnesite	over 100,000 t/year	up to 100,000 t/year
2.	Extraction and dressing of radioactive minerals including dumps and sludge beds and their recultivation	without limit	
3.	Extraction and treatment of petroleum	over 10,000 t/year	without limit
4.	Extraction and treatment of natural gas	over 10,000 m³/year	without limit
5.	Underground storage of natural gas in natural mineral structures	over 100 mil. m³/year	10 to 100 mil. m³/year
6.	Extraction and treatment of asbestos		without limit
7.	Extraction and dressing of stone, sand and other minerals not included under items 1 to 6	over 200,000 t/year or more than 10 ha	100,000 to 200,000 t/year or 5 to 10 ha
:			

Competent Authority: Ministry of Environment of the Slovak Republic

2. Energy Industry

Ellery	y Industry		<del></del>
Item	Activities and installations	Limits: Part A (obligatory assessment)	Limits: Pert B (screening)
1.	Thermal power station and other installations for incinerating of solid, liquid or gaseous fossil fuels	over 300 MW	50 to 300 MW
2.	Hydro power stations with water reservoirs having dam height above base line of or total volume or area of	over 10 m or over 1 mil m <sup>3</sup> or over 100 ha	3 to 10 m and up to 1 mil m <sup>3</sup> or 10 to 100 ha
3.	Nuclear power stations and other installations with nuclear reactors	without limit	
4.	Installations for production or enrichment of nuclear fuels, reprocessing of irradiated nuclear fuels and research installations for processing and conversion of nuclear fuels and nuclear materials	without limit	
5.	Installations for storage and disposal of burned nuclear fuels	without limit	
6.	Installations for collection, disposal and processing of high radioactive waste	without limit	
7.	Installations for processing and disposal of middle and low radioactive waste from operation and liquidation of nuclear power stations and use of radionuclides	without limit	
8.	Geothermal power stations and heating houses	without limits	
9.	Long distance electricity transmission installations	220 kV and more	110 kV
10.	Long distance gas carrying installations with diameter or pressure of	over 500 mm or over 1 MPa	300 to 500 mm or 0.3 to MPa

Competent Authority: Ministry of Environment of the Slovak Republic

3. Metallurgical Industry

ltem	Activities and installations	Limits: Part A (obligatory assessment)	Limits: Part B (screening)
1.	Finishing or agglomerating of ores	over 100,000 t/year	20,000 to 100,000 t/year
2.	Roasting or agglomerating of ores containing toxic components, mainly Hg, As, Cd		without limit
3.	Primary production of crude iron, cast iron and steel including rolling mills and other processing installations (foundries, forges etc.)	over 20,000 t/year	3,000 to 20,000 t/year
4.	Production of ferro-alloys containing toxic components		without limit
5.	Production and processing of non-ferrous metals	over 3,000 t/year	
6.	Melting of cast iron or crude steel and non- ferrous metals	over 100,000 t/year	20,000 to 100,000 t/year
7.	Melting of cast iron containing toxic components		without limit

Competent Authority: Ministry of Environment of the Slovak Republic

4. Chemical, Pharmaceutical and Petrochemical Industry

Item	Activities and installations	Limits: Part A (obligatory assessment)	Limits: Part B (screening)
1.	Thermal and chemical processing of coal (gasehouses, cokeries) and bituminous slade	over 100,000 t/year	10,000 to 100,000 t/year
2.	Processing of petroleum (excluding lubricants produced from semi-products) including installations for regeneration of used mineral oils	over 200,000 t/year	10,000 to 200,000 t/year
3.	Complex chemical installations for production of chemical compounds of organic and inorganic origin including chlorinated hydrocarbons with expressive production of toxic wastes	without limit	
4.	Production of solid fertilizers	over 10,000 t/year	
5.	Production of viscous fibers, cellophane and cellophane derrivates	without limit	
6.	Production of pharmaceutical products and pure chemicals		without limit
7.	Production of poisons and pesticides		without limit
8.	Storage of poisons and pesticides	over 100 t	10 to 100 t
9.	Production of antioxidants, accelerators and other rubber chemicals	over 200 t/year	
10.	Production of paint and varnishes	over 200 t/year	50 to 200 t/year
11.	Installations for long distance transportation of petroleum with diameter or pressure of	from 500 mm or from 1 MPa	300 to 500 mm or 0.3 to 1 MPa

Competent Authority: Ministry of Environment of the Slovak Republic

5. Wood-processing, Pulp and Paper Industry Building materials Industry

Bullair	ng materials industry		
Item	Activities and installations	Limits: Part A (obligatory assessment)	Limits: Part B (screening)
1.	Wood impregnation using toxic chemicals	over 1000 t/year of chemicals	100 to 1000 t/year of chemicals
2.	Production of fibre board, particle board and plywood	over 100,000 t/year	
3.	Production of furniture	-	over 10,000 m³/year of input material
4.	Production of pulp and paper	over 100,000 t/year	
5.	Installations for manufacture of cement, lime and magnesite	over 100,000 t/year	up to 100,000 t/year
6.	Production of building materials including panel production	over 100,000 t/year	
7.	Manufacture of asbestos-cement products	over 20,000 t/year of products	5,000 to 20,000 t/year of products
8.	Coating of resin blends	over 10,000 t/year	
		·	

Competent Authority: Ministry of Environment of the Slovak Republic

6. Metal Finishing Industry

İtem	Activities and installations	Limits: Part A (obligatory assessment)	Limits: Part B (screening)
1.	Metal finishing installations	over 100,000 m²/year of treated surface	
			4

## List of Activities

## for Environmental Impact Assessment

Competent Authority: Ministry of Environment of the Slovak Republic

## 7. Glass and Ceramics Industry Other Industries

Other	Industries		
Item	Activities and installations	Limits: Part A (obligatory assessment)	Limits: Part B (screening)
1.	Manufacture of glass or fibre-glass with capacity of	over 50,000 t/year	10,000 to 50,000 t/year
2.	Manufacture of bricks and other products of rough and fine ceramics	over 200,000 t/year	
3	Textile finishing and dyeing installations	over 10,000 t/year of used chemicals	
4.	Tanneries	over 20,000 t/year of used chemicals	
5.	Polygraphic installations	over 10,000 t/year of used chemicals	
6.	Use or regeneration of chlorinated hydrocarbons	over 100 t/year	
7.	Shoe production	over 250,000 pairs/year	
8.	Manufacture of products from asbestos with year-capacity of final products for - rub material - other use of asbestos	over 50 t/year over 200 t/year	10 to 50 t/year 50 to 200 t/year

Competent Authority: Ministry of Environment of the Slovak Republic

## 8. Infrastructure

Item	Activities and installations	Limits: Part A (obligatory assessment)	Limits: Part B (screening)
1.	Sludge beds, fly ash dumps and waste rock dumps with capacity of	over 250,000 m³	50 to 250,000 m <sup>3</sup>
2.	Installations for disposal of special and hazardous waste	without limit	
3.	Installations for disposal of other types of waste	over 250,000 m <sup>3</sup>	50,000 to 250,000 m <sup>3</sup>
4.	Installations for incineration of special and hazardous waste	without limit	
5.	Buildings and installations for handling with hazardous waste		without limit
6.	Surface storage of  - natural gas and other gaseous media  - petroleum and products from petroleum	over 100,000 m <sup>3</sup> over 10,000 m <sup>3</sup>	10,000 to 100,000 m <sup>3</sup> 1,000 to
	- chemicals	over 1,000 m <sup>3</sup>	10,000 m <sup>3</sup> 500 to 1,000 m <sup>3</sup>
7.	Underground storage of products from petroleum and chemicals	over 1,000 m <sup>3</sup>	

Competent Authority: Ministry of Environment of the Slovak Republic

9. Water Management

, water	Management		<del></del>
Item	Activities and installations	Limits: Part A (obligatory assessment)	Limits: Part B (screening)
1.	Dams and water reservoirs with dam height above base line or total volume or area of	over 10 m or 1 mil. m <sup>3</sup> or over 100 ha	3 to 10 m and up to 1 mil. m or 10 to 100 ha
2.	Buildings and installations for pumping of underground water for drinking purposes, water finishing, water pumps, installations for capturing springs	over 5000 m <sup>3</sup>	
3.	Water treatment plants and canalization networks	form more than equivalent of 100,000 citizens	·

Competent Authority: Ministry of Environment of the Slovak Republic

10. Agriculture and Forestry

Item	Activities and installations	Limits: Part A (obligatory assessment)	Lin its: Part B (screening)
1.	Installations for animal production including disposal of side-products for - cattle		over 100 of animals
	- pigs		over 200 of animals
	- poultry		over 25,000 of animals
2.	Melioration works (drainage, irrigation, soil- erosion protection, land restructuring) in protected areas and protected water management areas		NP, SNR, PA, AHP, PWMA, OP:\
3.	Installations for storage of pesticides, liquid and suspended fertilizers	over 100 t	
4.	Calipheries and veterinaries	without limit	
5.	Extraction of peat in terms of its quantity or total area use	over 200,000 t/year or over 10 ha	100,000 to 200,000 t/year or 5 to 10 ha
6.	Large area deforestration	over 10 ha	5 to 10 ha
	NP - National Park SNR - State Natural Reserve PA - Protected Area AHP - Area of Hygienic Protection PMWA - Protected Water Management Area OPA - Other Protected Areas		

Competent Authority: Ministry of Environment of the Slovak Republic

11. Food Industry

Item	Activities and installations	Limits: Part A (obligatory assessment)	Limits: Part B (screening)
1.	Installations for brewing, malting, production of wine and non-alcoholic drinks		over 5 mil. l/year
2.	Installations for slaughter of animals, processing of meat and poultry		over 5,000 t/year of products
3.	Industrial starch manufacturing installations		over 50,000 t/year of input material
4.	Sugar factories (production or refining of sugar)		over 150,000
			t/year of processed material
5.	Distilleries	over 10,000 t/year of raw materials	
6.	Manufacture of vegetable and animal oils and fats, production of detergents	over 20,000 t/year of products	5,000 to 20,000 t/year of products
7.	Installations for production of milk and products from milk		over 100,000 t/year of processed milk
8.	Packing and canning installations		over 10,000 t/year of products
			without limit
9.	Other special biotechnologies		

Competent Authority: Ministry of Environment of the Slovak Republic

## 12. Transportation and communication installations

tem	Activities and installations	Limits: Part A (obligatory assessment)	Limits: Part B (screening)
1.	Highways and roads including buildings	highways	I. and II. class roads over 5 km
		· .]	
2.	Railways	over 20 km	5 to 20 km
3.	Railway stations		
٥,	- passengers	over 3 rails	up to 3 rails
	- mixed (goods + passengers)	over 5 rails	up to 5 rails
•	- organizational	over 10 rails	
	- goods, tranship of combined transport	over 3 rails	up to 3 rails
	- container tranship	over 3 rails	
	- border transit	over 8 rails	
4.	Engine sheds and wagon depots	over 6 stays	up to 6 stays
5.	Disinfection stations (rails)	over 100 wagons per day	up to 100 wagons per
		Wagons per day	day
6.	Sheds (rails)	over 30 sets of wagons/day	up to 30 wagons/day
7.	Water routes	for ships over 1,350 t	for ships up to 1,350 t
8.	Harbors	for ships over 1,350 t	for ships up to 1,350 t
9.	Airports	runways over 2,100 m	runways 1,20 to 2,100 m
10.	Installations of special purpose tracks		cable-car tracks and lifts without limit

11.	Installations for repairing and maintenance of automobile technology	with capacity of over 50 repairing stages	with capacity of 30 to 50 repairing stages
12.	Installations for broadcasting		from 500 kW output
13.	Primary radiolocation installations	of output over 750 W and	
		frequency over 1 GHz	

Competent Authority: Ministry of Environment of the Slovak Republic

13. Landscape Use

1. Bores for drinking water supply  with exprichness 100 l/sec  2. Interference to landscape that might cause substantial changes in biological diversity, structure and ecosystems function  3. Pumping of geothermal waters  without li	its: I eeni		: Part A itory ment)	Limits: (obligations) assessi	:			lations	d instal	s an	tivitie	Ac	tem
substantial changes in biological diversity, structure and ecosystems function	ness	rich					oply	vater su	nking v	or drii	res fo	Во	1,
3. Pumping of geothermal waters without li	out	with				t cause ersity,	gical di	in biolo	hanges	tial cl	stanı	sul	2.
	out	with					ers	nal wate	eother	g of g	nping	Pur	3,
			.*			:				٠			
	÷									٠	1.		
		,											
								,**					

Competent Authority: Ministry of Environment of the Slovak Republic

#### 14. Tourism

İtem	Activities and installations	Limits: Part A (obligatory assessment)	Limits: Part B (screening)
1.	Building or touristic installations including camping sites and other housing facilities		in intravillane over 500 housing places in extravillane over 200 housing places
2.	Ports for water sports (adapted moles, storages, repairing shops etc.)	from 100 places for boats	
3.	Bridges for ski-jumping and slopes for down hill skiing	located in Protected Areas	
			:

Competent Authority: Ministry of Environment of the Slovak Republic

J. WIIIITA	ry Installations	T T	T
Item	Activities and installations	Limits: Part A (obligatory assessment)	Limits: Part B (screening)
1.	Military areas and facilities for training	over 100 ha	-
2.	Actions, installations and facilities mentioned in other parts of the List located in military areas		
			The set of classical formation of the set of
ļ			
			,
i			

II ルーマニア

## 1. 保護地域のリスト

## LIST OF PROTECTED AREAS OF ROMANIA - 1993

No. Name	County	UICN Cat.	Locality	Area	Year	Type
1 Danube Delta	TL, CT	Х		591,200.00	1991	
2 Retezat	HD	IX		54,400.00	1935	
3 Rodna	MM	IX		56,700.00	1990	
4 Domogled - V. Cernei	CS, MH, GJ	$\Pi$		60,100.00	1982	
5 Cheile Nerei - Beusnita	CS	II		45,561.00	1982	
6 Apuseni	вн, ав, сј	n		37,900.00	1990	
7 Bucegi	PH,DB,BV,AC			35,700.00	1990	
8 Semenic - C. Carasului	CS	П		30,400.00	1982	•
9 Ceahlau	NT	II		17,200.00	1971	
10 Cozia	VL	П	•	17,100.00	1966	
11 Calimani	sv	II	4 - 4	15,300.00	1971	
? Piatra Craiului	BV, AG	n		14,800.00	1990	
3 Cheile Bicazului-Hasmas	HR, NT	ñ	•	11,600.00	1990	* 1
14 Gradistea de Munte-Ciocl.	HD	п	•	1,000.00	1979	
15 Portile de Fier	MH	Π		423.00	1980	* * * * * * * * * * * * * * * * * * * *
16 Detunata Goala	AB	m	Bucium	24.00	1938	g
17 Ripa Rosie	AB	Ш	Sebes	10.00	1969	g
18 Detunata Flocoasa	AB	m	Bucium	5.00	1969	g
19 Coasta Jinei	AB	Ш	Susag	1.00	1969	g
20 Oul Arsiteí	AB	· III	Pianu	0.50	1969	g
21 Masa Jidovului	AB	Ш	Susag	0.50	1969	g
22 Grunzii stone	AB	Ш	Susag	0.50	1969	8
23 Piatra Despicata	AB	Ш	R. Montana	0.20	1954	g
24 Huda lui Papara	AB	Ш	Salciua	1.00	1969	5 S
25 Vinatarile Ponorului cave	AB	Ш	Salciua	1.00	1975	S
26 Vidolm forest	AB	. IV	Ocolis	91.50	1969	s
the state of the s	AB	IV	Bucium	5.00	1969	ь
27 Negrileasa glade	AB	IV	Bistra	3.50	1969	b
28 Capatina peatbog	AB	IA.	Intregalde	1.50	1969	b
29 Tecsesti glade 20 Surianul lake	AB AB	ΙΥ	-	20.00	1969	
	AB	IA	Cugir	0.20	1954	g
- Ampoita limestones	AB	·IV	Ampoita	355.20	1969	g m
32 Intregalde gorges	AB	IV	Intregalde Rimeti	200.00	1969	
33 Rimet gorges		IV.	Livezile	200.00	1969	m
34 Valisoara gorges	AB AB	IV	Rimeti	40.00	1969	III
35 Minastirea valey						m
36 Scarita-Belioara plain	AB	ΙV	Posaga de Sus	4.50 5.00	1941 1954	m
37 Piatra Corbului limestone	AB	. IV	R. Montana		1954	P .
38 Dealul cu Melci	AB	ΙV	Vidra	4.30	1969	P
39 Babii brook	AB	IV	Girbova de Sus	1.50		<b>P</b> .
40 Valea Mica limestone	AB	IV	Metes	1.00	1969	p ·
41 Sloboda forest	AB	IV	Aiud	20.00	1969	1
42 Ighiel lake	AB	IV	Ighiu	5.30	1969	1
43 Bagau lake	AB	IV	Lopadea Noua	4.00	1969	l
44 Cetateni karst	AG	Ш	Cetateni	10.00	1972	g
45 Albesti granite	AG	Ш	Albesti	0.50	1954	g
46 Suslanesti fossil point	AG	III	Mioarele	3.50	1955	P
47 Albesti limestone	AG	Ш	Albesti	1.50	1954	P
48 Negrasi glade	AG	IV	Negrasi	4.10	1966	b
49 Ratesti forest	AG	IV.	Ratesti	0.00	1972	f
50 Moldoveanu, Capra	AG	IV	Arefu-Nucsoara	0.00	1966	m

51	Valea Morii cave	AR	m	Moneasa	5.00	1982 s
52	Dosul Laurului	AR	IV	Gurahont	113.60	1938 в
53	Baltele-Gurahont	AR	IV	Gurahont	2.00	1982 Ъ
54	Runcu-Grosi	AR	īV	Birzava	932.50	1982 m
	Plesa Sebesului hill	AR	IV ·	Sebis	782.10	1982 m
	Magura forest	AR	IV	Dorgos	718.40	1982 m
	Dealul Mocrea forest	AR	IV	Ineu	243.40	1982 m
58	Bezdin lake	AR	IV	Pecica	25.00	1982 m
59	Prundul Mare island	AR	IV	Pecica	16.60	1982 m
60	Zerind-Bustard reserve	AR	IV	Zerind	2,200.00	1982 z
61	Perchiu hill	BC	IV	Livezi	90.60	1974 b
62	Runc forest	BC	IV	Racova	57.50	1974 f
63	Izvorul Alb forest	BC	ľV	Darmanesti	3.00	1974 f
64	Calugari karstic spring	BH	Ш	Carpinet	1.00	1971 g
	Cimpeneasca cave-Boiu sp.	BH	Ш	Vascau	1.00	1981 g
	Ciurului Izbuc cave	BH	Ш	Rosia	1.00	1971 s
67	Osoiu cave	BH	Ш	Virciorog	1.00	1981 s
60	Ciurului Ponor cave	BH	$\mathbf{m}$	Rosia	1.00	1981 s
ú,	Valea Lesului cave	BH	Ш	Bulz	1.00	1971 s
	Vintului cave	BH	$\mathbf{m}$	Suncuius	1.00	1971 s
	Galaseni cave	: BH	$\mathbf{m}$	Magesti	1.00	1981 s
72	Vadul Crisului cave	BH	Ш	Vadul Crisului	1.00	1955 s
	Boceasa peak	BH	IV	Remeti	100.00	1981 ь
74	Osorhei forest	BH	IV	Osorhei	50.00	1981 Ь
. 75	Cirligata peak (S-side)	BH	IV	Budureasa	10.00	1982 b
	Petea brook	BH	IV	Sinmartin	10.00	1932 в
	Pacau hill	ВH	IV	Soimi	8.00	1981 b
	Goroniste glade	BH	ľV	Tinca	7.00	1971 b
	Braiesei SE-slope	BH	IV	Budureasa	5.00	1982 в
	V.Iadului-Dealul Mare	BH	IV	Remeti-Bulz	2.00	1981 Ь
	Valea Rosie meadow	BH	IV	Cetariu	1.00	1981 Ь
	Ferice Plai-Hoanca	BH	IV	Buntesti	0.00	1982 b
	Crisul Repede gorges	BH	IV	Vadul Crisului	219.70	1955 m
	Valea Rece hidro complex	BH	IV	Salacea	80.00	1981 m
	Cicos lake	BH	IV	Sacuieni	10.00	1981 m
86	Gruiul Pietrii	BH	IV	Lugasul de Jos	1.00	1981 p
i	Miheleu limestone	BH	īV	Lazareni	1.00	1971 p
	Somleu hill fossil point	BH	IV	Sinmartin	1.00	1971 p
	Tasad limestones	BH	IV	Dragesti	1.00	1971 p
	Pestis-Lionii valey fossil p.	BH	ĪV	Alesd	1.00	1971 p
	Brusturi-Cornet fossil point	BH	IV	Astileu	1.00	1981 p
	Crisului valey limestone	BH	ĮV.	Bratca	1.00	1971 p
	Cornitel fossil point	BH	IV	Borod	1.00	1981 p
	Meziad cave	BH	rv	Remetea	1.00	1971 s
	Radvani forest	BH	IV.	Cefa	50.00	1981 z
	Rabagani springs	BH	IV	Rabagani	1.00	1981 z
	Corbului stone	BN	III	Cetate	5.00	1976 g
	Saratel salt hill	BN	III	Saratel	5.00	1976 g
	La Gloduri	BN	III	Monor	2.00	1976 g
	Ripa cu Papusi	BN	III	Domnesti	2.00	1976 g
	Borcut forest	BN	III	Romuli	1.00	1976 g
	Tausoare cave	BN	III	Rebrisoara	70.90	1976 s
	Sesul Mogosenilor glade	BN	IV	Mogoseni	6.00	1976 b
	La Saratura Volce Vinului format	BN	IV	Bajenii de Jos	5.00	1976 b
	Valea Vinului forest	BN	IV	Valea Vinului	5.00	1976 b
TOC	Saca mountain glade	BN	IA		5.00	1976 Ь

			•			
107 Sesul Vaii Budacului glade	BN	IV	Budacu	5.00	1976	b
107 Fintinelele stone	BN	īV	Fintinele	5.00	1976	b
108 Cusmei stone	BN	IV	Cusma	5.00	1976	b
109 Posmus forest	BN	IV	Posmus	2.00	1976	b
110 Repedea valey	BN	IV	Bistrita Birg.	222.00	1976	m
111 Zinelor lake	BN	IV	Bistrita Birg.	15.00	1976	$\mathbf{m}$
112 Cetatele lake	BN	IV	Caianu	1.00	1976	m
113 Zagra lake	BN	IV	Zagra	1.00	1976	$\mathbf{m}$
114 Ripa Mare fossil point	BN	ľV	Budacu de Sus	1.00	1976	p
115 Morii lake	BN	ľV	Cristur	0.50	1976	z
116 Cormaia valey	BN	٧	Cormaia	50.00	1976	1
117 Bistrita Ardeleana gorges	BN	v	Bistrita Birg.	50.00	1976	1
118 Tatarului stones	BN	v	2.20	25.00	1976	ī
119 Little island of Braila	BR	īV	Gropeni-Marasu	5,336.00	1979	z
120 Stinca-Stefanesti	BT	Ш	Stefanesti	1.00	1975	m
121 Dersca marsh	BT	IV	Dersca	10.00	1975	b
122 Bucecea	BT	· IV	Bucecea	2.00	1975	ъ
122 Ducecea 12 <sup>2</sup> Cerbu - Copalau	BT	IV	Cerbu	2.00	1975	b
<del>-</del> .	BT	IV	Ripiceni	1.00	1975	b
1. Stinca - Ripiceni	BT	IV	Minastirea Dei	0.00	1975	f
125 Baiceni 126 Dracsani - Sulita	BT	ĪV	Dracsani	670.00	1975	
		IV IV		600.00	1975	m
127 Ezer - Dorohoi	BT		Dorohoi	150.10		m
128 Vorona	: BT	ΙV	Vorona	7	1975	m
129 Tudora-Botosani forest	BT	IV	Tudora	120.00	1975	m
130 Ciorohal - Calarasi	BT	IV	Calarasi	107.30	1975	m
131 Stuhoasa - Suharau	BT	IV	Suharau	60.70	1975	m
132 Horlaceni forest	BT	IV	Sendriceni	5.00	1975	m
133 Ipotesti	BT	V	Gorbanesti	1,014.80	1975	f
134 Rupea basaltic stone	BV	Ш	Rupea	9.00	1954	8
135 Racos basaltic columns	BV	Ш	Racos	1.10	1962	g
136 Piatra Cioplita stones	BV	Ш	Comana de Jos	0.10	1962	g
137 Baile Homorod muddy volc.	BV	Ш	Homorod	0.00	1980	g
138 Hoghiz basaltic microcanyon	BV	III	Hoghiz	0.00	1980	g
139 Dopca gorges	BV	Ш	Hoghiz	0.00	1980	g
140 Vama Strunga fossil point	BV	III	Moieciu	10.00	1980	p
141 Ormenis fossil point	BV	Ш	Ormenis	4.00	1955	Р
<ol> <li>Carhaga fossil point</li> </ol>	BV	ПΙ	Racos	1.60	1962	P
143 Purcareni fossil point	BV	Ш	Tarlungeni	0.00	1962	p
144 Birlogul Ursului cave	BV	Ш	Apata	1.00	1980	S
145 Valea Cetatii cave	BV	Ш	Risnov	1.00	1980	s
146 Liliecilor cave	BV	Ш	Moieciu	1.00	1980	S
147 Dumbrava Vadului glades	BV	IV	Sercaia	394.90	1961	b
148 Dealul Cetatii-Lempes	BV	IV	Harman Sinpet.	274.50	1962	b
149 Harman marsh	BV	IV	Harman Sinpet.	8.00	1962	ь
150 Stupini marsh	BV	IV	Brasov	6.00	1980	ь
151 Zarnesti gorges	BV	٦IV	Moieciu	109.80	1980	g
152 Postavarul mountain	BV	IV	Brasov	1,025.50	1980	m
153 Cotul Turzunului	BV	IV	Hoghiz	0.00	1980	Z
154 Timpa mountain	BV	Ÿ	Brasov	188.20	1962	$\tilde{1}$
155 Stejarisul Mare	BV	v	Brasov	20.00	1962	ī
156 Bogatii forest	BV	y	· ·	8.50	1980	l
157 Prejmer forest& marshes	BV	V	Maierus-Hoghiz	252.00	1962	
158 Sarea lui Buzau	BZ:	III	Prejmer Badila-Priscov	1.00	1955	m
	BZ.	. IV		30.00	1955	g
159 Piclele Mari si Mici muddy v.		Ш	Berca Cilou Somoo P	0.50	1966	g
160 Corabia	CJ		Gilau-Somes.R.			g
161 Suatu (I and II)	CJ CJ	IУ	Suatu	9.20	1932	Ъ

				•		
162 Cluj- Copirsae fields	CJ	IV	Cluj-Napoca	1.00	1932	ь
163 Dumbrava brook	CJ	IV	Ciurila	0.50	1974	· b
164 Turda gorges	CJ	IV	Mihai Viteazul	104.00	1938	m
165 Stiucilor lake	CJ	IV	Fizesu Gherlei	26.00	1966	Z
166 Legillor valey	CJ	IV	Geaca	20.00	1966	Z
167 Sic reeds	CJ	īV	Sic	2.00	1974	2
168 Fagetul Clujului	CJ	IV	Cluj Napoca	10.00	1974	1
169 Coronini-Bedina	CS	Ĭ	B. Herculane	2,839.00	1982	m
170 Ciclova-Simionu-Rolu Valey	CS	Ī	Ciclova Romana	1,327.00	1973	m
171 Bigar	CS	Ī	Bozovici	176.00	1982	m
172 Lisovacea	CS	I	Bozovici	33.00	1982	ונג
173 Soceni fossil point	CS	Ш	Soceni Ezeris	7.10	1955	P
174 Birzoni cave	CS	Ш	Bogiltin	1.00	1982	s
175 Valea Sebesului plains	CS	IV	Turnu Ruieni	40.00	1982	Ь
176 Dognecea forest	CS	IV	Dognecea	316.50	1982	f
177 Berzovia forest	CS	IV	Berzovia	253.80	1982	f
178 Valea Mare	CS	Ĭ	Moldova Noua	384.20	1973	m
179 Vama Veche-2 Mai aquatorium	CT	I	Limanu	5,000.00	1980	m
1 Petroseni limestone walls	CT	Ш	Deleni	4.80	1980	g
181 Aliman fossil point	CT	Ш	Aliman	15.00	1962	P
182 Topalu fossil reef	CT	Ш	Topalu	8.00	1980	P
183 Credinta fossil point	CT	Ш	Cobadin	6.00	1980	P
184 Cernavoda fossil point	CT	Ш	Cernavoda	3.00	1962	P
185 Seimenii Mari fossil point	CT	Ш	Seimeni	0.50	1955	p
186 La Adam cave	CT	III	Tirgusor	5.00		S
187 Gura Dobrogei cave	CT	Ш	Tirgusor	5.00	1962	5
188 Limanu caye	CT	Ш	Limanu	1.00	1970	5
189 Valu lui Traian	CT	IV	Valu lui Traian	5.00	1962	b
190 Hagieni forest	CT	IV	Limanu	392.90	1970	m
191 Dumbraveni forest	CT	IV	Independenta	345.70	1980	m
192 Cheia gorge 193 Canaraua Fetii forest	CT CT	IV IV	Tirgusor	170.00 168.30	1970 1980	m
193 Canaraua rein forest 194 Fintinita-Murfatlar	CT	IV	Baneasa	66.40	1962	m
195 Esechioi forest	CT	ĪV	Murfatlar	26.00	1980	. m
	CT	IV IV	Ostrov	25.00	1939	m
196 Agigea sand dunes 197 Allah Bair hill	CT	IV	Constanta	and the second second	1980	m
	CT	IV	Crucea	10.00	1972	m
1 Agigea lake 155 Canaralele Hirsova			Constanta	86.80		2
200 Reci forest	CT CV	IV IV	Hirsova	5.30	1943	Ì
201 Aita Seaca fossil point	CV	ïV	Reci Aita Seaca	259.10	1962	b
202 Mulerii cave		I		1.00	1962	: <b>P</b>
203 Narile stone	GJ	Ш	Baia de Arama	19.00	1955	s
204 Sfinxul Lainicilor stone	GJ	Ш	Sohodol	1.00	1982	g
205 Buha stone	GJ	III	Lainici Sa salu	1.00	1982	g
206 Andreaua stone	GJ		Sacelu Calandal	1.00	1982	g
207 Biserica Dracilor stone	GJ	III	Sohodol	1.00	1982	g
208 Izvarna springs	GI	П	Blahnita	1.00 500.00	1982 1982	g
209 Jalesului spring	Gl	III	Tismana	20.00	1982	m
210 Gura Plaiului cave	GI	П	Runcu Tismana	10.00	1955	m
211 ledului cave	Cl Cl	Ш	Baia de Arama	1.00	1982	S
212 Polovragi cave	GJ	Ш	Polovragi	1.00	1982	S
213 Cotul cu Aluni	GJ	IV	Tismana	25.00	1982	b
214 Chitu-Bratcu forest	GJ	IV	Bumbesti	1,319.00	1982	f
215 Cornisel forest	GJ	IV	Bumbesti	85.00	1982	f
216 Cioclovina		IV	Tismana	12.00	1982	
217 Tismana-Pocruia forest	GJ	IV	Tismana		1982	f
AT TEMMIN-TOCHMA TOLESE	GJ	Ι·Υ	1 15111a11a	51.60	1307	f

+ 4 ·						
330 Bahna fossil point	MH	IV	Ilovita	10.00	1955	p
331 Albastru lake	MM	$\mathbf{m}$	Baia Sprie	0.50	1977	g
332 Chiuzbaia fossil point	MM	$\mathbf{m}$	Chiuzbaia	50.00	1977	p
333 Valenii Somcutei cave	MM	Ш	Somcuta Mare	5.00	1977	s
334 Cu Oase cave	MM	$\mathbf{III}$	Baiut	0.50	1977	s
335 Morarenilor lake	MM	IV	Breb	20.00	1977	b
336 Salhoi-Zimbroslavele rocks	MM	ľV	Borsa	5.00	1977	b
337 Poiana Brazilor marsh	MM	ΙV	Sapinta	4.00	1977	b
338 Vlascinescu marshes	MM	IV	Baia Mare	2.00	1977	Ъ
339 Taul lui Dumitru	MM	IV	Firiza	1.00	1977	ь
340 Ronisoara forest	MM	IV	Rona de Sus	62.00	1977	f
341 Ocna Sugatag forest	MM	ĪV	Ocna Sugatag	44.00	1977	£
342 Bavna forest	MM	ĪV	Miresu Mare	26.00	1977	f
343 Costiui forest	MM	IV	Rona de Sus	0.70	1977	f
344 Creasta Cocosului	MM	īv	Desesti-Mara	50.00	1977	g
345 Tatarului gorges	MM	IV	Desesti-Mare	15.00	1977	g
346 Babei gorges	MM	IV	Coroieni-Baba	15.00	1977	g
347 Cornedei-Ciungii Balasinii	MM	ĪV	Borsa	800.00	1977	m
Baia Mare forest	MM	IV	Baia Mare	500.00	1977	m
349 Zau de Cimpie	MS	ľV	Zau de Cimpie	3.00	1932	Ъ
350 Mociar forest	MS	ĪV	Solovastru	48.00	1932	f
351 Serbesti stone	NT	m	Stefan cel Mare	5.00	1971	
352 Teiului stone	NT	$\Pi$	Poiana Teiului	0.20	1971	g
353 Tosorog cave	NT	Ш	Bicazul Ardelean	1.00	1971	. S
354 Dealul Vulpii-Botoaia	NT	ïV	Piatra Neamt	2.00	1971	b
355 Dumbrava Rosie	NT	IV IV	Dumbrava Rosie	0.50	1971	Ъ
356 Gosman forest	NT	IV	Tarcau	175.00	1971	f
357 Vinatori forest	NT	IV	Vinatori	70.60	1971	f
					1971	
358 Cozla limestones	NT	IV	Piatra Neamt	0.00		g
359 Cernegura fossil point	NT	IV	Piatra Neamt	198.20	1971	P
360 Pietricica fossil point	NT	IV	Piatra Neamt	39.50	1971	P
361 Cozla fossil point	NT	IV	Piatra Neamt	10.00	1971	P
362 Agircia fossil point	NT	IV	Piatra Neamt	1.00	1971	p
363 Padurea de Arama	NT	V	Agapia	20.00	1971	f
364 Padurea de Argint	NT	V	Agapia	0.50	1971	f
365 Slanic Prahova salt mountain	PH	Ш	Slanic	2.00	1954	g
? Tigaile din Ciucas	PH	IV	Cheia	3.00	1962	ını.
30/ Ocna Sibiului lake	SB -	Ш	Ocna Sibiului	0.20	1962	g
368 Turnu Rosu-Porcesti limestone	SB	$\mathbf{m}$	Turnu Rosu	60.00	1954	p
369 Cisnadioara limestones	SB	Ш	Cisnadioara	1.00	1962	p
370 Cindrelului lakes	SB	IV	Gura Riului	417.40	1 <del>9</del> 61	Ъ
371 Bilii valey	SB	IV-	Cirtisoara	120.40	1932	m
372 Arpasel	SB	IV	Arpasul de Jos	736.00	1962	Z
373 Gradina Zmeilor sandstones	SJ	III	Gilgau Almasului	5.00	1975	g
374 Mosu si Baba stones	SJ	III	Somes - Guraslau	1.00	1975	g
375 Stinca Dracului sandstones	· SJ	III	Hida	1.00	1975	g
376 Racis - Hida glade	SJ	IV	Racis-Hida	1.50	1975	b
377 Salajului valey	SJ	IV	Cehu Silvaniei	0.00	1975	b.
378 Rakoczi limestones	sj	IV	Rona-Jibou	0.00	1975	g
379 Balta Cehei	SJ	IV	Cehei - Simleu	36.00	1975	m
380 Sanislau Piscolt	SM	IV	Sanislau	60.00	1982	ь
381 Urziceni forest	SM	īV	Urziceni	38.20	1982	f
382 Foieni forest	SM	īV	Foieni	8.00	1982	f
383 Pir	SM	ĪV	Piru Nou	0.00	1982	m
384 Moara Dracului	sv	Ш	Cimpulung Moldo	10.00	1971	g
385 Tibaului stone	sv	III	Cirlibaba	10.00	1971	g
		***				0

218 Polovragi forest	GJ	IV	Polovragi	10.00	1982	f
219 Sacelu eocene formations	GJ	IV	Sacelu	1.00	1982	g
220 Paring mountain	GJ	·IV	Novaci	2,000.00	1982	m
221 Gropul Sec(Plesu mn.Patrunsa)	GJ	ľV	Runcu	1,562.00	1982	Пì
222 Rachiteaua forest	GJ	IV	Runcu	1,200.00	1982	m
223 Tismanei grove	GJ	IV	Tismana	363.10	1982	m
224 Sohodol gorges	GJ	IV	Runcu	350.00	1982	m
225 Oslea mountain	GJ	ľV	Tismana-Pades	280.00	1982	m
226 Oltet gorges	GJ	IV	Polovragi	149.00	1982	m
227 Botorogi forest	GJ	IV	Danesti	106.00	1982	m
228 Cornetul Pocruiei	GJ	IV	Tismana	70.00	1982	m
229 Borostenilor stone	GJ	IV	Pestisani	28.00	1982	m
230 Buzesti fossil point	GJ	įv	Crasna	1.00	1982	p
231 Groserea fossil point	GJ	īV	Aninoasa	1.00	1982	p
232 Saulesti fossil point	GJ	IV	Saulesti	1.00	1982	p
233 Sacelu fossil point	GJ	IV	Sacelu	1.00	1982	p
234 Girbovu fossil point	GJ	IV	Turceni	1.00	1982	p
235 Desului valey fossil point	GJ	, IV	Vladimir	1.00	1982	· p
Girboavele forest	GL	IV	Galati	100.00	1977	f
237 Hanul Conachi sand dunes	GL	IV	Fundeni	199.00	1940	m
238 Breana-Roscani forest	GL	IV	Baneasa	88.30	1969	m
239 Rates fossil point	GL	īv	Tecuci	1.50	1967	p
240 Tirighina-Barbosi hill-Sside	GL	IV	Sendreni	1.00	1967	p
241 Paringu Mic peak-isol.rocks	HD	I	Petrosani	0.50	1979	ъ
242 Sura Mare cave & gorges	HD	I	Pui	5.00	1979	m
243 Tecuri cave	HD	I	Baru Mare Petros	2.00	1954	s
244 Corali cave	HD	I	Cimpul lui Neag	1.00	1979	s
245 Lapugiul de Sus fossil dep.	HD	Ш	Lapugiu de Sus	5.00	1988	· p
246 Sinpetru fossil deposit	HD	$\mathbf{m}$	Sintamarie-Orlea	5.00	1988	p
247 Valea Stimii cave	HD	Ш	Bosorod	1.00	1988	s
248 Zeicului cave	HD	Ш	Cimpul lui Neag	1.00	1979	s
249 Cizmei cave	HD	Ш	Bulzesti	1.00	1988	Z
250 Colt hill	HD	IV	Deva	78.00	1988	b
251 Pui plains	HD	IV	Pui	13.00	1979	Ъ
252 Nucsoara plains	HD	Į <b>V</b>	Salasu de Sus	10.00	1979	b
253 Pesteana marsh	HD	IV.	Densus	3.00	1979	b
i Fata Fetei limestone	HD	IV	Riul de Mori	3.00	1988	ь
255 Poienii peak	HD	IV	Salasu de Sus	1.00	1979	b
256 Paring mountain	HD	IV	Petrosani	0.00	1932	b
257 Magurile Sacarimbului	HD	IV	Sacarimb	500.00	1988	f
258 Chizid forest	HD	lV .	Hunedoara	129.00	1988	f
259 Bejan forest	HD	IV .	Deva	103.00	1940	f
260 Vulcan mountain	HD	IV	Buces	5.00	1979	g
261 Grohot natural bridge	HD	IV ·	Bulzesti	5.00	1979	g
262 Slivut forest	HD	IA	Hateg	506.00	1979	m
263 Magura hill limestones	HD	IV.	Craciunesti	120.00	1988	m
264 Deva Castle hill	HD	IV	Deva	30.00	1955	m
265 Magura Uroiului	HD	· IV	Simeria - Uroi	20.00	1979	m
266 Bobilna valey limestones	HD	IV	Rapoltu Mare	12.50	1988	m
267 Mada gorges	HD	·IV	Balsa	10.00	1979	m
268 Crivadia gorges	HD	IV	Banita	10.00	1979	m
269 Bolii cave	HD	ĪV	Banita	10.00	1979	m
270 Praid salt mountain	HR	Ш	Praid	8.00	1980	g
271 Banyapatakleje	HR	Ш	Sincraieni	5.00	1980	g
272 Rat lake	HR	III	Mugeni	3.00	1980	g
273 Melcului hill	HR	III	Corund	1.50	1980	g
					<b>-</b>	O

274 Filias muddy volcanoes	HR		Ш	Cristuru Secuiesc	1.00	1980	g
275 Sugau cave	HR		Ш	Suseni	17.00	1980	S
276 Luci peatbog	HR		IV	Sincraieni	273.00	1955	b
277 Dupa Lunca marsh	HR		IV	Voslobeni	40.00	1980	b
278 Kicsi Romlasmezo peatbog	HR		IV	Plaiesii de Jos	10.00	1980	ь
279 Vlahita glade	HR		IV	Vlahita	5.00	1980	Ъ
280 Nyeres piedmont	HR		IV	Voslobeni	5.00	1980	b
281 Pietrele Rosii	HR		IV	Remetea	4.00	1980	ъ
282 Valea de Miiloc peatbog	HR		ΙV	Tusnad	4.00	1980	ь
283 Benes peatbog	HR		IV	Tusnad	4.00	1980	Ъ
284 Dobreanului brook	HR		IV	Bilbor	3.50	1980	ь
285 Budos peathog	HR		ΙV	Sincraieni	3.00	1955	b
286 Nadasfurdo peatbog	HR		IV	Tusnad	2.00	1980	b
287 Dumbrava Harghitei peatbog	HR		īV	Lueta	2.00	1980	b
288 Borsaros-Sincraieni peatbog	HR		IV	Sincraieni	1.00	1939	b
289 Soimilor stone	HR		IV	Baile Tusnad	0.80	1980	b
290 Borsec botanical reserve	HR		īV	Borsec	0.50	1934	Ъ
291 Virghisului gorges and caves	HR		ĪV	Meresti	800.00	1980	m
? Sfinta Ana lake	HR		īV	Tusnad	240.00	1975	m
293 Mohos peatbog	HR		ĪV	Tusnad	240.00	1975	m
294 Firtus hill	HR		ĪV	Corund	15.00	1980	m
	HR		ΙΛ	Martinis	10.00	1980	z
295 Sinpaul birds resting place	IF		IV		and the second s	1.00	
296 Snagov lake	IF		IV	Snagov	1,000.00 10.00	1952 1952	m
297 Snagov forest			IV	Snagov			m
298 Caiafele forest	IL.		IV IV	Fetesti	330.00	1968	m
299 Moroiu forest	IL.			Fetesti	149.90	1968	m
300 Valea lui David plains	IS		IV	Letcani	50.00	1969	Ъ
301 Galata	IS		ΙV	Miroslava	1.90	1973	b
302 Valea Lunga	IS		ΙV	Holboca	0.20	1973	b
303 Humosu forest	IS		IV	Deleni	73.30	1973	f
304 Uricani forest	IS		IV	Miroslava	68.00	1973	f
305 Roscani forest	IS		IV	Trifesti	34.60	1973	f
306 Poieni forest	IS	٠.	IV	Schitu Duca	9.20	1973	f
307 Catalina forest	IS		IV	Cotnari	7.60	1973	f
308 Dealul Repedea fossil point	IS		ΙV	Birnova	5.80	1955	P
309 Epuran cave	MH		· I	Ciresu-Jupinesti	1.00	1980	S
^Topolnita cave	MH		Ш	Ciresu	50.00	1980	m
5.1 Camana spring	MH		Ш	Podeni	25.00	1980	m
312 Gura Vaii - Virciorova	MH		IV	Gura Vaii	305.00	1980	b
313 Oglanicului valey	MH		IV	Breznita	150.00	1980	b
314 Vinjului floodplain	MH		IV	Vinju Mare	147.00	1980	b
315 Ponoarele forest	MH		ΙV	Ponoare	20.00	1980	b
316 Izverna mediterranian bushes	MH		IV	Izverna	10.00	1980	Ъ
317 Banului floodplain	MH		IV	Lunca Banului	387.00	1980	f
318 Punghina forest	MH		IV.	Punghina	189.00	1980	f
319 Borovat forest	MH		ΙV	Balvanesti	30.00	1980	f
320 Bunget forest	MH		IV	Burila Mare	18.20	1980	f
321 Varanic hill	МН		īV	Breznita	350.00	1980	m
322 Stirmina forest	МН		ΪV	Hinova	100.30	1980	m
323 Ponoarele karstic complex	MH		ΙV	Ponoare	100.00	1980	m
324 Cosustei springs limestones	MH		ΪV	llovita	50.00	1980	
325 Cosustei springs	MH		ĪV	Balta	50.00	1980	m
326 Cornetul Babelor si Cerboaie	MH	•	ΙV	Balta	40.00	1980	m
327 Cornetul Piatra Incalecata	МH		ΙV	Izverna	12.00	1980	m
328 Topolnita gorges	МН		īv				m
			ĮV	Ciresu	0.00	1980	m
329 Svinita fossil point	MH		ŢΑ	Svinita	93.10	1980	p

		5 -	4		•	
386 Buhei stone	SV	Ш	Cimpulung Moldo	2.00	1971	g
387 Poiana Stampei peatbog	SV	ľV	Poiana Stampei	677.10	1955	Ь
388 Todirescu alpine plain	SV	ŢV	Cimpulung Moldo	44.00	1941	<b>b</b>
389 Sarul Dornei peatbog	SV	IV	Sarul Dornei	35.50	1973	b
390 Bosanci-Ponoare plains	SV	IV	Bosanci	24.50	1932	b
391 Salcea floodplain	SV	īV	Salcea	10.00	1971	.b
392 Bosanci-Frumoasa plains	sv	IV	Moara	9.50	1932	b
393 Radauti marsh	sv	IV	Radauti	5.00	1971	ь.
394 Lucina	sv	īV	Moldova-Sulita	1.00	1971	b
395 Magura - Cimpulung	sv	īV	Cimpulung Moldo	1.00	1971	b
396 Crujana forest	SV	ΪV	Patrauti	32.50	1973	f
397 Doamnei stones (Rarau mtn)	sv	IV	Cimpulung Moldo	887.90	1955	m
398 Slatioara forest	sv	IV	Slatioara	854.30	1941	m
399 Giumalau forest	sv	īV	Valea Putnei	314.00	1941	m
400 Bila - Lala	SV	īV	Cirlibaba	234.10	1971	m
401 Rachitisul Mare	sv	īV	Moldova-Sulita	177.50	1971	m
402 Dragomirna forest	SV	IV.	Mitocul Dragomir	131.00	1973	m
403 Zamostea-Lunca forest	SV	IV	Zamostea	115.30	1973	m
1 Zugrenilor gorges	SV	īV	Vatra Dornei	100.00	1973	m
405 Lucavei gorges	Š۷	īV	Moldova-Sulita	40.00	1973	m
406 Pinului and Soimului stone	SV	īV	Gura Humorului	1.50	1971	p
407 Pojorita triasic klippe	sv	īV	Fundul Moldovei	1.00	1971	p
408 Toancelor hill	SV	īV	Crucea	3.00	1971	Z
409 Luanei cave	SV	v	Sarul Dornei	2.00	1973	s
410 Niculitel forest	TL	īV	Niculitel	11.00	1939	m
411 Cenad forest	TM	īV	Cenad	314.00	1982	b
412 Poganisului floodplain	TM	īV	Berini-Otvesti	70.00	1974	b
413 Cadar	TM	īv	Cadar	6.00	1974	ь
414 Cerna	TM	īV	Cerna	6.00	1974	Ъ
415 Buzias	TM	īV	Buzias	6.00	1974	b
416 Blajova	TM	īV	Blajova	6.00	1974	b
417 Slatina saltings	TM	īV	Peciul Nou	4.00	1982	ь
418 Cladova	TM	īV	Cladova	2.00	1974	b
419 Drinova	TM	ΙV	Drinova	2.00	1974	b
420 Paninova	TM	īV	Paninova	2.00	1974	ь
421 Dudesti	TM	īV	Dudesti	2.00	1974	Ъ
'2 Ohaba Romana	TM	IV	Ohaba Romana	2.00	1974	b
423 Jesnic	TM	IV	Iesnic	2.00	1974	b
424 Leucusesti	TM	· IV		2.00	1974	ь
425 Brestovat		IV IV	Leucusesti Brestovat			b
· · · · · · · · · · · · · · · · · · ·	TM		Padureni	2.00	1974	
426 Padureni	TM	IV		2.00	1974	b
427 Bichigi 428 Sisitak knoll	TM	IV	Bichigi	2.00	1974	b
	TM	IV	Simpetru Mare	0.50	1974	b
429 Bazos forest	TM	IV	Remetea Mare	60.00	1954	£
430 Radmanesti fossil point	TM	IV.	Bara	4.00	1955	p
431 Satchinez marshes	TM	īV	Satchinez	101.00	1942	Z
432 Dumbrava forest	TM	IV	Buzias	310.00	1982	m
433 Bistra forest	TM	V	Ghiroda	20.00	1982	m
434 Stancioiului valey pyramids	VL	Ш	Goranu	12.00	1966	g
434 Slatioara soil pyramids	VL	III	Slatioara	7.00	1966	g
435 Caprelor cave	٧L	III	Olanesti	1.00	1983	S
436 Piciorul Boului cave	VL	Ш	Ciineni	1.00	1983	S
437 Liliecilor cave	VL	III	Costesti	1.00	1983	s
438 Munteanu-Murgoci cave	VL	III	Olanesti	1.00	1983	S
439 Pagodelor cave	VL	$\Pi$ I	Olanesti	1.00	1983	s
440 Rac cave	VL	111	Olanesti	1.00	1983	s

441 Valea Bistrita cave	VL	Ш	Costesti	1.00	1983	s
442 Lake cave	٧L	$\mathbf{III}$	Olanesti	1.00	1983	s
443 Pearls cave	VL	Ш	Olanesti	1.00	1983	S
444 Arnautilor cave	VL	III	Olanesti	1.00	1983	s
445 Clopot cave	VL	Ш	Olanesti	1.00	1983	s
446 Stricatul alpine pines	VL	IV	Voineasa	15.00	1983	ь
447 Simbotin - Daesti	VL	IA	Simbotin	1.00	1983	b
448 Mosoroasa marsh	VL	rv	Olanesti	0.20	1983	Ъ
449 Tisa Mare forest	VŁ	IV	Lungesti	50.00	1983	f
450 Silea forest	VL	ΙV	Fumureni	25.00	1983	f
451 Calinesti - Brezoi	VL	IV .	Brezoi	200.00	1983	m
452 Cilcescu	VL	IV	Voineasa	200.00	1983	m
453 Miru - Bora	VL	IV	Voineasa	25.00	1983	$\mathbf{m}$
454 Ocnele Mari	VL	IV	Ocnele Mari	15.00	1983	m
455 Radita - Minzu	VL	IV	Olanesti	10.00	1983	m
456 Latoritei lake	VL	IV	Malaia	10.00	1983	m
457 Stogu	VL	ľV	Olanesti	10.00	1983	m
4 <sup>-</sup> Latoritei forest	VL	IV	Malaia	7.10	1983	m
4. Sterpul - Dealul Negru	VL	IV	Voineasa	5.00	1983	m
460 Cristesti	VL	īV	Voineasa	3.00	1983	m
461 Valea Cheii forest	VL	ľV	Olanesti	1.50	1983	m
462 Golesti	VL	IV	Golesti	10.00	1983	p
463 Zabala - Raoaza	VN	Ш	Nereju	50.00	1990	g
464 Andreiasu living fire	VN	m	Andreiasu	12.00	1967	g
465 Goru peak	VN	īv	Naruja	391.40	1990	ь
466 Negru lake	VN	IV ·	Nistoresti	20.00	1990	ь
467 Verdele forest	VN	IV	Naruja	250.00	1990	f
468 Cenaru I forest	VN	īV	Andreiasu	233.40	1973	f
469 Lepsa - Zboina forest	VN	ĪV	Tulnici	210.70	1973	f
470 Schitu-Dalhauti forest	VN	īV	Cirligele	188.20	1973	f
471 Cenaru II forest	VN	īV	Andreiasu	149.80	1973	f
472 Izvoarele Narujei forest	VN	IV	Nistoresti	78.00	1973	ſ
473 Tisita forest	VN	IV	Tulnici	307.00	1973	m
474 Caldarile Zabalei-Piriul Negru	VN	īV	Neruja	300.00	1990	m
475 Narujei gorges	VN	īV	Naruja	200.00	1990	m
476 Scruntar forest	· VN	īV	Reghiu	125.00	1990	m
4 Ripa Rosie-Dealul Morii	VN	īV	Tulnici	49.60	1990	m
479 Strimtura	VN	īV	Tulnici	15.00	1990	m
480 Algheanu	VN	īV	Vrincioaia	10.00	1990	m
481 Putnei waterfall	VN	īV	Tulnici	10.00	1973	m
482 Bozu brook	VN	īV	Valea Sarii	5.00	1990	m
483 Tisita Mare gorges	VN	. IV	Tulnici	0.00	1990	m
484 Malusteni fossil point	vs	III	Malusteni	10.00	1973	
485 Hulubat fossil point	VS	ПІ	Vaslui	2.50	1973	p
486 Movila lui Burcel	VS	IV	Miclesti	12.00	1973	P b
•	VS			6.00	1973	b
487 Glodeni plains	VS VS	IV	Negresti-Glodeni	6.00	1973	ъ
488 Tanacu-Coasta Rupturile 489 Badeana forest		. IA	Tanacu Tutova	126.70	1973	f
490 Hirboanca forest	VS VC	IV TV		69.50	1973	f
	VS	IV D	Delesti			
491 Seaca-Movileni forest	VS	IV D	Corolesti	48.10	1973	f ç
492 Balteni forest	VS	IV	Stefan cel Mare	22.00	1973	f

## Act/year

## ANGIOSPERMAE

#### ----------

	Compositae	
	Leontopodium alpinum *	J.C.M.nr.1743/1939
	Ericaceae	
	Rhododendron kotschyi	J.C.M.nr.1743/1939
	Gentianaceae	
	Gentiana lutea	J.C.M.nr.1743/1939
	Iridaceae	
	Iris graminea	J.C.M.nr.1743/1939
	Crocus moesiacus	J.C.M.nr.1743/1939
	Leguminosae	
	Caragana frutex **	H.C.M.nr.1625/1955
	Caragana molis	H.C.M.nr.1625/1955
	Liliaceae	
	Convallaria majalis	J.C.M.nr.1743/1939
	Fritilaria meleagris	J.C.M.nr.1743/1939
	Ruscus aculeatus	J.C.M.nr.1743/1939
	Ruscus hypoglossum	J.C.M.nr.1743/1939
	Orchidaceae	
	Cypripedium calceolus	J.C.M.nr.1743/1939
	Nigritella rubra	J.C.M.nr.645/1938
	Nigritella nigra	J.C.M.nr.645/1938
	Nimphaeaceae	
	Nimphaea lotus termalis	J.C.M.nr.148/1931
	Paeoniaceae	
÷	Paeonia peregrina subsp. romanica	J.C.M.nr.1743/1939
	Ranunculaceae	
	Trollius europaeus	J.C.M.nr.1743/1939
	Thymelaceae	
	Daphne blagayana	J.C.M.nr.645/1938
	Daphne cneorum	J.C.M.nr.1743/1939
	Umbeliferae	
	Angelica archangelica	J.C.M.nr.1743/1939

## GYMNOSPERMAE

\*\*\*\*\*\*\*\*\*\*

Taxaceae

Larix decidua J.C.M.nr.284/1941 Taxus baccata J.C.M.nr.1743/1939

STRICTLY PROTECTED FAUNA OF ROMANIA

	•
CARNIVORA	
Felidae	
Lynx lynx	J.C.M.nr.734/1933
ARTIODACTYLA	
Bovidae	•
Rupicapra rupicapra	J.C.M.nr.734/1933
Birds	
PELECANIFORMES	
Pelecanidae	
Pelecanus crispus	J.C.M.nr.600/1933
Pelecanus onocrotalus	J.C.N.nr.600/1933
CICONIIFORMES	
Ardeidae	
Casmerodius albus (Egretta alba)	J.C.M.nr.600/1933
Egretta garzetta	J.C.M.nr.600/1933
ANSERIFORMES	
Anatidae	
Tadorna tadorna	H.C.M.nr.894/1952
Casarca ferruginea	H.C.M.nr.894/1952
FALCONIFORMES	
Accipitridae	
Gypaetus barbatus	J.C.M.nr.600/1933
Aegypius monachus	J.C.M.nr.600/1933
Gyps fulvus	J.C.M.nr.600/1933
Aquila chrysaetos	J.C.N.nr.2377/1940
Neophron percnopterus	J.C.M.nr.600/1933
GALLIFORMES	
Tetraonidae	
Tetrao urogallus (female)	J.C.M.nr.600/1933
Lyrurus tetrix	H.C.M.nr.894/1952
GRUIFORNES	
Otitidae	7 C X COO (1000
Otis tarda (female)	J.C.M.nr.600/1933 J.C.M.nr.600/1933
Otis tetrax	J.C.M.nr.800/1933
CHARADRIIFORMES	
Charadriide Himantopus himantopus	H.C.M.nr.894/1952
PASSERIFORMES	11.0.11.111 ; d 347 1 332
Corvidae	
Corvux corax	J.C.M.nr.2377/1940
CICONIIFORMES	5.G.H.HI.23///1940
Threskiornithidae	
Platalea leucorodia	H.C.M.nr.894/1952
Reptiles	
TESTUDINES	•
Testudinidae	
Testudo graeca ibera	J.C.M.nr.142/1938
Testudo hermanni hermanni	H.C.M.nr.1625/1955
g notice that the new grant of the season of	

<sup>\* -</sup> Journal of the Council of Ministers
\*\* - Decision of the Council of Ministers

## MINISTRY OF ENVIRONMENT ( ROMANIA)

## O R D E R No.619 of 21,09,1992

The Minister of Environment,

Having in view the need of regulating the procedure of elaboration and the contents of studies and analyses on the environmental impact, as part of the technical documentation required for obtaining an approval and environment authorization for activities that have a powerful impact upon ecosystems;

In completion of Order No.170 of 01.11.1990 regarding the procedure and competence for issuing an environment approval, and of Decision No.113/26.11.1990 regarding the contents of the technical documentation required for issuing an environment approval;

On the basis of Government Decision No.264 of 12.04.1991 regarding the organization and functioning of the Ministry of Environment,

issues the following

### ORDER

- 1. The "Methodologic norms regarding the procedure of elaboration and the minimum contents of studies and analyses on the environmental impact" are approved.
- 2. The present Order comes into force starting with 1 October 1992.
- 3. The Directorate for Evaluation of the Ecologic Impact and Approval is in charge of enforcing the provisions of the present Order.

MINISTER, Marcian Bleahu

#### METHODOLOGIC NORMS

regarding the elaboration procedure and minimum contents of impact studies and analyses

#### 1. PREAMBLE

- 1.1. "Environmental impact" refers to any direct or indirect effect of a human activity carried out in a certain region, that produces a change of the evolution course of environment and ecosystems quality, a change that can affect human health, environment integrity water, air, soil, underground, forests, flora, fauna, landscape, human establishments, constructions, cultural patrimonium or social-economic conditions.
- 1.2. The purpose of impact evaluation is to emphasize the negative as well as positive effects of a projected or existing activity. The evaluation of negative effects will constitute the base for deciding upon the measures to be taken according to admitted environment parametres.
- 1.3. Elaboration of impact studies is obligatory for achieving a correct evaluation of long and short-term consequences and for obtaining the environment agreement for urbanism and land improvement projects, for new investments and activities, as well as for projects of development or modernization of existing capacities that might affect the environment by overexploitation of local, regional or global resources.

In the case of regions the economic development of which have a cumulated impact upon the components defined at point 1.1., case studies might be found necessary for one or several objectives, as well as impact studies for the whole region that will bear the consequences of the planned activity.

- 1.4. For the objectives and activities that function without an environment agreement, impact evaluation will be performed through impact analyses, necessary for issuing or renewing the environment authorization.
- 1.5. Objectives (activities) specified in Annex 2 of Decision 113/1990 of the Ministry of Environment are subject to impact evaluation.

### 2. IMPACT STUDIES ELABORATION PROCEDURE

2.1. The study of impact global evaluation is integrated in the designing process of various investment activities and is subject to established procedures of promotion of those projects that can affect the environment by their nature, dimensions and location.

Initiators of the investments must ensure the realization and financing of evaluation impact studies. These studies can be elaborated by specialized bodies of the ministries, by other specialized institutes or university research groups, as well as by other institutions that are legal persons. The Agencies for supervision and protection of the environment will be necessarily consulted for the elaboration of evaluation impact studies.

Institutions that supply essential data and those that perform impact studies are to be held resposible towards designers, beneficiaries and investors for the accurateness of the information supplied and for the quality of the studies elaborated by them.

- 2.2. Impact evaluation is to be performed, depending on each case, in two stages:
- first stage a preliminary impact study is elaborated only for objectives that have a very powerful impact upon environment and ecosystems, as well as for objectives located in regions of scientific, touristic or cultural interest, that must be protected; this study estimates the influence certain activities might have upon environment and establishes clear restrictions that are to be imposed from the very start for ensuring environment protection.
- second stage a study of global impact evaluation leads to deciding upon the environment protection solutions, through the global evaluation of potential implications of the proposed activities.
- 2.3. The methodologies of elaboration of environment impact studies for objectives specific to various fields of activity will be proposed and realized by ministries, departments, research and design institutes, higher education institutes.

Before being distributed and used, these methodologies will be submitted for approval to the Ministry of Environment.

- 2.4. Impact evaluation studies are included in the technical documentations drown up in view of obtaining an environment approval, according to the Contents regulations specified in Annex 1 of Decision 113/1990 of the Ministry of Environment.
- 2.5. The preliminary impact study helps orienting the designers in choosing the most suitable locations and technical-economic solutions that have minimum consequences upon environment. This study will be elaborated in parallel with the first designing stage.
- 2.6. The global impact evaluation study substantiates the decisions and solutions connected to environment protection, that are established in the technical-economic documentations on the "feasability study" stage.

#### 3. APPROVAL PROCEDURE

3.1. Global impact evaluation studies accompanying technical documentations for promoting investments are to be approved together with the later by the Ministry of Environment and the regional agencies for the supervision and protection of environment, by the issuance of an "environment approval", according to the issuance procedure and competences specified in Annexes 1 and 2 of Order No.170/1990 of the Ministry of Environment.

Preliminary impact studies are approved, according to the same competences, by the issuance of an "acceptance of the preliminary impact study", that has the character of technical advise, and not of a legal environment approval.

3.2. Projects of land improvement, as well as the projects concerning the location of objectives that can generate an important negative impact upon environment are communicated to the population for information and consultation in view of reaching decisions regarding their promotion, before being submitted for approval.

### 4. CONTENTS REGULATIONS

- 4.1. The preliminary impact study must contain at least elements regarding:
- 4.1.1. location of the objective and requirements of natural resources utilization;
- 4.1.2. profile and volume of the activity proposed by the project;
- 4.1.3. noxious substances estimated to be evacuated in the environment by overflow in waters, emissions in the atmosphere, deposit of residues, etc.
- 4.1.4. major restrictions, including risk analyses and cost-benefit analyses, imposed to the projected activity from the point of view of location and impact limitation or prevention, taking into consideration the sources of pollution, the actual environment quality level and the quality requirements specified by norms;
- 4.1.5. capacity and profile of polution prevention equipment and its efficiency as compared to the limits established for water, air, land etc.;
- 4.1.6. control of the level of noxious substances, including secondary products, evacuation in the environment;
- 4.1.7. other elements considered necessary for preliminary evaluation.
- 4.2. The global impact evaluation study is based on the information supplied by the initiator of the investment (beneficiary).

In case this information is insufficient or little credible, it can be established by the institute that elaborates the study, on the basis of experimental determinations

- 4.3. The global impact evaluation study comprises the following data:
  - general physical characteristics of the objective:
- projected products and subproducts, requirements of land and natural resources utilization during the realization and exploitation of the investment;
- characteristics of fabrication methods, nature and volume of auxiliary raw materials and fuels utilized;
  - estimation of the types and quantities of residues and

emissions evacuated in the environment; pollution by vibrations, noise, light, radiations, etc. as a result of the exploitation of the investment;

- presentation of the toxicity degree of each polluting substance, of its spreading and noxious influence on man (according to the results of toxicology studies) corresponding to the estimated levels of emission.
- 4.3.2. For the evaluation of the impact, it is interesting to consider the situation of the environment before starting the projected activity. Population and human establishments must be taken into consideration for this purpose, as well as the fauna, flora, water, climate, geology, hydrogeology, architectural patrimony, archeology, landscape, ways of access and traffic development (sound pollution), the possible interrelations between the enumerated elements.
- 4.3.3. Evaluation of important direct and secondary indirect effects, cumulative and synergic, short, medium and long-term effects, permanent and temporary, positive and negative effects that the different technologic variants of the projected objective might produce on environment as a result of:
  - the existence of the projected objective;
  - the utilization of natural resources;
- the emission of noxious substances, elimination of toxic residues.

Evaluation of the previsible effects the projected objective might produce on environment during normal exploitation or in case of accidents will have in view the inventory, description and quantification of the possible form of manifestation of the impact: impact upon surface elements, upon underground waters, land stability, landscape, upon flora and fauna, air quality, traffic and roads, upon human establishments and material goods.

The residual impact will be taken into consideration, too (the one that is left after applying measures for amelioration or for removing noxious effects).

- 4.3.4. Identification of the technologic variant (out of several variants examined for the proposed project) that ensures minimal negative effects on environment and ecosystems.
  - 4.3.5. Specification of necessary conditions for carrying

out the projected activity in view of environment and ecosystems protection.

4.3.6. Specification of the technical measures proposed for avoiding, reducing or compensating the important negative effects on environment of the projected objective: measures for fighting underground and surface water pollution, for ensuring land stability, for limitting modifications of the landscape, for reducing air pollution, for destroying fabrication residues.

For the activities that imply fabrication, transportation, manipulation or utilization of chemical substances in various temperature and pressure conditions (either in the technological processes, or in special climatic conditions), the impact studies will have to take into consideration the risks of critical situations (major accidents), that may cause the evacuation of polluting substances in the environment, as follows:

- inventory of the "hot zones" that can generate an accident or incident in exploitation;
- specification of technical measures (that must be included in the project) for the prevention of such events and intervention in case of thir occurence.
- 4.3.7. Specification of the works of ecologic reconstruction required in the affected area, specification of compensation works for affected material goods: houses, water sources, forests, arable land, recreation regions, architectonic elements and s.o.
- 4.3.8. Providing control systems for the emissions into the atmosphere, for efluents in receiving waters, for the infiltrations of noxious substances in undergroud water.
- 4.3.9. Emphasizing the aspects that could not be investigated sufficiently during the elaboration of the study. for lack of information or other reasons; emphasizing the aspects for which the designer or the author of the study has certain reserves (incertitudes).
- 4.3.10. Emphasizing the need of continuing the ecologic impact evaluation study during the period of elaboration of the following designing stages or during the functioning period of

the proposed objective.

- 4.4. At the issuance or renewal of the functioning authorization for activities that produce a major impact on environment, the elaboration of an impact analysis will be required, that should contain both a characterization of the activity with respect to the existing environment protection regulations, and the measures required by the norms;
- 4.4.1. Characterization of the activity with respect to existing environment protection norms must comprise:
  - location;
  - profile and production capacity;
  - water source, drown and used flow;
- sources of noxious substances and quantities discharged in the environment: in the air, water, land, noise and vibrations, etc.;
- provisions of the documents that regulate the functioning of the objective;
  - monitoring system of emissions in the environment;
- impact produced upon the environment and the ecosystems by the evacuation of noxious substances;
- efficiency of the installations for recovering useful substances and reducing pollution, with respect to the provisions of existing regulations;
- system of distribution or annihilation of residues resulted of the technological processes.
- 4.4.2. Supplementary measures required for conformity to norms:
- measures for keeping noxious substances at the level prescribed by regulations; these measures apply to the fabrication technologies;
- measures of ecologic reconstruction of areas affected by pollution;
  - measures of reconstruction of the affected goods;
  - program of implementation of the proposed measures;
- other measures and works necessary for environment protection.

### DRINKING WATER

### 1. OBJECT AND DOMAIN OF APPLICATION

- 1. The present standard applies to drinking water supplied by central installations or local sources, by transportable water tanks, as well as to kitchen hot water.
- 2. The present standard does not refer to mineral waters.
- 3. Drinking water the indexes of which surpass admitted concentrations, up to exceptionally admitted concentrations, will be used with the approval of county preventive medical centers.

### 2. QUALITY CONDITIONS

### 2.1. Organoleptic indicators

Table 1

Indicators	Admitted values	Exceptionally admitted values	Method of analysis
Smell, degrees, max.	2	2	STAS 6324-61
Taste, degrees, max.	2	2	STAS 6324-61

### 2.2. Physical indicators

Table 2

Indicators	Admitted values	Exceptionally admitted values	Method of analysis
Hydrogen ions concentration (pH) pH units	6.5 7.4	max.8.5	STAS6325-75

Electric conductivity US/cm.max.	1000	3000	STAS7722-84
Colour, degrees, max.	15	30	STAS6322-61
Turbidity, degrees or units of formazine turbidity, max.	5	10	STAS6323-88

## 2.3. Chemical indicators

## 2.3.1. General chemical indicators

Table 3			
Indicators	Admitted concentration	Exceptionally admitted concentration	Bethod of analysis
Aluminium(Al2),mg/dm3,mex.	0.05	0.2	STAS 6326-90
Assonia(KH4+),mg/dm3,max.	0	0.5a)	STAS 6328-85
Hitrites(HO2-),mg/dm3,max.	0	4.51 0.3e)	STAS 3048/2-90
Calcium(Ca7-),mg/dm3.max.	100	180	STAS 3662-62
Residual chlorine in disinfected water(C12),mg/dm3 ab) - at the consumer			
free realdual chlorine total residual chlorine	0.10 0.25 0.10 0.23		STAS 6364-78
- at the entrance in the water supply network free residual chlorine max.	0.50		
totla residual chlorine max.	0.55		
Chlorides(Cl-),mg/dm3,max.	250	400	STAS 3049-88
Distillable phenolic compounds,mg/dm3,max.	0.001	0.002	STAS 10266-87
Copper(Cu7-),zg/dzJ,nax.	0.05	0.i	STAS 3224-69

Synthetic anionic			
detergents.mg/dm3.max.	0.2	0.5	STAS 7576-66
Total hardness,German degrees.max.	20	30	STAS 3026-76
lron(FeZ++Fe3+),ag/da3,max.	0.1	0.3 (Fe2-+Fe3-+Hn)	STAS 3086-68
Phosphates(PO43-),mg/da3,max.	0.1	0.5	STAS 3265-86
Magnesium (Mg2+),mg/dm3,max.	50abol	80	STAS 3265-86
Hanganese(Ha),mg/dm3,max.	0.05	0.3 (Mn+Fe2-+Fe3-)	STAS 3624-81
Dissolved Oxygen(O2),ag/da3,min.	6	6	STAS 5536-87
Fixed residue,ng/dn3			
nin.	100	30	STAS 3638-76
Dax.	800	1200	
Oxidable organic			:
substances, mg/dm3, max.			
- through the Potassium			
permanganate method, empressed in:			
CCO-Hn(O2)			ente 0000 65
Potassium permanganate(IHnO4)	2.5	3.0	STAS 3002-85
<ul> <li>through the Potassium dichromate method, CCO-Cr(O2)</li> </ul>	10	12	-
persod ( cco-cf ( cc)	3	5	
Sulphates(SO42),ag/da3,zax.	200	490	STAS 3069-87
Sulphides and hydrogen sulphide, mg/da3, max.	Û	0.la)	STAS 7510-66
Zinc(2n2-),ng/do3,nax.	5	; <b>7</b> :	STAS 6327-81

<sup>\*)</sup> Values are valid only for water of underground sources, over 60m deep, not chlorinated, provided the water corresponds from the bacteriologic point of view.

 $<sup>^{\</sup>rm ab})$  Free residual chlorine must represent at least 80% of total residual chlorine.

abo) In case sulphates concentration ( $504^2$ ) surpasses  $250 \text{mg/dm}^3$ ,

the maximal concentration admitted for Magnesium ( $Mg^{2-}$ ) is  $30mg/dm^3$ .

### 2.3.2. Toxic chemical indicators

Table 4

Indicators	Admitted concentration	Method of analysis
Aromatic amines (phemil-B-maphtaline) mg/dm3.max.	0	STAS 11139-78
Arsenic(As3+),ng/do3,max.	0.05	STAS 7885-67
Nitrates(NO3-),pg/dp3,zax.	45	STAS 3048/1-77
Cadaius(Cd2-),23/d23.25x.	0.005	STAS 180 5961 STAS 11184-78
Free clanides(CK),mg/dp3,max.	0.01	STAS 10847-77
Chronium(Cr6+),ng/dn3,nax.	0.05	STAS 7884-57
Fluorine(f),mg/dm3,max.	1.2	STAS 6673-62
Aromatic polycyclic bydrocarbous_µs/du3,max.	0.01	x)
Hercury(Hg2+),mg/dm3.max.	0.001	STAS 10267-89
Nickel(Ni2+),mg/dm3,max.	0.1	x)
Pesticides (organochlorinated, organophosphoric, insecticides, herbicides), g/ds3,sax.:  - each component  - such of all components of each class	0.1 0.5	STAS 12650-88
Lead(Fb2+),pg/da3,paz.	0.05	STAS 6362-85
Selenium, mg/dmJ, max.	0.01	STAS 12663-88
Tribalometani.ag/da3,maxtotal -of which chlorophora(CAC13)	0.1 0.03	x)
Matural uraniva.cg/ús3.sax.	0.021	STAS 12130-32

\*) The methods of analysis are conform to Health Ministry instructions

### NOTES:

- 1. In tables 2 and 3, the values for pH, dissolved oxygen and phosphates do not refer to running hot water.
- 2. Chemical indicators specified in tables 3 and 4 are not limitative. They can be completed with any chemical indicator existing in drinking water in a certain territory or in a certain purification and distribution system, provided this indicator is approved by the Ministry of Health.

### 2.4. Radioactive indicators

Maximal values admitted for radioactive indicators correspond to 5 mrcm/year (0.05mSv/year) water supply to population, for 2dm<sup>3</sup> daily consumption.

### 2.4.1. Alfa and beta global activity

Maximal admitted alfa and beta global activity is established in dependence on the maximal total quantity of radionuclide Radium 226 alfa radioactive and of radionuclide Strontium 90 beta radioactive, and is presented in table 5.

Table 5

Global activity max.*>	Admitted concentration <pre>xx)</pre>	Exceptionally admitted concentration	Method of analysis
	Bq×××		
- alfa	Ů.1	2.3	STAS 10447/1- 83
- beta	1	50	STAS 10447/2- 83

<sup>\*)</sup> Does not include Radion and Tritium activity

\*\*) In case admitted concentrations are surpassed, it is

necessary to determine the specific activity of the radionuclides specified in table 6.

 $\times \times \times$ ) 1 Bq = 27 pCi

2.4.2. The admitted specific activity of each radionuclide that can be found in drinking water is specified in table 6. In case in water there are several radionuclides, the following relation must be observed:

$$\frac{A_1}{A_{01}} + \frac{A_2}{A_{02}} + \dots + \frac{A_1}{A_{0i}} \leqslant 1$$

in which:

 $A_1, A_2 \ldots A_1$  represent the specific activity of radionuclide 1,2 ... i, in drinking water, in bequerels per liter;

 $A_{a1}, A_{a2}$  ...  $A_{a1}$  represent the specific activity admitted for radionuclides 1,2 ... i, in drinking water, in bequerels per liter.

Table 6

Radionuclide	Radionuclide Specific activity		
	admitted	except.admit.	analysis
	Bq/	dm3	
Natural radionuclide			
Hydrogen 3(tritrium)	4000	-	STAS 12293-85
Potassium 40×)	14.42	-	STAS 11592-83
Radon 222	300	~~	STAS 12031-84
Radium 226	0.086	0.5	STAS 10447/3- 85
Radium 228	0.1		300C)
Lead 210	0.025	0.4	STAS 12435-85
Polonium 210	0.136	-	STAS 12444-86

Natural uranium×××)	0.59	1		STAS 12130-82
Natural torium××××)	0.04	0.1		STAS 12130-82
Artificial radionuclide				
Cobalt 58	60			MM)
Cobalt 60	10	_		xx;)
Strontium 89	30	_		MM.)
Strontium 90	0.55	53		STAS 12038-81
Iodine 129	0.6			MM.)
Iodine 131	5	530		STAS 12218-84
Cesium 13	4	-		xx)
Cesium 137	5	60	:	STAS 12334-85
Americium 241	0.1	<del>-</del>		xx)
Plutonium 239	0.024	2.3		xx)

<sup>\*)</sup> Methods of analysis are conform to instructions of the Ministry of Health.

### 2.5. Bacteriologic indicators

Table 7

Drinking water sort	Total no. of	Probable no.oi	Probable number of	Hethods of
	bacteriuss	total colifora	fastal coliforn	analysis
	dissolved at	bacteriums/dm3	bedieriups/dp3	
	370C/c23			

 $<sup>^{\</sup>times\times}$ ) 1 mg natural U (contains all its natural isotops) = 25.35 Bg = 685.2 pCI

<sup>\*\*\*\* 1</sup> μg Th = 0.111 pCI

The presence of artificial radionuclides is not allowed in underground sources of drinking water.

		· · · · · · · · · · · · · · · · · · ·	1	1
Water supplied by the central installations in Bucharest:				
- at the entrance in the network	below 20	below 3	belov 3	
- in the distribution network	below 20	below 31)	below 3	
Water supplied by central city and village instal-				
lations, with disinfected water: - at the entrance				
in the network	below 100	below 10	below 10	
- in the distribution network	below 100	below (Ú‡‡)	below 10	STAS 3001-83
Water supplied by central city and village				
installations, without disinfected water:				
- at the entrance in the network	belov 100	belov 30	pelov 10	
- in the distribution network	belov lůů	below 30:)	below 10	
Water supplied by local sources				·
(vella, apringa)	below 300	belov 100	belov 20	

### x) UFC = units that form colonies

xx) In 95% of the specimens analyzed during the year, for large water flows and a sufficient number of probes. Occasionally,

without surpassing 5% of the specimens analyzed and never in consecutive probes, max. 3/100 cm<sup>2</sup> is admitted.

xxx) In 95% of the specimens analyzed during the year, for large water flows and a sufficient number of probes. Occasionally, without surpassing 5% of the samples analyzed and never in consecutive probes, less than 10/100 cm<sup>3</sup> is admitted.

NOTE: Bacteriologic indicators specified in Table 7 are not limitative. They can be completed, provided they are approved by the Ministry of Health.

### 2.6. Biologic indicators

Table 8

Indicators	Admitted concentr.	Method of analysis
Volume of the sestone obtained by filtration through planctonic net, cm <sup>3</sup> /m <sup>3</sup> , max.:  — in central installations	1	
- in local installations	10	
Visible animal organisms, vegetals and particles	none	
Microscopic animal organisms, number/dm³, max.	20	STAS 6329-90
Organisms that, by multiplication, can modify the organoleptic or physical characteristics of water in 100 dm <sup>2</sup>	none; isolated organisms are allowed, depending on the species */	
Organisms that indicate pollution	none	

	1	`
Organisms that affect health	none	
	L	

>> Isolated organisms to be admited will be established by the Ministry of Health.

# SURFACE WATERS Categories and technical quality conditions

### 1. GENERALITIES

- 1.1. Object and domain of application
- 1.1.1. The present standard establishes the categories and technical quality conditions of surface waters, depending on their domain of utilization.

Surface waters signify:

- natural or appropriated water courses;
- natural and accumulation lakes;
- Black Sea coast waters.
- 1.1.2. The present standard does not refer to protected lakes, therapeutic lakes, surface high salinity waters, open channels with modified drainage regime for purged, pluvial and drainage waters, or to fronteer waters.

### 2. CATEGORIES

2.1. Natural and appropriated water courses, natural and accumulation lakes are classified, depending on their menu of use, in three quality categories, according to Table 1.

Table 1

Quali-	Domain of utilization
ty	Domain of defired
cate- gory	
I	- centralized drinking water supply - centralized water supply to animal farms - centralized water supply to food factories and to other entreprises that require drinking-quality water - water supply to irrigated vegetable cultures that require I quality water - salmonoids reproduction and development, as well as water supply to fish and salmonoid breeding basins - natural lakes appropriated for swimming - appropriated nautic basins
II	- reproduction and development of the natural fish fund in plane waters, water supply to fish basins except salmonoid ones
	- water supply for industrial technologic processes and for other activities that require II quality water - urbanistic and recreation purposes
III	- water supply to the irrigation systems - water supply to hydro-electric plants - water supply to aggregates for cooling installations
	- water supply for washing stations and other activities that require III quality water

### NOTES:

- 1. Water quality of surface water refers to the water at the source, before treatment.
- 2. Water quality of surface water used for other purposes than those specified in table 1 is to be approved by the specialized bodies.
- 3. Water quality for irrigation must correspond to STAS 9150-88.
- 4. Water quality in natural lakes appropriated for swimming must correspond to STAS 12585-87

From the eutrophic point of view, natural and accumulation lakes are classified in:

- oligotrophic lakes;

- mezotrophic lakes;
- eutrophic lakes.

### 3. TECHNICAL QUALITY CONDITIONS

3.1. Natural and appropriated water courses, natural and accumulation lakes

### 3.1.1. Organoleptic indicators

Table 2

	Aclmi	Admitted values			
Indicator	Quality categories			Method of analysis	
Indicator	I	11	III		
Colour	Colour	less			<b>x</b> := :
Smell	Inodor	Inodorous			<b>x</b> .

<sup>\*</sup> Methods of analysis correspond to Waters National Council instructions.

### 3.1.2. Physical indicators

Table 3

	Admitted values  Quality categories Met		lues	
Indicator			i } ! Method of analysis	
	I	II	III	
Hydrogen ions concentration (pH), pH units	6.5 8.5		3.5	STAS 6325-75

### 3.1.3. Chemical indicators

### 3.1.3.1. General chemical indicators

Table 4				
	Acim	itted va	Method	
	Qual	ity cate	of analys.	
Indicator	I	II	III	
Ammonium(NH <sub>4</sub> +), mg/dm <sup>2</sup> ,max.	1	3	10	STAS8683-70
Ammonia(NHz), mg/dm²,max.	0.1	0.3	0.5	STAS8683-70
Nitrates(NOs-), mg/dm <sup>2</sup> ,max.	10	30	not normed	STAS8900/1-71
Nitrites(NO2-), mg/dm <sup>3</sup> ,max.	1	3	not normad	STAS8900/2- 71
Calcium(Ca <sup>2+</sup> ), mg/dm <sup>3</sup> ,max.	150	200	300	STAS3662-62
Free residual chloride (Cl <sub>2</sub> ),mg/dm <sup>3</sup> ,max.		0.005		STAS6364-73
Chlorides(Cl <sup>-</sup> ), mg/dm <sup>3</sup> ,max.	250	300	300	STAS8663-70
Free carbon bioxide, mg/dm³,max.		50		STAS3268-61
Phenols drawn by water vapours (CeHsOH), mg/dm <sup>3</sup> , max.	0.001	0.02	0.05	STAS7167-65
Total iron (Fe <sup>2+</sup> ), mg/dm <sup>3</sup> ,max.	0.3	1	1	STAS8634-70
Phosphorus (P), mg/dm³,max.		0.1		STAS10961- 75
Hydrogen sulphide and sulphides (S <sup>2-</sup> ), mg/dm <sup>2</sup> ,max.	none	none	0.1	STAS7510-66

Magnesium (Mg <sup>2+</sup> ), mg/dm <sup>3</sup> ,max.	50	100	200	STAS6674-77
Manganese (mn <sup>7+</sup> ), mg/dm <sup>2</sup> ,max.	0.1	0.3	ŭ.8	STAS8662-70
Oxygen dissolved in water (O2), mg/dm3,max.	6	5	4	STAS6536-88
Oil products, mg/dm3, max.		0.1		STAS7877-87
Filtered residue dried at 105°C, mg/dm <sup>3</sup> , max.	750	1000	1200	STAS9187-84
Sodium (Na+), mg/dm3, max.	100	200	200	STAS8295-69
Organic substances (02) a) biochemical oxugen consumption (CBOs), mg/dm <sup>3</sup> ,max.	5	7	12	STAS6560-82
b) chemical oxygen consumption (CCO), mg/dm³, max through the Potasyum permanganate method	10	15	25	STAS9887-71
- through the Potasyum dichromate method	. 10	20	30	STAS6251-82
Sulphides (SO <sub>4</sub> 2-), mg/dm <sup>2</sup> , max.	200	400	400	STAS8694-70

NOTE: Quality conditions of III quality water correspond to the requirements of biological processes that ensure selfepuration.

### 3.1.3.2. Specific chemical indicators

	Admitted values	
Indicator, mg/dm <sup>3</sup> ,max.	Quality categ.	Method of analysis
	I,II,III	
Silver (Ag+)	0.01	STAS 8190-68
Arsenic (As)	0.01	STAS 7885-67
Barium (Ba <sup>2+</sup> )	1.0	STAS 10258-75
Cadmium (Cd2+)	0.003	STAS 7852-80
Cianides (CN-)	0.01	STAS 7685-79
Cobalt (Co2+)	1	STAS 8288-69
Chrom - trivalent	0.5	
- hexavalent	0.05	STAS 7884-67
Copper (Cu2+)	0.05	STAS 7795-80
Aminoactive detergents	0.5	STAS 7576-65
Fluor (F-)	0.5*	STAS 8910-71
Aromatic polycyclic hydrocarbons	0.0002	**
Mercury (Hg <sup>2+</sup> )	0.001	STAS 8015-79
Molibden (Mo)	0.05	STAS 11422-84
Nickel (Ni <sup>2+</sup> )	0.1	STAS 7987-67
Pesticides - herbicides - triazines	0.001	**
- triazinones	0.001	   **
- toluidines	0.001	     **

		and the second of the second o
- insecticides	0.0201	GMAD 10050 00
- organochlorinated	0.0001	STAS 12650-88
- organophosphoric	none	**
- organometalic	none	**
- nitroderivates (dinitro- orto-crezol, dinitro-sec-		
butilphenol)	none	**
Lead (Pb2+)	0.05	STAS 8637-79
Selenium	0.01	STAS 12663-88
Zinc	0.03	STAS 8314-87
BOY I quality currens ustens u		1.

<sup>\*</sup> For I quality surface waters used as drinking water supply, a max. 1.2 mg/dm3 is allowed.

### 3.1.4. Radioactivity

Radioactivity must correspond to existing regulations.

### 3.1.5. Microbiologic indicators

Table 6

	Quali	ty categories	Method of
Indicator	I	II & III	analysis
Total coliform bacteriums, probable			
no./dm³,max.	100 000	not normed	STAS 3001-83

<sup>\*\*</sup> Methods of analysis are conform to instructions of the Waters National Council.

### 3.1.6. Eutrophization process indicators

Table 7

Table (			·	-
:	Va			
Indicator	Natural and accumulation lakes			Method of analysis
	oligotro -phic	mezotro-	eutro- phic	
Oxygen saturation degree	min.70	10 70	max 10	STAS6536-87
Nutritive substances - total nitrogen				
(N),mg/dm <sup>3</sup>	max.0.3	max.1	min.1.5	STAS 7312-83
- total phosphorus (P), mg/dm <sup>3</sup>	max.0.03	max,0.1	min.0,15	STAS10061-75
Phitoplanctonic biomass, mg wet substance/dm <sup>3</sup>	up to 10 (10 exclud.)	from 10 to 20 (20 exclud.)	min.20	*

<sup>\*</sup> Method of Analysis is conform to the instructions of the Waters National Council.

3.2. Black Sea coast waters (except water in regions appropriated for swimming)

### 3.2.1. Organoleptic indicators

Table 8

Indicator	Values allowed	Method of analysis
Smell	natural	*
Colour	natural	*

<sup>\*</sup> Methods of analysis are conform to the instructions of the Waters National Council.

### 3.2.2. Physical indicators

Table 9

Indicator	Values allowed	Method of analysis
Hydrogen ions concentration (pH), pH units	6 8.5	STAS 6325-75
Temperature, oC,max.	30	STAS 6321-61
Transparency, m, min.	1.5	*

<sup>\*</sup> The method of analysis is conform to the instructions of the Waters National Council.

### 3.2.3. Chemical indicators

Table 10

Indicator	Values allowed	Method of analysis
Arsenic, mg/dm², max.	0.03	
Cadmium, mg/dm³, max.	0.03	
Cianides, mg/dm <sup>3</sup> , max.	0.2	
Chrom (Cr <sup>6+</sup> ),mg/dm <sup>3</sup> , max.	Ŭ.1	
Copper, mg/dm3, max.	0.3	
Anionactive detergents, mg/dm <sup>3</sup> , max.	0.3	
Phenols drawn by water vapors, (CeHsOH), mg/dm <sup>3</sup> , max.	0.02	
Dissolved oxygen (O2), mg/dm <sup>3</sup> , max.	6	

Oil products	no film visible on the water surface	
Organophosphoric pesticides, mg/dm3, max.	none	
Lead, mg/dm², max.	0.05	
Oxygen saturation at 20°C, %, min.	75	
Organic substances (02), biochemical oxygen consumption, (CBO <sub>5</sub> ), mg/dm <sup>2</sup> , max.	5	
Zinc, mg/dm³, max.	1	

### 3.2.4. Microbiologic indicators

Table 11

Indicator	Value allowed	Method of analysis
Total coliform bacteriums,		
probable no./dm³, max.	20 000	STAS 3001-83

3.2.5. Wtaer in natural regions appropriated for swimming must correspond to STAS 12585-87.

### 4. SAMPLES COLLECTION

Water samples are collected in glass or plastic vessels, acording to established standards and to the instructions regarding the collection of surface water samples, elaborated by the Waters National Council.

### 5. METHODS OF ANALYSIS

According to chapter 3.

#### URBAN ACOUSTICS

#### 1. GENERALITIES

### 1.1. Object and domain of application

The present standard refers to the admitted limits of noise level in cities, depending on the area and functional endowments, on the technical category of the street, established in accordance with the existing specific technical regulations regarding systematization and environment protection.

The provisions of the present standard refer to:

- systematization of protected functional areas in cities (dwellings, social-cultural institutions, recreation areas, production and transportation institutions);
- location of noise sources in the neighbourhood of protected urban regions:
  - restructuring of existing urban areas.
- 1.2. In urban areas, limits are established for:
- the level of noise in the streets and undergrownd passages;
- the level of noise at the limits of functional regions in cities;
  - the level of noise inside functional regions in cities;
- air noise isolation indexes for windows and doors (of buildings located on streets with heavy traffic).
- 1.3. The method of determining the city noise level is conform to STAS 6161/3-82.
- 1.4. The terminology used in the present standard corresponds to STAS 1957/1 and 3-74.

### 2. ADMITTED LIMITS OF THE NOISE LEVEL

#### 2.1. Exterior noise level

2.1.1. The admitted values of exterior noise in the streets. measured at the roadway border, are established in accordance with the technical category of the street (depending on traffic

intensity), as in table 1.

Table 1

~				
No.	Street type (acc.to STAS10111/1-80)	Equivalent noise level Lach*) dB(A)	Value of the noise curve Cz dB**)	Top noise level Lio dB(A)
1	IV category street, for local traffic	60	55	70
2	Collection street, III category	65	60	75
3	Connection street. II category	70	65	80
4	Main street, I category	75.:.85***	7080***	8595***

\*) The equivalent noise level is calculated differently for night and daytime, according to STAS 6161/1-79.

\*\*) Cz noise curves evaluation is used only for stationary noise.

\*\*\*) When designing main streets, measures must be taken in order to obtain equivalent levels (actually measured) as close as possible to the minimal values in the table, without admitting the surpassing of maximal values.

2.1.2. The admitted values of exterior noise level in various parts of underway passages are shown in table 2.

Table 2

No.	Part of the passage	Equivalent noise level Lech dB(A)	Noise curve value, Cz.dE	Top noise level, Lio dB(A)
1	Tramway stations	<b>S</b> .	es as admitt there the pas located	
2	Trafficable part of passages 1- 200m long: - in III category			
	streets - in II & I category streets	-	ana	80 90
3	Pedestrian passages	65	60	_
4	Metro stations	65	60	near markets with 1870 p. paraller statement of 1870 proposer (18. 18. 2. 18. 2. 18. 2. 18. 2. 18. 2. 18. 2. 1

2.2. The admitted values of the noise level at the limit of functional regions in cities are shown in table 3.

Table 3

No.	Area considered	Equivalent noise level, Lech dB(A)	Noise curve value, Cz dB
1	Parks, recreation areas,	45	40
2	Schools, nurseries, play- yards	75	70
3	Stadiums, open cinemas	90*)	85
4	Markets, shops, open restaurants	65	60
5	Industrial regions	65	60

6	Parking areas	90*)	85
7	Parking areas with underground service stations	90	85
8	Railroad areas**)	70	65
9	Airports	90	85

NOTES:

- \*) The time period taken into consideration for determining the equivalent noise level is equivalent to work-time.
- \*\*) The limit of the railroad region is 25m away from the closest railway.
- \*\*\*) The values were established according to STAS 10183/3-75.

When two or several neighbouring areas have different noise levels, the limit admitted on their border is the lowest value.

2.3. Noise levels admitted in functional areas in cities are those shown in table 4.

Table 4

	gore 4		<del></del>
No.	Area considered	Equivalent noise level Lach, dE(A)	Noise curve value, Cz, dB
1	Parks	60	55
2	Recreation areas, spas	45	40
3	Schools, nurseries, playyards	65	80
4	Markets, shops, open restaurants	70	65
5	Parking areas	90	85

2.4. Depending on the conditions of determination and on the characteristics of the noise source, corrections can be applied to the values shown at points 21. ... 2.3.

- 2.4.1. Corrections due to transport noise.
- 2.4.1.1. In regions affected by rail and river traffic, the effects of the noise produced by traffic are taken into consideration as it follows:
- if the variation of acoustic pressure level is not affected, no corrections are applied;
- if the variation of the acoustic pressure level is affected, corrections are applied according to point 2.4.2.
- 2.4.1.2. In areas affected by airplane noise, the provisions of STAS 10183/4-75 apply.
- 2.4.2.. Corrections due to isolated actions.

In case of isolated actions characterized by a high noise level, this level is corrected in function of its duration (expressed in percents of a reference period of 8h for daytime or 30 min at night) with the values shown in table 5.

The noise levels thus obtained, expressed in dB(A) or in Cz curves must be lower or at least equal to the values admitted in tables 1 ... 4.

Table 5

NOTES:

T. (	apre o	
No.	Functioning time/Total time x 100 in %	Correction, in dB(A)
1	100 56	0
2	<56 18	-5
3	<18 6	-10
4	<6 1.8	-15
5	<1.8 0.6	-20
6	<0.6 0.2	-25
7	<0.2	-30

- 1. Isolated actions of the type of those shown at point 2.4.2., that appear less than once a day, are not taken into consideration.
- 2. When calculating the equivalent noise level for a

characteristic period of time, isolated noises are considered at their real value.

- 3. The comparison with the admitted values is made for the following situations:
- equivalent noise level, corresponding to a characteristic period;
- corrected noise level, corresponding to an isolated action.

The location of buildings and the organization of road traffic will be so done as to ensure a noise level of 50 dB(A) 2.00m away from the building, according to STAS 6161/1-79, and a noise curve Cz 15.

If, in case of traffic noise, this condition cannot be met, the measures taken must ensure the level admitted for noise inside buildings according to STAS 6156-86 and STAS 6161/1-79.

For noise produced by other sources (open cinemas, playyards, parking areas), the limit value is dB(A), noise curve Cz 45 respectively.

2.6. If the distance between the border of the road and the facade of the building is less or at least equal to 8.00 m and there are no obstacles that might constitute acoustic screens, the air noise isolation indexes for doors and windows must correspond to existing technical regulations; solutions of complying with these regulations should be adopted on the basis of an economic efficiency calculation.

#### WATER FOR THE IRRIGATION OF CROPS

### 1. OBJECT AND DOMAIN OF APPLICATION

- 1.1. The present standard refers to the irrigation of crops.
- 1.2. The use of water for the irrigation of agricultural crops is done in conformity to existing regulations.

# 2. CLASSIFICATION OF WATER FOR CROPS IRRIGATION

- 2.1. Water for the irrigation of crops is classified in dependence on the following indicators:
  - hydrogen ions concentration (pH);
- saline indicators: saline residue, dissolved mineral salts (chlorides, sulphides and sulphur), sodium absorbtion ratio (SAR index) and residual sodium carbonate (CSR index);
  - toxic and/or harmful indicators;
  - microbiologic indicators.
- 2.2. Depending on the hydrogen ions concentration (pH), water for the irrigation of crops is classified in: neutral, slightly acid and slightly alkalinous.
- 2.3. Depending on the saline residue, the CSR index and the containts of chlorides and sulphides, water for the irrigation of crops is classified in the following classes of salinity:
- C1 class (little saline residue), used for most soils and crops;
- C2 class (moderate saline residue), used on permeable soils and moderately salinity-tolerant crops;
- C3 class (high saline residue), used with special appropriations for washing and drainage, on permeable soils and on salinity tolerant crops;
- C4 class (very high saline residue), used with special appropriations for washing and drainage, on permeable soils and highly salinity-tolerant crops.
- 2.4. Depending on the SAR index, the containts of sodium, calcium and magnesium, each salinity class is classified in three

alkalization subclasses;

- Si subclass (slight alkalization), used on most soils;
- Sz subclass (moderate alkalization), used on permeable soils, with no special appropriations for washing and drainage;
- Sa subclass (high alkalization), used on permeable soils with special appropriations for washing and drainage, and with the application of organic and mineral amendments.
- 2.5. Depending on the toxic and/or hamrful indicators, irrigation norms, climatic conditions and soil texture, water for crops irrigation is classified in two types:
- type I, for large irrigation norms, used in dry regions and on soil with fine ... gross texture;
- type II, for reduced irrigation norms, used in wet regions and on soil with fine texture.
- 2.6. Depending on the microbiologic indicators, water for crops irrigation is classified in three categories:
  - M1 category, used on all soils and crops;
- M2 category, used on all soils and crops, except extremely permeable soils and plants used as human or animal food, fresh or conserved by freezing, pickling, but not through thermic processing;
- M3 category, used only on soils with a phreatic level situated at over 4 m depth and on crops the products of which are processed thermically and industrially, as well as on non-food vegetal products.

### 3. TECHNICAL QUALITY CONDITIONS

### 3.1. Hydrogen ions concentration (pH)

Table 1

Name of indicator	Neutral	Slightly acid	Slightly alkaline	Method of verific.
Hydrogen ions	6.5 7.2	5.5 6.4	7.3 8.6	STAS6325-75
concentra- tion (pH)				e e ). ; .).

NOTE - The use of water that have the pH lower than 5,5 or higher

than 8.6 leads to secondary soil degradation.

### 3.2. Saline indicators

3.2.1. Saline residue, residual sodium carbonate (CSR index), chlorides and sulphides contents

Table 2

Name of		Salinit	y class		Method of
indicator	Cı	C2	Сз	C4	verification
Saline residue, mg/dm³,max.	160	500	1500	3250	point 5.1
CSR index,miliequi- valents/dm <sup>3</sup> ,max	0.63	1.25	1.90	2.50	point 5.2
Chlorides (Cl-), mg/dm <sup>2</sup> ,max.	40	120	370	810	STAS 8663-70
Sulphides (SO <sub>4</sub> 2-), mg/dm <sup>S</sup> ,max.	100	320	1000	2200	STAS 8601-70
Electric conductivity at 25°C,S/cm,max.	0.25	<b>0.7</b> 5	2.25	5.00	STAS 7722-84

### 3.2.2. Sodium absorbtion ration (SAR index) and sodium contents

		•				Salinit	y class		ده محسمت نور نور نور				Hethod
		CI			C2			C3			C4		ii Verifi
Indicator		Alkalization subclass								cation			
	\$1	<b>S</b> 2	\$3	\$1	S2	\$3	51	52	<b>S</b> 3	\$1	\$2	\$3	
SAR index,nax	8.2	15.3	22.5	6.1	12.2	18.3	1.0	9.0	11.0	2.5	6.7	11.0	point 5.3
Sodium (Na+), g/dm3,max	47	48	50)	120	145	150	215	340	400	240	520	750	STAS 8295- 69

### 3.3. Toxic and/or harmful indicators

### 3.3.1. Chemical indicators

Table 4

	Туре		Method of
Indicator	Ī	II	verification
Indicator	Maximal allowed concentration, mg/dm <sup>3</sup>		
Aluminium	5.0	20.0	STAS 9411-83
Arsenic	0.1	2.0	STAS 7885-67
Berilium	0.1	0.5	<i>y</i> .
Boron	0.75	2.0**	*
Cadmium	0.01	0.05	STAS 7825-80
Cianides	0.2	0.2	STAS 7685-79
Cobalt	0.05	5.0	STAS 8288-69
Chrom(Cr <sup>6+</sup> )	0.1	1.0	STAS 7884-67
Copper	0.2	5.0	STAS 7795-80

1.0	5.0	STAS 8634-70
1.0	5.0	STAS 8910-71
2.5	2.5	*
0.2	3.0	STAS 8662-70
0.01	0.05	*
0.02	0.05	STAS 8045-79
0.2	2.0	STAS 7987-67
2.0	5.0	STAS 8637-79
0.02	0.05	*
0.1	0.5	STAS 7510-66
0.1	1.0	*
2.0	10.0	STAS 8314-69
0	0	*
	1.0 2.5 0.2 0.01 0.02 0.2 2.0 0.02 0.1 0.1 2.0	1.0     5.0       2.5     2.5       0.2     3.0       0.01     0.05       0.02     0.05       0.2     2.0       2.0     5.0       0.02     0.05       0.1     0.5       0.1     1.0       2.0     10.0

<sup>\*)</sup> Methods of analysis correspond to the instructions of the Waters National Council and the Ministry of Agriculture.

\*\*) For viticultural and fruit crops irrigated by aspersion, the contents of boron is of max.0.75 mg/dm<sup>3</sup>.

### 3.3.2. Radioactivity

Radioactivity must correspond to existing regulations.

### 3.4. Microbiologic indicators