### DANUBE POLLUTION REDUCTION PROGRAMME

# NATIONAL REVIEWS 1998 ROMANIA

## **PROJECT FILES**



# MINISTRY OF WATERS, FOREST AND ENVIRONMENTAL PROTECTION

in cooperation with the

**Programme Coordination Unit UNDP/GEF Assistance** 

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#### **Preface**

The National Reviews were designed to produce basic data and information for the elaboration of the Pollution Reduction Programme (PRP), the Transboundary Analysis and the revision of the Strategic Action Plan of the International Commission for the Protection of the Danube River (ICPDR). Particular attention was also given to collect data and information for specific purposes concerning the development of the Danube Water Quality Model, the identification and evaluation of hot spots, the analysis of social and economic factors, the preparation of an investment portfolio and the development of financing mechanisms for the implementation of the ICPDR Action Plan.

For the elaboration of the National Reviews, a team of national experts was recruited in each of the participating countries for a period of one to four months covering the following positions:

- Socio-economist with knowledge in population studies,
- Financial expert (preferably from the Ministry of Finance),
- ➤ Water Quality Data expert/information specialist,
- Water Engineering expert with knowledge in project development.

Each of the experts had to organize his or her work under the supervision of the respective Country Programme Coordinator and with the guidance of a team of International Consultants. The tasks were laid out in specific Terms of Reference.

At a Regional Workshop in Budapest from 27 to 29 January 1998, the national teams and the group of international consultants discussed in detail the methodological approach and the content of the National Reviews to assure coherence of results. Practical work at the national level started in March/April 1998 and results were submitted between May and October 1998. After revision by the international expert team, the different reports have been finalized and are now presented in the following volumes:

Volume 1: Summary Report Volume 2: Project Files

Volume 3 and 4: Technical reports containing:

- Part A: Social and Economic Analysis

- Part B: Financing Mechanisms

- Part C : Water Quality

- Part D: Water Environmental Engineering

In the frame of national planning activities of the Pollution Reduction Programme, the results of the National Reviews provided adequate documentation for the conducting of National Planning Workshops and actually constitute a base of information for the national planning and decision making process.

Further, the basic data, as collected and analyzed in the frame of the National Reviews, will be compiled and integrated into the ICPDR Information System, which should be operational by the end of 1999. This will improve the ability to further update and access National Reviews data which are expected to be collected periodically by the participating countries, thereby constituting a consistently updated planning and decision making tool for the ICPDR.

UNDP/GEF provided technical and financial support to elaborate the National Reviews. Governments of participating Countries in the Danube River basin have actively participated with professional expertise, compiling and analyzing essential data and information, and by providing financial contributions to reach the achieved results.

The National Reviews Reports were prepared under the guidance of the UNDP/GEF team of experts and consultants of the Danube Programme Coordination Unit (DPCU) in Vienna, Austria. The conceptual preparation and organization of activities was carried out by **Mr. Joachim Bendow**, UNDP/GEF Project Manager, and special tasks were assigned to the following staff members:

- Social and Economic Analysis and

Financing Mechanisms: Reinhard Wanninger, Consultant
- Water Quality Data: Donald Graybill, Consultant,
- Water Engineering and Project Files: Rolf Niemeyer, Consultant

- Coordination and follow up: Andy Garner, UNDP/GEF Environmental

Specialist

The **Romanian National Reviews** were prepared under the supervision of the Country Programme Coordinator, **Mr. Octavian Ceachir**. The authors of the respective parts of the report are:

- Part A: Social and Economic Analysis: Ms. Mihaela Popovici

- Part B: Financing Mechanisms: Ms. C. Rosu and Ms. Manea

Part C: Water Quality: Mr. Liviu Popescu
 Part D: Water Environmental Engineering: Mr. Petru Serban

The findings, interpretation and conclusions expressed in this publication are entirely those of the authors and should not be attributed in any manner to the UNDP/GEF and its affiliated organizations.

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Vienna – Austria, November 1998

### **Table of Contents**

Municipal Sector	1
Harmonization of EU Regulations of Emissions in Water with Nationa Standards	
Support for Reference Laboratories	11
Wastewater Treatment Plant Craiova	19
Water Quality Territorial Laboratories Development	27
Quality Objectives in the Activity of Water Quality Protection	35
Control and Fight against Accidental Pollution	43
Introduction of New Instruments for Water Quality Protection	51
Expansion of Wastewater Treatment Plant from Mangalia City	59
Wastewater Treatment Plant of Brăila Nord City	67
Development of Wastewater Treatment Plant of Câmpulung Muscel City	75
Development of Wastewater Treatment Plant of Deva City	
Development of Hydrological Database Using GIS	91
WWTP of the City of Bucharest	99
Expansion of WWTP of TIMIŞOARA City	107
Wastewater Treatment Plant of IAŞI City	115
Development of Wastewater Treatment Plant of Reşiţa City	123
Wastewater Treatment Plant of Zalău City	131
Agricultural Sector	139
Technologies of Reclamation of Agricultural Soils Affected by Oil and Salty Water Pollution	141
Ecological Reconstruction of Agricultural Soils – Baia Mare	149
Afforestation in the Copşa Mică Area	157
Agricultural Turning to Good Account of Zootechnical Waste at ROMSUIN TEST PERIŞ	165
Capacity Increase of WWTP of COMTOM TOMEŞTI	
Recycling and Management of Available Waste from Breeding Farms	
Ecological Reconstruction of Poor Agriculture Land	

Monitoring System Development of Chemical soil Pollution in Agricultural Area	197
Bio-diversity Recovery of Agricultural Ecosystems Affected by Drought	205
Ecological Reconstruction at Zlatna	213
Protected Area Monitoring	221
Development of Existing Forests Monitoring Ecosystems	229
Fight against Soil Erosion in Tazlău River Basin	237
Rapid Data Collection by Satellites Applied on Dangerous Hydro-Meteo Phenomena	245
Development of Hydrological Database Using GIS	253
Development of Rapid Dissemination of Information about Flood Propagation	261
Ecological Reconstruction of Polluted Zone around SC ROMFOSFOCHIM SA Valea Călugărească	269
Consolidation and Rehabilitation of Sliding Lands in Zalău City	277
Ecological Reconstruction of Polluted Zone around SC ROMFOSFOCHIM SA Valea Călugărească	285
WWTP at CONSUIN BEREGSAU Timis	293
WWTP at SC SUINPROD Independenta - jud. Galati	301
Industrial Sector	309
Self Monitoring of Big Industries	311
Modernization of Installations from SC LETEA SA Bacău	319
Wastewater Treatment Plant at SC CELOHART DONARIS - Brăila	327
Wastewater Treatment Plant of SC COLOROM CODLEA SA	335
Wastewater Treatment Plant Expansion at SC ANTIBIOTICE SA – Iaşi	343
Works for Pollution Reduction at UPS GOVORA S.A	351
Modernizing the Secondary Treatment of WWTP - S.C. SIDERCA – CĂLARAȘI	359
Modernizing WWTP for Oil Products and Slug Recovery at PETROBRAZI – PLOIEȘTI	
WWTP at ARPECHIM S.A PITESTI	

Ecologizing the Wet Process in the Platform TÎRGU MUREŞ MANPEL S.A38	33
Removal of Chromium, Zinc and Phenols from the Wastewater – SINTEZA Oradea39	91
Modernizing WWTP CLUJANA S.A - Cluj-Napoca39	<b>)</b> 9
WWTP System at VIDRA S.A ORĂȘTIE40	<b>)7</b>
Action Programme for Environment Protection in Petroleum Industry41	15
Harmonization of National Legislation with Six EU Regulations Regarding Risks and Industrial Pollution Control42	23
Pollution with Petroleum Products Abatement in PLOIEŞTI Zone (pilot project)43	31
Modernization of Wastewater Treatment at SC SOMES SA DEJ43	39
Modernization and Completion of the WWTP at FIBREX Savinesti44	<b>17</b>
Modernization of WWTP at SC INDAGRA SA Arad45	55
Dams Rehabilitation alongside Danube River from the "Iron Gates" - km 875 to Isaccea - km 10346	63
Modernization of Water Treatment Installation at SC OLTCHIM SA47	71
Completion and Modernisation of WWT at Phoenix Baia Mare47	<b>79</b>
Wastewater Treatment Plant of Galați City48	37
Expansion of Discharging Facilities and Final Disposal of Waste at SC UPSOM SA OCNA MURES49	95

# **Municipal Sector**

# Project No. AI3-1

**Harmonization of EU Regulations of Emissions in Water with National Standards** 

Date of first setting up:	1995	Date of latest update:	05.1995
Project Title :	Harmonization of EU national standards	regulations of emission	ns in water with

Responsible/Leg	gal Body		
Authority/Company	Ministry of Water,	Forest and Environmental Protection	
Name	Ing. Liliana Mâra –	director	
Address	Bd. Libertății 12, București, România		
Telephone	40.1.4100255		
Fax	40.1.4100282		
e-mail			
Project Target	Harmonization of EU regulations of emissions in water with the national standards (integration in EU)		
<b>Investment Costs</b>	25000 USD		
<b>Status of Project</b>	IX ongoing	planned emerging concept	
Language of Proje	ect Documents	⊠ Romanian    □ English    □  German  Summary in English:  □ yes    ☒ no	

### 1 Project title

Harmonization of EU regulations of emissions in water with the national standards

### **2 Investor Details**

### 2.1 Authority/Company

Name	Not applicable (N Ap)
Address	N Ap
Telephon	N Ap
e	
Fax	N Ap

### 2.2 Contact persons

N Ap

### 2.3 Advisor/Consultant

Research and Engineering Institute for Environment Spl. Independenței 294, București, Romania. Tel. 40.1.6373020, Fax 40.1.3121393

### 2.4 Legal/Financial Status

N Ap

### 2.5 Authority/Company profile

N Ap

### 2.6 Planning/Implementing Extent/Capacity of the Investor

N Ap

### 2.7 Institutions/Enterprises beside the Investor

- Ministry of Industry and Commerce
- Ministry of Agriculture and Food
- Ministry of Public Works and Territorial Planning
- Autonomous Regia "Romanian Water" (Regia Autonomă Apele Române)

### 3. PROJECT DESCRIPTION

### 3.1 Project Outline

Non structural project

A set of draft legal acts after screening the existing domestic legislation with the EU legislation. The prospective users of the documents will be the decision-makers, having in view the objective of integration in EU.

### 3.2 Primary Needs for the Project

The aim of the project is to harmonize the existing regulations with the EU legislation. The implementation of these acts will contribute to the reduction of pollution in the Danube River Basin in all aspects: health protection, aquatic life, recreation, aesthetics, etc. in the transboundary context

### 3.3 Status of Project Preparation

The project is ongoing now. Some basic legal acts are already in force, e.g. Law of Environmental Protection, Law of Waters, etc.

### 3.4 Technology proposed

N Ap

3.5 Ownership of project Site
N Ap
1174
3.6 Specific Project Items
N Ap
-
4. Project Effects and Interactions
4.1 Public's Expression of Interest
The public's attitude is positive
4.2 Environmental Impact Assessment
yes no NAp
planned in progress in finished/completed accepted in accepted in progress in finished/completed in accepted in accepted in progress in finished/completed in accepted in acce
rejected N Ap
4.3 Sensitivity of Locality/Receptor
N Ap
IV Ap
4.4 Primary Effects of Project
The implementation of this project will have the following effects:
Improving the Danube River Basin water quality;
Reducing the impact of pollution on human health and nature;
<ul> <li>Reducing the costs of water treatment;</li> <li>Compatible way to assess the impact of pollution in the transboundary context</li> </ul>
- Companion way to assess the impact of pollution in the transpoundary context

5. Economic Project.	5. Economic Project Justification			
5.1 Economic Project Be	enefits			
At present it is not possible to project	o quantify the economic benefits by implementing the			
<b>Employment/income effects</b>				
during construction period	N Ap			
during operation period	N Ap			
Other economic benefits				
Implementation of the new en	nvironmental legislation is to be a win-win process.			
5.2 Economic Internal R	Rate of Return (EIRR)			
Has an EIRR been calculated				
total investment costs of project 25 000 USD				
planned annual depreciation	N Ap			
planned annual operation co	osts N Ap			
planned annual revenues	N Ap			
6. Financial Viability	7			
6.1 Estimated Investmen				
Investment cost				
	Allocation of capital cost			
Land	N Ap			
Construction and machinery	y N Ap			
Planning and supervision	N Ap			
Total cost	25 000 USD			
On an annual basis				
Year of cost estimate	1998			
Nature of cost estimate (pre	<u> </u>			
preliminary calculati	ion			

<b>6.2 Estimated Operational C</b>	Cost					
<b>Expected annual (operational) re</b>	current cost (in real	terms)				
N Ap						
Repair and replacement cost	N Ap					
Total operational cost	N Ap					
Year of cost estimate	1998					
Nature of cost estimate (prelimin	ary, adequate, source	es of information)				
The source of information: Nationa	The source of information: National Environmental Action Plan					
<b>6.3 Estimate of Revenues</b>						
<b>Expected annual revenues (in rea</b>	al terms)					
N Ap						
Year of estimate	1998					
Nature of estimate (preliminary,	adequate, etc.)					
The nature of estimate is prelimina	ry					
6.4 Financial Internal Rate of	of return (FIRR)					
Has a FIRR been calculated?	☐ yes	□ no N Ap				
6.5 Anticipated/Proposed Fu	inding Scheme		6.5 Anticipated/Proposed Funding Scheme			
Source of funding	Secured	Requested				
		_	Non- secured			
	Cu	rrency [USD]				
1. Equity of project owner	Cu	urrency [USD]				
1. Equity of project owner 2. National Environmental	Cu	urrency [USD]				
	Cu	nrrency [USD]				
2. National Environmental	Cu	rrency [USD]				
2. National Environmental Fund	Cu	nrrency [USD]				
2. National Environmental Fund 3. Water Management Fund	Cu	rrency [USD]				
<ol> <li>National Environmental         Fund     </li> <li>Water Management Fund</li> <li>Public loan – central budget</li> </ol>	25 000	arrency [USD]				
2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional		urrency [USD]				
2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget		rrency [USD]				
2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan		arrency [USD]				
2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant		rrency [USD]				
2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant 10. Commercial bank loan		arrency [USD]				
2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant		rrency [USD]				

# Project No. AI3-13 Support for Reference Laboratories

Date of first setting up:	1995	Date of latest update:	03.1998
<b>Project Title:</b>	Support for refere	ence laboratories	
Responsible/Leg	gal Body		
A .1 '. /C	NA: CXXI	E ( 1E ' (1D	
Authority/Company	Ministry of water	r, Forest and Environmental P	rotection
Name	Ing. Liliana Mâra	– director	
Turre			
A 11	Bd. Libertății 12,	București, România	
Address	, .	, .	
	40.1.4100255		
Telephone	40.1.4100233		
Fax	40.1.4100282		
e-mail			
<b>Project Target</b>	To assure the con	npatibility of water quality and	alysis through
	out the territory	1	, and and
	928 000 USD		
<b>Investment Costs</b>	720 000 030		
<b>Status of Project</b>	ongoing of	planned emerg	ging concept

**Language of Project Documents** 

**⊠** Romanian

German

☐ English

Summary in English:  $\square$  yes  $\boxtimes$  no

1 Projec	 ct title
	r reference laboratories
	tor Details
	ority/Company
Name	Not applicable (N Ap)
Address	N Ap
Telephon e	N Ap
Fax	N Ap
<b>2.2 Cont</b>	act persons
	N Ap
2.3 Advis	sor/Consultant
Tel	l. Independenței 294, București, Romania. l. 40.1.6373020 , Fax 40.1.3121393
2.7 Liga	N Ap
	•
<b>2.5</b> Auth	ority/Company profile
	N Ap
2.6 Plani	ning/Implementing Extent/Capacity of the Investor
	N Ap

### 2.7 Institutions/Enterprises beside the Investor

- Ministry of Industry and Commerce
- Ministry of Agriculture and Food
- Ministry of Public Works and Territorial Planning
- Autonomous Regia "Romanian Water" (Regia Autonomă Apele Române)
- Research and Engineering Institute for the Environment

### 3. PROJECT DESCRIPTION

### 3.1 Project Outline

Structural project

Standard methodologies and equipment for water quality analysis will be provided for the reference laboratory – Research and Engineering Institute for the Environment (ICIM)

### 3.2 Primary Needs for the Project

The target of the project is to assure the compatibility of the analysis results through the whole territory of Romania.

### 3.3 Status of Project Preparation

The project is ongoing now.

Some standards have been harmonized with the EU standards but the process should be finalized.

### 3.4 Technology proposed

N Ap

3.5 Ownership of project Site
NI A co
N Ap
3.6 Specific Project Items
A set of standard laboratory equipment procurement and methodologies for water analysis will be set up.
4. Project Effects and Interactions
4.1 Public's Expression of Interest
N. A.o.
N Ap
4.2 Environmental Impact Assessment
yes no NAp
☐ planned ☐ in progress ☐ finished/completed ☐ accepted ☐ rejected N Ap
4.3 Sensitivity of Locality/Receptor
· · ·
N Ap
4.4 Primary Effects of Project
The implementation of the project will have the effect of unitary way of analysis and interpretation of results.

5. Economic Project Jus	tification		
5.1 Economic Project Benefits			
N Ap			
Employment/income effects			
during construction period N A	Ap		
during operation period N A	Aр		
Other economic benefits N	Ap		
5.2 Economic Internal Rate	of Return (EIRR)		
Has an EIRR been calculated	☐ yes N Ap ☐ no		
total investment costs of project	928 000 USD		
planned annual depreciation	N Ap		
planned annual operation costs	N Ap		
planned annual revenues	N Ap		
6. Financial Viability			
6.1 Estimated Investment C	ost		
Investment cost	928 000 USD		
All	location of capital cost		
Land	N Ap		
Construction and machinery	828 000		
Planning and supervision	100 000		
Total cost	928 000 USD		
On an annual basis			
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, etc.)		
preliminary calculation			
6.2 Estimated Operational (	Cost		
Expected annual (operational) r	ecurrent cost (in real terms)		
N Ap			
Repair and replacement cost	N Ap		
Total operational cost	N Ap		
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, sources of information)		
The source of information is the N cost estimate is preliminary.	Tational Environmental Action Plan and the nature of		

<b>6.3 Estimate of Revenues</b>					
Expected annual revenues (in rea	l terms)				
N Ap					
Year of estimate	1998				
Nature of estimate (preliminary, a	adequate, etc.)				
The nature of estimate is preliminar	у				
6.4 Financial Internal Rate o	f return (FIRR)				
Has a FIRR been calculated?	☐ yes	X no			
6.5 Anticipated/Proposed Fu	6.5 Anticipated/Proposed Funding Scheme				
Source of funding	Secured	Requested	Non- secured		
	Secured	Requested Currency [USD]	_		
	Secured	•	_		
Source of funding  1. Equity of project owner 2. National Environmental	Secured	•	_		
1. Equity of project owner 2. National Environmental Fund	Secured	•	_		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund	Secured	•	_		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget	Secured	•	_		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget	Secured	•	_		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget	Secured	Currency [USD]	_		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget	Secured	Currency [USD]	_		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan	Secured	Currency [USD]	_		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant	Secured	Currency [USD]	_		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant 10. Commercial bank loan	Secured	Currency [USD]	_		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant	Secured	Currency [USD]	_		

# Project No. AI4-5 Wastewater Treatment Plant Craiova

Date of first setting up:	1996		Date of latest	update :	07.1998	
Project Title:	Wastewater treatment plant Craiova.					
Responsible/Leg	gal Body					
Authority/Company	Council of the	e Dolj (	county			
Name	Irimia Mircea	L				
Address	Str. Unirii, nr	19, Cr	aiova			
Telephone	40.51. 415843	1				
Fax	40.51.412003	; 40.51	.418042			
e-mail						
Project Target			ent on the river	Jiu.		
<b>Investment Costs</b>	32.000 000 U	SD				
<b>Status of Project</b>	ongoing		planned	emerg	ing concept	
Language of Proje	ect Docume	nts	🔀 Romania	an $\square$ E	nglish $\Box$	]

Summary in English: yes no

### 1 Project title

Wastewater treatment plant Craiova

### 2 Investor Details

### 2.1 Authority/Company

Name	Regia Apă Canal și Termoficare Craiova
Address	Str. Brestei, nr. 101, Craiova, județul Dolj, Romania Str. Crișan, bl. N4, ap. 9
Telephon e	40.51.422748
Fax	40.51.422263

### 2.2 Contact persons

Leonida Nicolaescu –director

#### 2.3 Advisor/Consultant

PROED București, Str. Tudor Arghezi 21, București

Tel: 40.1.2115510, Fax: 40.1.2101801

### 2.4 Legal/Financial Status

State company

### 2.5 Authority/Company profile

- Water supply and sewerage works.
- Turnover of company: 10 574 700 USD (1997)
- Expenses in 1997: 93 000 000 000 lei (10 689 655 USD)
- Number of persons employed: 1700 (1997)
- Profit:0 (1997)

### 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, consulting, control during erection and operation of the new structures.

### 2.7 Institutions/Enterprises beside the Investor

PROED București, Str. Tudor Arghezi 21, sector 2, Tel: 40.1.2115510, Fax: 40.1.2101801

ICIM București - Spl. Independenței 294, Tel.: 40.1.6373020, Fax: 40.1.3121393

### 3. PROJECT DESCRIPTION

### 3.1 Project Outline

The construction of WWTP which will consist of primary and secondary treatment. The user of the WWTP will be RAAC Craiova. The location of the plant is on the own land of the user at the site of the primary sedimentation tanks, which are under erection.

### 3.2 Primary Needs for the Project

The main goal of the project is to reach the effluent quality standard and to restore the aquatic environment for fish as well as for recreation, bio-diversity and economic development functions.

### 3.3 Status of Project Preparation

The project is ongoing, now: 40 percent of primary sedimentation tank 45 percent of the digestion tanks and 100 percent – the main sewage collection system are achieved.

### 3.4 Technology proposed

The flowsheet consists of primary sedimentation, aeration tanks (complete nitrification) and secondary sedimentation tanks. The resulted sludge is digested and disposed off on the drying beds.

3.5 Ownership of project Site
5.5 Ownership of project Site
The site of the plant is in the ownership of the investor.
3.6 Specific Project Items
There is no wastewater treatment now and 2500 l/s of domestic and industrial wastewater is discharged into river Jiu.
4. Project Effects and Interactions
4.1 Public's Expression of Interest
Public's attitude is positive. The project is included in the priority list of the National Environmental Action Plan and the design has been approved.
1.2 Environmental Impact Assessment
<b>4.2 Environmental Impact Assessment</b>
□ planned □ in progress □ finished/completed ☒ accepted □
rejected
4.3 Sensitivity of Locality/Receptor
River Jiu which as a recipient of the wastewater is a highly polluted river. The river is
discharging its water into the Danube River (boundary zone with Bulgaria).
4.4 Primary Effects of Project
The effects of the project implementation will be on local, national and transboundary levels.

5. Economic Project Justification				
5.1 Economic Project Benefits				
It is not possible to justify beca	nuse of ongoing project. The WWTP is under erection.			
<b>Employment/income effects</b>				
	100 – 120 employees			
during operation period	0 employees			
Other economic benefits				
5.2 Economic Internal Rate of Return (EIRR)				
Has an EIRR been calculated	□ ves			
total investment costs of proje	ct 32.000.000 USD			
planned annual depreciation	191.000 USD			
planned annual operation cos	ts 180.000 USD			
planned annual revenues	580.12000 USD			
6. Financial Viability				
6.1 Estimated Investment Cost				
Investment cost	32.000 000 USD			
	Allocation of capital cost			
Land	30.000 USD			
Construction and machinery				
Planning and supervision	120.000 USD			
Total cost	32.000.000 USD			
On an annual basis				
Year of cost estimate	1998			
Nature of cost estimate (preliminary, adequate, etc.)				
Preliminary calculation				
6.2 Estimated Operational Cost				
Expected annual (operational) recurrent cost (in real terms)				
Wastewater treatment plant: 180.000 USD				
Repair and replacement cost	50.200 USD			
Total operational cost	180.000 USD			
Year of cost estimate	1998			
Nature of cost estimate (preliminary, adequate, sources of information)				
	y. The estimation is based on the similar costs spent on			

<b>6.3 Estimate of Revenues</b>			
Expected annual revenues (in re-	al terms)		
200 000 HgD			
580.000 USD			
Year of estimate	1998		
Nature of estimate (preliminary,	adequate, etc.)		
Nature of estimation is preliminary	and it is based on the	updated indexes for in	vestment
of sewerage works.			
6.4 Financial Internal Rate	of return (FIRR)		
Has a FIRR been calculated?	☐ yes	X no	
6.5 Anticipated/Proposed Fu	anding Scheme		
Source of funding	Secured	Requested	Non-
			secured
	Currency [USD]		
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional		32.000.000	
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources		22,000,000	
Total funda / requirementa			

# Project No. AI3-11

Water Quality Territorial Laboratories Development

Date of first setting up:	1995	Date of latest update :	
Project Title:	Water quality territorial laboratories development		
Responsible/Leg	gal Body		
Authority/Company	Ministry of Wate	er, Forest and Environmental Protection	
Name	Ing. Mâra Lilian	a	
Address	Bd. Libertății 12	, București, România	
Telephone	40.1.4100255		
Fax	40.1.4100282		
e-mail			
Project Target	compatible resul	of methods of analysis in order to get the ts about water quality indexes	
<b>Investment Costs</b>	353 000 USD		
<b>Status of Project</b>	ongoing	planned emerging concept	
Language of Proje	ect Document	Romanian	

Summary in English:  $\square$  yes  $\boxtimes$  no

1 Project title			
	Water quality territorial laboratories development		
	tor Details		
<b>2.1 Auth</b>	ority/Company		
Name	Not applicable (N Ap)		
Address	N Ap		
Telephon	N Ap		
Fax	N Ap		
<b>2.2 Cont</b>	act persons		
	N Ap		
2.3 Advis	sor/Consultant		
Spl	search and Engineering Institute for Environment . Independenței 294, București, Romania 40.1.6373020, Fax 40.1.3121393		
2.4 Lega	l/Financial Status		
	N Ap		
<b>2.5</b> Auth	ority/Company profile		
	N Ap		
2.6 Planı	ning/Implementing Extent/Capacity of the Investor		
	N Ap		

3. PROJECT DESCRIPTION 3.1 Project Outline
3. PROJECT DESCRIPTION
3. PROJECT DESCRIPTION
3.1 Project Outline
5.11 Toject Outline
Non atmastrated project
Non structural project A set of regulations and methodologies for water quality analysis as well as
intercalibration system made by the reference laboratory.
3.2 Primary Needs for the Project
The aim of the project is to achieve a unitary system of measurement throughout the
country with systematically intercalibration made by the reference laboratory.
3.3 Status of Project Preparation
The musicatic engains nevy
The project is ongoing now.
3.4 Technology proposed
N Ap
3.5 Ownership of project Site
N Ap

3.6 Specific Project Items	
The project is supposed to start taking in view a few experiments with $3-4$ laboratories	٠.
4. Project Effects and Interactions	
4.1 Public's Expression of Interest	
NI Am	
N Ap	
4.2 Environmental Impact Assessment	
☐ yes ☐ no N Ap	
□ planned □ in progress □ finished/completed □ accepted □	
rejected N Ap	
4.3 Sensitivity of Locality/Receptor	
N Ap	
7 ( 1 p	
4.4 Primary Effects of Project	
The results given by the territorial laboratories will be compatible and this will make	
possible the interpretation in a proper way.	
5 Francis Duciest Institution	
5. Economic Project Justification  5.1 Economic Project Panefits	
5.1 Economic Project Benefits	
N Ap	
Employment/income effects	
during construction period     N Ap       during operation period     N Ap	
during operation period N Ap Other economic benefits N Ap	
отег ссоионие венень пур	$\neg$

<b>5.2 Economic Internal Rate</b>	of Return (EIRR)		
Has an EIRR been calculated	☐ yes N Ap ☐ no		
total investment costs of project	353 000 USD		
planned annual depreciation	N Ap		
planned annual operation costs	N Ap		
planned annual revenues	N Ap		
6. Financial Viability			
<b>6.1 Estimated Investment C</b>	ost		
Investment cost	353 000 USD		
All	location of capital cost		
Land	N Ap		
Construction and machinery	N Ap		
Planning and supervision	353 000 USD		
Total cost	353 000 USD		
On an annual basis			
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, etc.)		
preliminary calculation			
<b>6.2 Estimated Operational</b>	Cost		
<b>Expected annual (operational) r</b>	ecurrent cost (in real terms)		
N Ap			
Repair and replacement cost	N Ap		
Total operational cost	N Ap		
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, sources of information)		
N Ap			
<b>6.3 Estimate of Revenues</b>			
<b>Expected annual revenues (in re</b>	al terms)		
N Ap			
Year of estimate	1998		
Nature of estimate (preliminary,			
N Ap			

6.4 Financial Internal Rate o	f roturn (FIRR)		
Has a FIRR been calculated?			
	☐ yes	□ no N Ap	
6.5 Anticipated/Proposed Fu	nding Scheme		
Source of funding	Secured	Requested	Non-
			secured
	(	Currency [USD]	
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget		353 000	
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		353 000	

Project No. AI1- (2)

**Quality Objectives in the Activity of Water Quality Protection** 

Date of first setting up:	1995	Date of latest update :	02.1998
Project Title :	Quality objectives	s in the activity of water quality	y protection

Responsible/Leg	gal Body		
Authority/Company	Ministry of Water,	Forest and Environmental Protection	
Name	Ing. Liliana Mâra -	Ing. Liliana Mâra – director	
Address	Bd. Libertății 12, București, România		
Telephone	40.1.4100255		
Fax	40.1.4100282		
e-mail			
Project Target	Implementation of 10 EU Directives in the national legislation regarding the requirements from water users		
<b>Investment Costs</b>	284 000 USD		
<b>Status of Project</b>	ongoing ×	planned emerging concept	
Language of Proje	ect Documents	⊠ Romanian    □ English    □  German  Summary in English: □ yes    ☒ no	

# 1 Project title Quality objectives in the activity of water quality protection. 2 Investor Details 2.1 Authority/Company

Name	Not applicable (N Ap)
Address	N Ap
Telephon	N Ap
e	
Fax	N Ap

## 2.2 Contact persons

N Ap

### 2.3 Advisor/Consultant

Research and Engineering Institute for Environment Spl. Independenței 294, București, Romania. Tel. 40.1.6373020, Fax 40.1.3121393

## 2.4 Legal/Financial Status

N Ap

## 2.5 Authority/Company profile

N Ap

## 2.6 Planning/Implementing Extent/Capacity of the Investor

N Ap

2.7 Institutions/Enterprises beside the Investor
NI Ap
N Ap
3. PROJECT DESCRIPTION
3.1 Project Outline
Non structural project
Screening of existing domestic legislation with 10 EU Directives regarding the
requirements for water users; draft documents for licensing process taking into
consideration the realistic requirements
3.2 Primary Needs for the Project
The aim of the project is to harmonize the domestic regulations with the 10 EU
Directives specific for water problems. If this project will not be implemented the water
use of a transboundary river will not be regarded in an unitary system
2.2.C( )
3.3 Status of Project Preparation
The project is ongoing now.
2.4 Tashualagu mumagad
3.4 Technology proposed
N Ap
11.12p
3.5 Ownership of project Site
N Ap

3.6 Specific Project Items	
3.6 Specific Project Items	
The new regulations which are to be drafted is to approach on a realistic base the EU Directives	
4. Project Effects and Interactions	
4.1 Public's Expression of Interest	
N Ap	
4.2 Environmental Impact Assessment	
☐ yes ☐ no N Ap	
□ planned □ in progress □ finished/completed □ accepted □ rejected N Ap	
4.3 Sensitivity of Locality/Receptor	
N Ap	
4.4 Primary Effects of Project	
William Jarous of Froject	
• A unitary approach of European requirements for water quality protection will be	
achieved by a set of new regulations.	
5. Economic Project Justification	
5.1 Economic Project Benefits	
N Ap	
Employment/income effects	
during construction period N Ap	
during operation period N Ap	
Other economic benefits	

5.2 Economic Internal Rate of Return (EIRR)			
Has an EIRR been calculated	☐ yes N Ap ☐ no		
total investment costs of project	284 000 USD		
planned annual depreciation	N Ap		
planned annual operation costs	N Ap		
planned annual revenues	N Ap		
6. Financial Viability			
<b>6.1 Estimated Investment C</b>	ost 284 000 USD		
Investment cost			
All	location of capital cost		
Land	N Ap		
Construction and machinery	N Ap		
Planning and supervision	284 000		
Total cost	284 000 USD		
On an annual basis			
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, etc.)		
preliminary calculation			
6.2 Estimated Operational (	*		
Expected annual (operational) r	ecurrent cost (in real terms)		
N Ap			
Repair and replacement cost	N Ap		
Total operational cost	N Ap		
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, sources of information)		
The cost has been taken from the National Environmental Action Plan			
6.3 Estimate of Revenues			
Expected annual revenues (in real terms)			
N Ap			
Year of estimate 1998			
Nature of estimate (preliminary, adequate, etc.)			
The nature of estimate is preliminary			

6.4 Financial Internal Rate of return (FIRR)			
	return (FIKK)		
Has a FIRR been calculated?	☐ yes	□ no N Ap	
6.5 Anticipated/Proposed Fu	nding Scheme		
Source of funding	Secured	Requested	Non-
8		•	secured
	Cı	urrency [USD]	
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget	284 000		
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements	284 000		

# Project No. AI3 - 23 Control and Fight against Accidental Pollution

Date of first setting up:	1997	Date of latest update :		
Project Title :	Control and fight against accidental pollution.			
Responsible/Leg	gal Body			
Authority/Company	Ministry of Wat	ter, Forest and Environmental Protection		
Name	Ing. Octavian Ciachir – director			
Address	Bd. Libertății 12, București, România			
Telephone	40.1.4100255			
Fax	40.1.4100282			
e-mail				
<b>Project Target</b>	Prevention of effects of damages caused by accidents.			
<b>Investment Costs</b>	100 000 USD			
<b>Status of Project</b>	ongoing	▼ planned □ emerging concept		
		⊠ Romanian    □ English    □		

German

Summary in English:  $\square$  yes  $\boxtimes$  no

**Language of Project Documents** 

## 1 Project title

Control and fight against accidental pollution.

### 2 Investor Details

## 2.1 Authority/Company

Name	Autonomous Regia "Romanian Waters" (Regia Autonomă Apele Române)
Address	Str. Edgar Quinet, nr. 6, București
Telephon e	40.1.312.21.74
Fax	40.1.312.21.74

### 2.2 Contact persons

Dr. ing. Gheorghe Băran – general director

## 2.3 Advisor/Consultant

AQUA Project, Splaiul Independenței 294, Sector 3, Bucharest

### 2.4 Legal/Financial Status

State company

## 2.5 Authority/Company profile

Water management

## 2.6 Planning/Implementing Extent/Capacity of the Investor

The investor can act by means of 11 branches which are subordinated

2.7 Institutions/Enterprises beside the Investor
Environmental protection agencies which are located in each of 41 counties.
3. PROJECT DESCRIPTION
3.1 Project Outline
Non structural project.  The project comprises the typical methods to be used to avoid the effects of accidental pollution, the technical solution to be applied, especially in the transboundary context.
3.2 Primary Needs for the Project
The main target of the project is to present the technical solution to be applied in order to avoid the deleterious effects of accidental pollution, especially in the transboundary context.
3.3 Status of Project Preparation
The project is included in the N.E.A.P.
3.4 Technology proposed
Not applicable (N Ap)
3.5 Ownership of project Site

N Ap

3.6 Spacific Project Items
3.6 Specific Project Items
The project will contain an inventory of the most sensitive zones where pollution accidents might happen.
1 Project Effects and Interactions
4. Project Effects and Interactions
4.1 Public's Expression of Interest
Public attitude is positive.
4.2 Environmental Impact Assessment
□ planned □ in progress □ finished/completed □ accepted □ rejected N Ap
4.3 Sensitivity of Locality/Receptor
The localities, which might be affected by accidental pollution, are to be put into evidence especially those, which are situated outside the country.
4.4 Primary Effects of Project
Special warns of discharges of Nitrogen and Phosphorus into the inland rivers as well as into the Danube River are to be established
5. Economic Project Justification
5.1 Economic Project Benefits
Because the project is just planned there are no calculation of economic project benefits.
Employment/income effects
during construction period N Ap
during operation period N Ap
Other economic benefits N Ap

5.2 Economic Internal Rate of Return (EIRR)			
	☐ yes N Ap		
Has an EIRR been calculated	no		
total investment costs of project	100 000 USD		
planned annual depreciation			
planned annual operation costs	N Ap		
planned annual revenues	N Ap		
6. Financial Viability			
<b>6.1 Estimated Investment C</b>	ost		
Investment cost	100 000 USD		
All	location of capital cost		
Land	0		
Construction and machinery	0		
Planning and supervision	100 000 USD		
Total cost	100 000 USD		
On an annual basis			
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, etc.)		
preliminary calculation			
6.2 Estimated Operational 6	Cost		
<b>Expected annual (operational) re</b>	ecurrent cost (in real terms)		
N Ap			
Repair and replacement cost	N Ap		
Total operational cost	N Ap		
Year of cost estimate	11119		
Nature of cost estimate (preliminary, adequate, sources of information)			
	, , , , , , , , , , , , , , , , , , ,		
The source of information: NEAP			
<b>6.3 Estimate of Revenues</b> N Ap			
Expected annual revenues (in real terms)			
NI A co			
N Ap			
Year of estimate			
Nature of estimate (preliminary,	adequate, etc.)		
Nature of estimate is preliminary			

6.4 Financial Internal Rate of return (FIRR)			
Has a FIRR been calculated?	yes yes	□ no N Ap	
6.5 Anticipated/Proposed Fu	nding Scheme	<u> </u>	
Source of funding	Secured	Requested	Non-
			secured
	C	Currency [USD]	
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget		100 000	
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		100 000	

## Project No. AI3 - 15

**Introduction of New Instruments for Water Quality Protection** 

Date of first setting up:	1995	Date of latest update :	01.1998
	Г		
Project Title:	Introduction of n	new instruments for water qual	lity protection

Responsible/Legal Body			
Authority/Company	Ministry of Water, Forest and Environmental Protection		
Name	Ing. Liliana Mâra –	director	
Address	Bd. Libertății 12, București, România		
Telephone	40.1.4100255		
Fax	40.1.4100282		
e-mail			
Project Target	Compliance with the new legislation harmonized with the EU Directives in order to avoid eventual damage of Danube River Delta		
<b>Investment Costs</b>	262 500 USD		
<b>Status of Project</b>	☐ ongoing ☐ planned ☐ emerging concept		
<b>Language of Project Documents</b>		⊠ Romanian  □ English  □ German Summary in English: □ yes  ☒ no	

1 Projec	et title		
	on of new instruments for water quality protection		
2 Invest	2 Investor Details		
2.1 Auth	ority/Company		
Name	Not applicable (N Ap)		
Address	N Ap		
Telephon e	N Ap		
Fax	N Ap		
<b>2.2</b> Cont	act persons		
	N Ap		
2.3 Advis	sor/Consultant		
The	e Institute of Research and Design for the Danube River Delta		
2.4 Lega	l/Financial Status		
	N Ap		
2.5 Auth	ority/Company profile		
	N Ap		
2 6 Plani	ning/Implementing Extent/Capacity of the Investor		
2.0 I lalli	mg/Implementing Extend Capacity of the investor		
	N Ap		

2.7 Institutions/Enterprises beside the Investor
N Ap
3. PROJECT DESCRIPTION
3.1 Project Outline
The project is non structural.  There will be a set of draft legal acts, which will provide maximum allowable values of Nitrogen, and Phosphorus concentration required to avoid the damages, which might occur in the Danube River Delta.
3.2 Primary Needs for the Project
The main target of the project is to set up legal means to comply with the new legislation within the framework of water quality protection.  The project is intended to protect and improve the biodiversity of the Danube River Delta
3.3 Status of Project Preparation
The project is proposed in the N.E.A.P.
3.4 Technology proposed
N Ap
3.5 Ownership of project Site
N Ap

3.6 Specific Project Items	
Critical loads of Nitrogen and Phosphorus in the Danube River established.	Delta are to be
4. Project Effects and Interactions	
4.1 Public's Expression of Interest	
4.11 ubite s Expression of Interest	
Public attitude is positive.	
4.2 Environmental Impact Assessment	
☐ yes ☐ no N Ap	
☐ planned ☐ in progress ☐ finished/completed ☐ rejected N Ap	accepted
4.3 Sensitivity of Locality/Receptor	
N Ap	
4.4 Primary Effects of Project	
Special warns of discharges of Nitrogen and Phosphorus into the into the Danube River are to be established	e inland rivers as well as
5. Economic Project Justification	
5.1 Economic Project Benefits	
N An	
N Ap	
Employment/income effects	
during construction period N Ap	
during operation period N Ap	
Other economic benefits N Ap	
1	

5.2 Economic Internal Rate of Return (EIRR)			
Has an EIRR been calculated	☐ yes N Ap ☐ no		
total investment costs of project	262 500 USD		
planned annual depreciation			
planned annual operation costs	N Ap		
planned annual revenues	N Ap		
6. Financial Viability			
<b>6.1 Estimated Investment C</b>	Cost		
Investment cost	262 500 USD		
Al	location of capital cost		
Land	N Ap		
Construction and machinery	N Ap		
Planning and supervision	262 000 USD		
Total cost	262 000 USD		
On an annual basis			
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, etc.)		
preliminary calculation			
<b>6.2 Estimated Operational</b>	Cost		
Expected annual (operational) r	ecurrent cost (in real terms)		
N Ap			
Repair and replacement cost	N Ap		
Total operational cost			
Year of cost estimate			
Nature of cost estimate (prelimin	nary, adequate, sources of information)		
N Ap			
6.3 Estimate of Revenues			
Expected annual revenues (in re	al terms)		
Zipected dimudi revenues (in re	WI VOI IIII)		
N Ap			
Year of estimate			
Nature of estimate (preliminary	, adequate, etc.)		
N Ap			

6.4 Financial Internal Rate of return (FIRR)			
Has a FIRR been calculated?	☐ yes	no N Ap	
6.5 Anticipated/Proposed Funding Scheme			
Source of funding	Secured	Requested	Non-
			secured
	C	Currency [USD]	
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget		262 500	
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		262 500	

# Project No. AI3 - 23

**Expansion of Wastewater Treatment Plant from Mangalia City** 

Date of first setting up:	1 July 1997	Date of latest update:	
Project Title :	Expansion of Wastewater Treatment Plant from Mangalia city		
Responsible/Leg	gal Body		
Authority/Company	Council of the co	ounty of Constanța	
Name	Hristu Pestita		
Address	Bd. Tomis 51, C	onstanța, Județul Constanța, România	
Telephone	40.41.612854		
Fax			
e-mail			
Project Target	Decrement of or recreation area (	ganic substances load and improving of tourism)	
<b>Investment Costs</b>	5 400 000 USD		

planned

German

**X** Romanian

☐ emerging concept

☐ English

Summary in English:  $\square$  yes  $\boxtimes$  no

ongoing

**Status of Project** 

**Language of Project Documents** 

## 1 Project title

Expansion of Waste Water Treatment Plant from Mangalia city

#### 2 Investor Details

## 2.1 Authority/Company

Name	Council of Constanța county- RAJAC
Address	Str. Călărași 22 – 24 , Județul Constanța, Constanța, Romania
Telephon	40.41.611742
e	
Fax	40.41.66.25.77

### 2.2 Contact persons

Ing. Nicolae Pitu – director

#### 2.3 Advisor/Consultant

PROED București, str. Tudor Arghezi 21, sector 2,

Tel: 40.1.2115510 Fax: 40.1.2101801

## 2.4 Legal/Financial Status

State company

## 2.5 Authority/Company profile

- Water supply and sewerage works
- Turnover of company: 15 000 000 USD (1997)
- Number of persons employed: 2014 (1997)

## 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, consulting and control during erection and operation of the new structure.

#### 2.7 Institutions/Enterprises beside the Investor

PROIECT S.A. Constanța, Bd. Tomis 143, Tel: 40.41.660025, Fax: 40.41.638116 PROED S.A. București, Str. Tudor Arghezi 21, sector 2, Tel: 40.1.2115510, Fax: 40.1.2101801

ICIM București, Spl Independenței 294, Tel: 40.1.6373020, Fax: 40.1.3121393

#### 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

Structural project.

The capacity of the existing plant will be almost doubled (primary sedimentation, aeration tanks and secondary sedimentation

The site of the existing plant will be used (location: city of Mangalia)

#### 3.2 Primary Needs for the Project

The main targets of the project are to reduce the organic load of the Black Sea, the main benefit being the tourism activity improvement. If the project is not to be implemented the quality of the effluent will nor reach the standards.

### 3.3 Status of Project Preparation

Feasibility study achieved. Technical project under revision.

#### 3.4 Technology proposed

The technology proposed is based on activated sludge process.

#### 3.5 Ownership of project Site

The site of plant is in the ownership of the investor

3.6 Specific Project Items			
The existing mechanical equipment and other devices (e.g. automatization) are to be replaced.			
4. Project Effects and Interactions			
4.1 Public's Expression of Interest			
Public attitude is positive. The project is included in the priority list of the NEAP			
4.2 Environmental Impact Assessment			
⊠ yes □ no			
☐ planned ☐ in progress ☐ finished/completed ☒ accepted ☐ rejected N Ap			
4.3 Sensitivity of Locality/Receptor			
The location of the plant is on the Black Sea coast. The receiving water is the Black Sea where a touristic zone is established.			
4.4 Primary Effects of Project			
By implementing this project the effluent which is discharged will be improved and effects will be on local and transboundary levels.			
5. Economic Project Justification			
5.1 Economic Project Benefits			
It is not possible to justify because of ongoing project.			
Employment/income effects			
<b>during construction period</b> 50 – 60 employees			
during operation period 40 employees			
Other economic benefits			

5.2 Economic Internal Rate of Return (EIRR)			
Has an EIRR been calculated	□ yes ⊠ no		
total investment costs of project	5 400 000 USD		
planned annual depreciation	245 000 USD		
planned annual operation costs	225 000 USD		
planned annual revenues	900 000 USD		
_	700 000 CDD		
6. Financial Viability	1 - ~4		
6.1 Estimated Investment C			
Investment cost	5 400 000 USD		
	location of capital cost		
Land Construction and machinery	80 000 USD 5 233 600 USD		
Construction and machinery			
Planning and supervision Total cost	86 400 USD 5 400 000 USD		
On an annual basis	3 400 000 CSD		
Year of cost estimate	1998		
Nature of cost estimate (prelimin	2,7,4		
preliminary calculation	mary, aucquate, etc.)		
· · · · · · · · · · · · · · · · · · ·			
<b>6.2 Estimated Operational Cost Expected annual (operational) recurrent cost (in real terms)</b>			
<ul><li>Wastewater treatment: 245 000</li><li>Sewage collection: 416 000 Us</li></ul>			
Repair and replacement cost	91 800 USD		
Total operational cost	661 000 USD		
Year of cost estimate			
Nature of cost estimate (prelimin	nary, adequate, sources of information)		
The cost estimate is preliminary. The total cost of investment is mentioned in the NEAP			
<b>6.3 Estimate of Revenues</b> 9	000 000 USD		
Expected annual revenues (in real terms)			
Expected annual revenue: 900 000 USD			
Year of estimate			
Nature of estimate (preliminary,	, adequate, etc.)		
Nature of estimation is preliminary and it is based on the data taken from MPWTP			

6.4 Financial Internal Rate of return (FIRR)				
Has a FIRR been calculated?	☐ yes	× no		
6.5 Anticipated/Proposed Fu	nding Scheme			
Source of funding	Secured	Requested	Non- secured	
	(	Currency [USD]		
1. Equity of project owner				
2. National Environmental				
Fund				
3. Water Management Fund				
4. Public loan – central budget		5 400 000		
5. Public loan – regional budget				
6. Public grant – central budget				
7. Public grant – regional				
budget				
8. International loan				
9. International grant				
10. Commercial bank loan				
11. Other sources				
Total funds / requirements		5 400 000		

Project No. AI4 - 2

Wastewater Treatment Plant of Brăila Nord City

Date of first setting up:	1995	Date of latest update :	02.1998	
Project Title :	Wastewater treatment plant of Brăila Nord city			
Responsible/Leg	gal Body			
Authority/Company	Council of Brăila county			
Name	Stânciugel Aurel	Stânciugel Aurel		
Address	Piața Independenței nr. 1			
Telephone	039/61.91.00, 039/61.97.00 -103			
Fax	039/61.17.65			
e-mail				
Project Target	Decrease of organic load on the Danube River			
<b>Investment Costs</b>	21 900 000 USD			
<b>Status of Project</b>	X ongoing	☐ planned ☐ emerg	ing concept	
Language of Project Documents Romanian German German			nglish $\square$	

Summary in English:  $\square$  yes  $\boxtimes$  no

## 1 Project title

Wastewater treatment plant of Brăila Nord city

#### 2 Investor Details

## 2.1 Authority/Company

Name	APTERCOL Brăila
Address	Piața Uzinei, nr. 6
Telephon	40.39.692969
e	
Fax	40.39.693209

#### 2.2 Contact persons

Romeo Findrinan - director

#### 2.3 Advisor/Consultant

SETA București – Gheorghe Moraru Tel. 40.1.2114177, Fax 40.1.2113220

## 2.4 Legal/Financial Status

State company

#### 2.5 Authority/Company profile

The company is specialized on water supply and sewerage works.

Number of employees: 1382 (1997)

Annual revenue (1997): 98 578 647 000 lei (≈ 11 330 878 USD) Annual expenses (1997): 97 385 800 000 lei (≈ 11 193 770 USD)

Profit (1997): 1 190 347 000 lei (136 821 USD)

## 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, consulting, supervision during erection and operation of new structures.

#### 2.7 Institutions/Enterprises beside the Investor

SETA București

ICIM București – Spl. Independenței 294, Tel.: 40.1.6373020, Fax: 40.1.3121393

#### 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

The wastewater treatment plant consisting of primary and secondary treatment will be constructed. The operation and maintenance of the plant are to be assured by APTERCOL Brăila.

This structural project supposes to use a site that is not now owned by the investor.

#### 3.2 Primary Needs for the Project

The project will contribute to the abatement of impact of the wastewater from Brăila city on the Danube River, by decreasing the organic load. This will reduce the negative impact on the aquatic life, the recreation conditions, bio-diversity, as well as economic development.

## 3.3 Status of Project Preparation

At present, the project is presented to the authorities with the licensing procedures. Feasibility study to be approved.

## 3.4 Technology proposed

The technology proposed is based on activated sludge process (primary sedimentation, aeration tanks and secondary sedimentation). Finally the effluent is to be disinfected by chlorination.

3.5 Ownership of project Site
The site where the plant is to be located does not belong to the investor. The actual owner is also a public institution. The mayoralty intends to arrange an exchange of the respective land.
3.6 Specific Project Items
Disinfection by chlorination is provided in order to reduce contamination of Danube River water by bacteria.
4. Project Effects and Interactions
4.1 Public's Expression of Interest
The public attitude is positive.
1.2 Environmental Impact Aggaggment
<b>4.2 Environmental Impact Assessment</b> ☐ yes ⋈ no
□ planned ☑ in progress □ finished/completed □ accepted □ rejected N Ap
4.3 Sensitivity of Locality/Receptor
The discharge of the untreated municipal wastewater into the Danube River Delta, which is quite a sensitive biotop.
4.4 Primary Effects of Project
The primary effects of project implementation will be the improvement of bio-diversity in the Delta and better quality of water for users downstream (Galați city)

5. Economic Project Justification				
5.1 Economic Project Benefits				
It is not possible to justify because of ongoing project. The wastewater treatment plant feasibility study is under approval process				
<b>Employment/income effects</b>				
during construction period	80	- 100 employees		
during operation period	40	- 50 employees		
Other economic benefits				
5.2 Economic Internal R	ate	of Return (EIRR)		
Has an EIRR been calculate	d	□ yes ⊠ no		
total investment costs of proje	ect	21 900 000 USD		
planned annual depreciation		293 000 USD		
planned annual operation co.	sts	273 700 USD		
planned annual revenues		1 095 000 USD		
6. Financial Viability				
6.1 Estimated Investmen		ost		
Investment cost				
Allocation of capital cost				
Land		350 000 USD		
Construction and machinery		2 133 100 USD		
Planning and supervision		219 000 USD		
<b>Total cost</b> 21 900 000 USD		21 900 000 USD		
On an annual basis		1000		
Year of cost estimate		1998		
Nature of cost estimate (prel		nary, adequate, etc.)		
Preliminary calculati		Cost		
6.2 Estimated Operation				
Expected annual (operational) recurrent cost (in real terms)				
<ul><li>Wastewater treatment: 298 000 USD</li><li>Sewage collection system</li></ul>				
Repair and replacement cos	t	219 000		
Total operational cost		372 000		
Year of cost estimate				
Nature of cost estimate (prel	imiı	nary, adequate, sources of information)		
	ry. T	The estimation is based on the similar costs spent on		

6.3 Estimate of Revenues					
Expected annual revenues (in rea	Expected annual revenues (in real terms)				
1 095 000 USD					
Year of estimate	1998				
Nature of estimate (preliminary,	adequate, etc.)				
Nature of estimation is preliminary and it is based on the updated indexes for investment of sewerage works.					
6.4 Financial Internal Rate o	f return (FIRR)				
Has a FIRR been calculated?					
6.5 Anticipated/Proposed Fu	nding Scheme				
Source of funding	Secured	Requested	Non- secured		
	Cı	irrency [USD]	•		
1. Equity of project owner					
2. National Environmental Fund					
3. Water Management Fund					
4. Public loan – central budget					
5. Public loan – regional budget		21 900 000			
6. Public grant – central budget					
7. Public grant – regional					
budget					
8. International loan					
9. International grant					
10. Commercial bank loan					
11. Other sources					
Total funds / requirements		21 900 000			

# Project No. AI4 - 7

Development of Wastewater Treatment Plant of Câmpulung Muscel City

Date of first setting up:	1995	Date of latest update:	07.1998
Project Title :	Development of was Muscel city	tewater treatment plant of	of Câmpulung

Responsible/Legal Body				
Authority/Company	Town Hall of the C	âmpulung Muscel city		
Name	Ing. Drăgoi Băjan	Ing. Drăgoi Băjan		
Address	Str. Negru Vodă nr.	Str. Negru Vodă nr. 127, Câmpulung Muscel		
Telephone	048.81.10.18	048.81.10.18		
Fax	048.83.12.38			
e-mail				
<b>Project Target</b>	Abatement of organic load (including nutrients) on river Argeş			
<b>Investment Costs</b>	1 500 000 USD			
Status of Project	ongoing ongoing	planned emerging concept		
<b>Language of Project Documents</b>		⊠ Romanian    □ English    □  German  Summary in English:  □ ves    ⊠ no		

## 1 Project title

Development of wastewater treatment plant of Câmpulung Muscel city

#### 2 Investor Details

## 2.1 Authority/Company

Name	R.A. RIMLIL Câmpulung
Address	Str. Traian nr. 41
Telephon	811386
e	
Fax	

### 2.2 Contact persons

Ing. Duță Sebastian

#### 2.3 Advisor/Consultant

PROED București, Str. Tudor Arghezi 21, București Tel: 40.1.2115510, Fax: 40.1.2101801

## 2.4 Legal/Financial Status

State company

## 2.5 Authority/Company profile

The main activity of the company is water supply and wastewater collection, treatment and disposal works.

- Number of employees: 450
- Annual revenues (1997): 17 648 000 000 lei (2 028 505 USD)
- Profit (1997): 805 000 000 lei (95 529 USD)

## 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, consulting, supervising during erection, starts up operation of the new structures, operation and maintenance.

#### 2.7 Institutions/Enterprises beside the Investor

Autonomous Regia "Romanian Waters" (RAAR), Str. Edgar Quinet 6, București

PROED București, Str. Tudor Arghezi 21, sector 2, Tel: 40.1.2115510, Fax: 40.1.2101801

ICIM București - Spl. Independenței 294, Tel.: 40.1.6373020, Fax: 40.1.3121393

#### 3. PROJECT DESCRIPTION

## 3.1 Project Outline

Structural project.

The existing wastewater treatment plant is to reach the required efficiency in order to improve the quality of the effluent. A digestion tank and a sludge thickener are to be provided.

## 3.2 Primary Needs for the Project

The main target of the project is to reduce the organic load (including nutrients) on the river Târgului (Argeş river basin). The project implementation will improve the aquatic life and will diminish the eutrofication in the impounding reservoirs downstream (health effects).

### 3.3 Status of Project Preparation

The project is in the phase of achievement

## 3.4 Technology proposed

Technology of treatment is based on activated sludge process: primary sedimentation, aeration tanks, and secondary sedimentation with a capacity of treating 460 l/s wastewater.

3.5 Ownership of project Site
The site is in the ownership of the titleholder.
3.6 Specific Project Items
The project will revise the existing plant and new equipment and other facilities will be provided in order to reach the standard quality.
4. Project Effects and Interactions
4.1 Public's Expression of Interest
The public attitude is positive.
4.2 Environmental Impact Assessment
yes □ no
□ planned □ in progress ☒ finished/completed □ accepted □ rejected
4.3 Sensitivity of Locality/Receptor
The river Târgului discharges its water in the river Argeş that is used for drinking purposes by the population downstream. That is why a first quality class of the river must be achieved.
4.4 Primary Effects of Project
By implementing the project, a reduction of 260 tones BOD, 21 tones of Nitrogen and 6 tones of Phosphorus per year will occur and the effects will be at the local level.

5. Economic Project Justification				
5.1 Economic Project Be	enef	its		
It is necessary to be updated due to some modifications during the work				
<b>Employment/income effects</b>				
during construction period	20 -	- 25 employees		
during operation period	10 -	- 15 employees		
Other economic benefits				
545		CD (CIDD)		
5.2 Economic Internal R	ate	of Return (EIRR)		
Has an EIRR been calculate	d	□ yes 区 no		
total investment costs of proje	ect	1 500 000 USD		
planned annual depreciation		45 000 USD		
planned annual operation cos	sts	50 000 USD		
planned annual revenues		100 000 USD		
6. Financial Viability				
6.1 Estimated Investmen		ost		
Investment cost		1 500 000 USD		
	All	ocation of capital cost		
Land		0 USD		
Construction and machinery	y	1 350 000 USD		
Planning and supervision		150 000 USD		
Total cost		1 500 000 USD		
On an annual basis				
Year of cost estimate		1998		
Nature of cost estimate (prel		nary, adequate, etc.)		
Preliminary calculati		~ .		
<b>6.2 Estimated Operation</b>				
Expected annual (operational) recurrent cost (in real terms)				
Repair and replacement cost	t	5 000 USD		
Total operational cost		50 000 USD		
Year of cost estimate		1998		
Nature of cost estimate (prel	imiı	nary, adequate, sources of information)		
Nature of cost estimate is prelindexes of investments in was		ary. The cost has been estimated by updated the		

6.3 Estimate of Revenues					
Expected annual revenues (in real terms)					
100 000 USD					
Year of estimate	1998				
Nature of estimate (preliminary,	adequate, etc.)				
	Nature of estimate is preliminary and the cost has been estimated taking in view the available indexes, which have been updated.				
6.4 Financial Internal Rate of	of return (FIRR)				
Has a FIRR been calculated?	☐ yes	X no			
6.5 Anticipated/Proposed Funding Scheme					
olo minicipated/i i oposed i t	maning Scholle				
Source of funding	Secured	Requested	Non- secure d		
	Secured	Requested rrency [USD]	secure		
	Secured	-	secure		
Source of funding	Secured	-	secure		
1. Equity of project owner 2. National Environmental	Secured	-	secure		
1. Equity of project owner 2. National Environmental Fund	Secured	-	secure		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund	Secured	-	secure		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget	Secured	-	secure		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget	Secured	rrency [USD]	secure		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional	Secured	rrency [USD]	secure		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional	Secured	rrency [USD]	secure		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant	Secured	rrency [USD]	secure		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant 10. Commercial bank loan	Secured	rrency [USD]	secure		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant	Secured	rrency [USD]	secure		

Project No. AI4 - 8

**Development of Wastewater Treatment Plant of Deva City** 

Date of first setting up:	1995	Date of latest update :	01.1998		
Project Title :	Development of wastewater treatment plant of Deva city				
Responsible/Leg	gal Body				
Authority/Company	The Council of H	Iunedoara county			
Name	Ing. Rotaru Viorel				
Address	Str. 1. Decembrie 1918, nr. 35				
Telephone	054/21.33.83				
Fax	054/21/41/30				
e-mail					
Project Target	Abatement of organic load of the transboundary river Mureş				

 $\square$  planned

German

**X** Romanian

Summary in English: yes

emerging concept

 $\square$  English

5 600 000 USD

X ongoing

**Investment Costs** 

**Status of Project** 

**Language of Project Documents** 

## 1 Project title

Development of wastewater treatment plant of Deva city

#### 2 Investor Details

## 2.1 Authority/Company

Name	RAGCL Deva
Address	Str. Libertății, Nr. 3
Telephon	054/21.12.43
e	
Fax	

#### 2.2 Contact persons

Ing. Mendrea Ion

#### 2.3 Advisor/Consultant

APAC București, Str. Intrarea Polonă, Nr. 4

## 2.4 Legal/Financial Status

State company

## 2.5 Authority/Company profile

The company is specialized on water supply and sewerage works.

## 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, consulting, supervision of works during erection, operation and maintenance of the new structures.

## 2.7 Institutions/Enterprises beside the Investor

RAAR – Str. Edgar Quinet, Nr. 6, Bucureşti PROED – Str. Tudor Arghezi, Nr. 21, Bucureşti ICIM – Spl Independenței, Nr. 294, Bucureşti

## 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

Structural project.

Primary treatment is to be extended and the biological treatment is to be provided. The expansion will be from 350 l/s wastewater flow to 1000 l/s. The plant is located on the Mureş riverbank. The site is the same with the site where the existed plant is located.

## 3.2 Primary Needs for the Project

The main target of project is reducing the organic load (including nutrients) on the transboundary river Mureş. The project implementation will improve the organic life and the quality of water used for drinking purposes.

### 3.3 Status of Project Preparation

The plan is under erection.

#### 3.4 Technology proposed

Activated sludge process is provided. Primary sedimentation is followed by aeration and secondary sedimentation.

# 3.5 Ownership of project Site

The site is the ownership of the titleholder.

## 3.6 Specific Project Items

A special attention is given to the mechanical and laboratory equipment.

4. Project Effects and Interactions			
4.1 Public's Expression			
The public attitude is positive	•		
4.2 Environmental Impa	act Assessment		
X yes	s $\square$ no		
planned in prog	ress		
4.3 Sensitivity of Localit	y/Receptor		
-	ndary one flowing to Hungarian territory. The quality of first class some of the users downstream being population.		
4.4 Primary Effects of P	roject		
The primary effects of project should be regarded in the transboundary context. The receptor will be unloaded as it follows: 930 tones BOD per year, 39 tones of N per year and 11 tones of P per year.			
5. Economic Project .	Justification		
5.1 Economic Project Be	enefits		
It has not been calculated.			
<b>Employment/income effects</b>			
during construction period	40 – 50 employees		
during operation period	20 – 25 employees		
Other economic benefits			
5.2 Economic Internal R	Rate of Return (EIRR)		
Has an EIRR been calculate	d yes x no		
total investment costs of proje	<i>ect</i> 5.600.000 USD		
planned annual depreciation	190.000 USD		
planned annual operation co	sts 180.000 USD		
planned annual revenues	560.000 USD		

6. Financial Viability				
6.1 Estimated Investment Cost				
Investment cost 5.600.000 USD				
All	ocation of capital cost			
Land	0 USD			
Construction and machinery	5.540.000 USD			
Planning and supervision	60.000 USD			
Total cost	5.600.000 USD			
On an annual basis				
Year of cost estimate	1998			
Nature of cost estimate (prelimin	narv, adequate, etc.)			
Preliminary calculation	<b>V</b> / <b>A</b> / /			
6.2 Estimated Operational (	Cost			
Expected annual (operational) re				
Expected aimain (operationar) 1	centrent cost (m rear terms)			
NA				
Repair and replacement cost	15.000 USD			
Total operational cost	180.000 USD			
Year of cost estimate	1998			
Nature of cost estimate (prelimin	nary, adequate, sources of information)			
The nature of cost estimate is preliminary.				
<b>6.3 Estimate of Revenues</b>				
<b>Expected annual revenues (in re</b>	al terms)			
560.000 USD				
Year of estimate	1998			
Nature of estimate (preliminary,	adequate, etc.)			
Nature of estimate is preliminary and the cost has been evaluated on the base of updated				
existing indexes concerning waster	water treatment works.			
6.4 Financial Internal Rate of return (FIRR)				
Has a FIRR been calculated?	yes × no			

6.5 Anticipated/Proposed Fund	ding Scheme		
Source of funding	Secured	Requested	Non- secured
	Currency [USD]		
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget		5.600.000	
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		5.600.000	

# Project No. AI3 - 2

**Development of Hydrological Database Using GIS** 

Date of first setting up:	1995	Date of latest update:	04.1998
Project Title:	Development of hydr	ological database using	GIS

Responsible/Legal Body				
Authority/Company	Ministry of Water,	Forest and Environmental Protection		
Name	Ing. Octavian Ceach	nir		
Address	B-dul Libertății, nr. 12, București			
Telephone	40.1.41.00.255			
Fax	40.1.41.00.282			
e-mail				
Project Target	Availability of compatible data for computation of hydraulic structures			
<b>Investment Costs</b>	290 000 USD			
<b>Status of Project</b>	ongoing	🗵 planned 🔲 emerging concept		
<b>Language of Project Documents</b>		⊠ Romanian    □ English    □  German  Summary in English: □ yes    ▼ no		

## 1 Project title

Development of hydrological data base using GIS

#### 2 Investor Details

## 2.1 Authority/Company

Name	Regia Autonomă "Apele Române"
Address	Str. Edgar Quinet, nr. 6, București, cod. 70106
Telephon	
e	40.1.315.55.35.
Fax	40.1.312.21.74

#### 2.2 Contact persons

Dr. ing. Gheorghe Bârau – director general

#### 2.3 Advisor/Consultant

National Institute of Meteorology and Hydrology (Institutul Național de Meteorologie și Hidrologie – INMH)

#### 2.4 Legal/Financial Status

State company

## 2.5 Authority/Company profile

The company is responsible for water management throughout the territories of the country

- Number of employees (1997): 13500 employees
- Annual revenue (1997): 299215x 10<sup>6</sup> lei (34.000.000.USD)
- •Annual expenses (1997): 279823 x 10<sup>6</sup> lei (32.000.000.USD)
- •Profit (1997): 19392x 10<sup>6</sup> lei (2.200.000.USD)

## 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration and co-ordination of hydrological activities. There are 11 branches of the company corresponding to each Inland river basins and 900 hydrometric station covering the whole territory of the country.

2.7 Institutions/Enterprises beside the Investor		
-Ministry of Agriculture and Food - ISPIF - București		
3. PROJECT DESCRIPTION		
3.1 Project Outline		
The outline of this non-structural project is the organization of data base using GIS		
3.2 Primary Needs for the Project		
The target of the project – to have or new organized hydrological data bas-is related to the design all hydraulic structures at the national and transboundary levels		
3.3 Status of Project Preparation		
The project is in the setting up phase.		
3.4 Technology proposed		
Not applicable (NAp).		
3.5 Ownership of project Site		
The project site is in the ownership of the investor.		

3.6 Specific Project Items	1				
,					
It is supposed that the project will need external assistance					
4. Project Effects and Interactions					
4.1 Public's Expression of	f Interest				
•					
Public's attitude is positive.					
4.2 Environmental Impac	et Assessment				
	× no				
Not necessary	110				
planned in progres	ss				
rejected in progres	ss 🗀 mished/completed 🗀 accepted 🗀				
4.3 Sensitivity of Locality	/Receptor				
	•				
Not Applicable (NAp)					
4.4 Primary Effects of Pro	oject				
Unitary and compatible system to get a data base availability of hydrological data for computations.					
5 Francis Ducies I					
5. Economic Project July 19 19 19 19 19 19 19 19 19 19 19 19 19					
5.1 Economic Project Ber	nents				
The economic project benefits have not been quantified.					
<b>Employment/income effects</b>					
during construction period	NAp				
~ ·	NAp				
Other economic benefits					

5.2 Economic Internal Rate of Return (EIRR)					
	☐ yes				
Has an EIRR been calculated	⊠ no				
total investment costs of project	290 000 USD				
planned annual depreciation	NA				
planned annual operation costs	NAp				
planned annual revenues	NAp				
6. Financial Viability					
6.1 Estimated Investment C	ost				
Investment cost	290 000 USD				
All	location of capital cost				
Land	0 USD				
Construction and machinery	insignificant				
Planning and supervision	290 000 USD				
Total cost	290.000 USD				
On an annual basis					
Year of cost estimate	1998				
Nature of cost estimate (prelimin	nary, adequate, etc.)				
Preliminary calculation					
6.2 Estimated Operational (	Cost				
Expected annual (operational) re					
NAp					
Denoise and vanlagement aget	NAn				
Repair and replacement cost	NAp				
Total operational cost	NAp				
Year of cost estimate					
Nature of cost estimate (prelimit	nary, adequate, sources of information)				
NAp					
Т					
<b>6.3 Estimate of Revenues</b>					
<b>Expected annual revenues (in re</b>	al terms)				
NAp					
Year of estimate	1998				
Nature of estimate (preliminary, adequate, etc.)					
NAp					

6.4 Financial Internal Rate of	f return (FIRR)						
Has a FIRR been calculated?	☐ yes	X no					
6.5 Anticipated/Proposed Funding Scheme							
Source of funding	Secured	Requested	Non- secured				
	Currency [USD]						
1. Equity of project owner		290 000					
2. National Environmental							
Fund							
3. Water Management Fund							
4. Public loan – central budget							
5. Public loan – regional budget							
6. Public grant – central budget							
7. Public grant – regional							
budget							
8. International loan							
9. International grant							
10. Commercial bank loan							
11. Other sources							
Total funds / requirements		290.000					

**WWTP** of the City of Bucharest

Date of first setting up:	1989	Date of latest update :	01.1998
Project Title :	WWTP of the o	city of Bucharest	
Responsible/Leg	gal Body		
Authority/Company	The Mayoralty	of the city of Bucharest	
Name	Bogdan Soşoac	eă – general director	
Address	b-dul Carol, nr.	. 27, București	
Telephone	314.10.67/261		
Fax			
e-mail			
Project Target	Reduction of or River via Dâml	rganic load (including nutrients) a bovița river	n the Danube
<b>Investment Costs</b>	250 000 000 U	SD	
<b>Status of Project</b>	X ongoing	☐ planned ☐ emergi	ng concept
		<b>⊠</b> Romanian □ En	glish $\square$

German

Summary in English:  $\square$  yes  $\boxtimes$  no

**Language of Project Documents** 

WWTP of the city of Bucharest

## 2 Investor Details

# 2.1 Authority/Company

Name	Regia Autonomă Apă Canal a municipiului București
Address	Str. Aristide Demetriad, nr. 2, sector 1, București
Telephone	40.1.613.28.10
Fax	40.1.312.44.37

#### 2.2 Contact persons

Dr.ing. Costin Beresianu – general director Ing. Viorel Dumitrescu

#### 2.3 Advisor/Consultant

PROED – București ICIM -București

# 2.4 Legal/Financial Status

State company

# 2.5 Authority/Company profile

The company is specialized on water supply and sewerage works.

Number of employees: 5204

Annual revenue (1997): 470.000.000.000 lei (54.000.000 USD) Annual expenses (1997): 448.000.000.000 lei (51.490.000 USD)

Profit (1997): 22.000.000.000 lei (2.528.000 USD)

## 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, consulting, supervision during and maintenance of the new structures.

### 2.7 Institutions/Enterprises beside the Investor

PROED –BUCUREȘTI str. Tuddor arghezi, 21, sector 2, tel. 40.1.211.55.10; Fax: 40.1.210.18.0

#### 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

The WWTP is designed for a capacity of 22,5 cu.m. per second of municipal wastewater. The WWTP is located out side of Bucharest in the South part of the city.

#### 3.2 Primary Needs for the Project

The main task of the project is to reduce the organic load (including nutrients) on the Danube river via Dâmboviţa of river. The discharging point is in the zone of Olteniţa town on the opposite part of locality Tutrakan (Bulgaria)

#### 3.3 Status of Project Preparation

The WWTP is 70 percent – first line and 30 percent – the second line are achieved.

## 3.4 Technology proposed

The technology of treatment is based on the activated sludge process (primary treatment) followed by aeration tanks and is anacrobically digested and finally disposed off on drying beds.

#### 3.5 Ownership of project Site

The site of the WWTP is in the ownership of the investor.

## 3.6 Specific Project Items

The erection of plant had started before 1990 and then has been stooped due to the lack of funds.

# 4. Project Effects and Interactions

# 4.1 Public's Expression of Interest

The public attitude is positive.

4.2 Environmental Impact Assessment		
☐ yes	× no	
planned in prog	ress  finished/completed  accepted	
rejected N Ap	1	
4.3 Sensitivity of Localit	y/Receptor	
•		
The receptor – river Dîmboviț	a is considered degraded downstream the discharging river	
is planned.		
4.4 D • Dec 4 e D	• ,	
4.4 Primary Effects of P	roject	
Ry implementation the respec	tive project an annual reduction of 40.000 tones BOD 5,	
1840 tones of N and 500 tones	± 0	
5. Economic Project.	Instification	
5.1 Economic Project Be		
5.1 Economic Project De	chents	
The project is ongoing now ar	nd the updated economic benefits have not been quantified	
F9		
<b>Employment/income effects</b>		
during construction period	200 – 250 employees	
during operation period	100 – 120 employees	
Other economic benefits		
5.2 Economic Internal Rate of Return (EIRR)		
Has an EIRR been calculate	yes	
Has all EIRR been calculate	u X no	
total investment costs of proje	ect 250.000.000 USD	
planned annual depreciation	NA	
planned annual operation co	sts 1.100.000 USD	
planned annual revenues	3.000.000 USD	

6. Financial Viability	
6.1 Estimated Investment C	ost
Investment cost	21 000 900 USD
All	location of capital cost
Land	0
Construction and machinery	248.800.000 USD
Planning and supervision	1.200.000 USD
Total cost	250.000.000 USD
On an annual basis	
Year of cost estimate	1998
Nature of cost estimate (prelimin	nary, adequate, etc.)
Preliminary calculation	
<b>6.2 Estimated Operational</b>	Cost
<b>Expected annual (operational) re</b>	ecurrent cost (in real terms)
1.100.000 USD	
Repair and replacement cost	100.000 USD
Total operational cost	1.100.000 USD
Year of cost estimate	1998
Nature of cost estimate (prelimin	nary, adequate, sources of information)
The cost estimate is preliminary. T titleholder.	The source of information home been given by the
<b>6.3 Estimate of Revenues</b>	
<b>Expected annual revenues (in re</b>	al terms)
3.000.000 USD	
Year of estimate	1998
Nature of estimate (preliminary,	, adequate, etc.)
The estimation is preliminary	
<b>6.4 Financial Internal Rate</b>	of return (FIRR)
Has a FIRR been calculated?	□ ves ⊠ no

6.5 Anticipated/Proposed Funding Scheme			
Source of funding	Secured	Requested	Non- secured
	Currency [USD]		
1. Equity of project owner		50.000.000	
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget		200.000.000	
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		250.000.000	

**Expansion of WWTP of TIMIŞOARA City** 

Date of first setting up:	1995	Date of latest update: 01 1998
<b>Project Title:</b>	Expansion of	WWTP of TIMIŞOARA city
Dognonsible/Log	ral Dadr	]

Responsible/Leg	gal Body	
Authority/Company	The Mayoralty of the city of TIMIŞOARA	
Name	Gheorghe ciuhandru	
Address	Str. C.D Loga nr. 1 Timişoara	
Telephone	056/19.03.63	
Fax	056/19.0635	
e-mail		
Project Target	Reduction of organ transboundary river	ic load (including nutrients) on the Bega
<b>Investment Costs</b>	12.681.512.000 lei (1.500.000 USD)	
<b>Status of Project</b>	ongoing	☐ planned ☐ emerging concept
Language of Proje	ect Documents	⊠ Romanian    □ English    □  German  Summary in English:   □ yes    ☒ no

The Mayoralty of the city of TIMIŞOARA

# 2 Investor Details

# 2.1 Authority/Company

Name	Regia Autonomă Apă Canal Timișoara
Address	Str. Paris, nr. 2A, 1900 Timişoara, judeţul Timiş
Telephone	40.0.56.20.13.70
Fax	40.0.56.13.27.12

#### 2.2 Contact persons

Ing. Adriana Angheluş
Ing. Gheorghe Giuva

### 2.3 Advisor/Consultant

#### SWEZ LYONNAISE DESEAUX

## 2.4 Legal/Financial Status

State company

# 2.5 Authority/Company profile

The company is specialized on water supply and sewerage works.

Number of employees: 1046

Annual revenue (1997): 68.672.592.000 lei (7.890.000 USD) Annual expenses (1997): 56.869.160.000 lei (6.536.000 USD)

Profit (1997): 11.803.432.000 lei (1.356.000 USD)

# 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, supervising, operation and maintenance of the new structures.

#### 2.7 Institutions/Enterprises beside the Investor

SWEZ LYONNAISE DESEAUX

Institutul de Proiectări Timișoara

#### 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

The structural project will comprise the expansion of the existing WWTP from 2500 l/s to 5000 l/s. an expansion of the existing capacity of the biological step to 2500 l/s is now.

### 3.2 Primary Needs for the Project

The structural project is intended to reduce the organic (including nutrients) on the transboundary river Bega – the neighboring country being Yugoslavia

## 3.3 Status of Project Preparation

The project implementation is achieved 4 a percent.

## 3.4 Technology proposed

The technology consists of primary treatment (screens, oil and sand separation) followed by aeration tanks and secondary sedimentation. The sludge is anaerobically digested

## 3.5 Ownership of project Site

The site of the WWTP is in the ownership of the investor.

## 3.6 Specific Project Items

The works have been planned till the years of 2003

# 4. Project Effects and Interactions

# 4.1 Public's Expression of Interest

The public attitude on the project is positive

4.2 Environmental Impa	nct Assessment	
□ yes ☒ no		
planned in prog	ress	
rejected N Ap	1	
4.3 Sensitivity of Localit	y/Receptor	
The receptor Bega - channel is become in the forthcoming ye	is a transboundary river and first quality class is planned to ars.	
4.4 Primary Effects of P	roiect	
Trimuly Effects of I	Toject	
By project implementation about 7500 tones of BOD 5 per year, 300 tones of N per year and 95 tones of P per year will not be discharged into the receptor.		
5. Economic Project.	Justification	
5.1 Economic Project Benefits		
The economic project benefits have not been quantified (the project is ongoing now).		
<b>Employment/income effects</b>		
during construction period	70 – 80 employees	
during operation period	20 – 25 employees	
Other economic benefits		
5.2 Economic Internal Rate of Return (EIRR)		
Has an EIRR been calculate	d yes X no	
total investment costs of proje	1.500.000 USD	
planned annual depreciation	NA	
planned annual operation co	sts 160.000 USD	
nlanned annual revenues	400 000 USD	

6. Financial Viability	
6.1 Estimated Investment C	ost
Investment cost	1.500 000 USD
All	location of capital cost
Land	0
Construction and machinery	1.480.000 USD
Planning and supervision	20.000 USD
Total cost	1.500.000 USD
On an annual basis	
Year of cost estimate	1998
Nature of cost estimate (prelimin	nary, adequate, etc.)
Preliminary calculation	
6.2 Estimated Operational (	Cost
Expected annual (operational) re	ecurrent cost (in real terms)
160.000 USD	
Repair and replacement cost	20.000 USD
Total operational cost	160.000 USD
Year of cost estimate	1998
Nature of cost estimate (prelimin	nary, adequate, sources of information)
The operation cost s preliminary a investor.	nd the information have been, obtained from the
<b>6.3 Estimate of Revenues</b>	
<b>Expected annual revenues (in re</b>	al terms)
400.000 USD	
Year of estimate	1998
Nature of estimate (preliminary,	, adequate, etc.)
The revenue estimate is preliminar	ry
6.4 Financial Internal Rate	of return (FIRR)
Has a FIRR been calculated?	ves × no

6.5 Anticipated/Proposed Fu	nding Scheme		
Source of funding	Secured	Requested	Non- secure d
	Cu	rrency [USD]	
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget		1.500.000	
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		1.500.000	

**Wastewater Treatment Plant of IAŞI City** 

Date of first setting up:	1994	Date of latest update :	03.1998
Project Title :	Wastewater Treat	tment Plant of IAŞI city	
Responsible/Leg	gal Body		
Authority/Company	The Council of Ia	ışi County	
Name	Tiberiu Brăileanu	ı	
Address	Str. Ştefan cel Ma	are și Sfânt nr. 47, Iași	
Telephone	032/13.50.60		
Fax			
e-mail			
Project Target		anic load (including nutrients) er Prut via river Bahlui	on the
<b>Investment Costs</b>	43.000.000 USD		
<b>Status of Project</b>	▼ ongoing	□ planned □ emerg	ging concept
Language of Proj	ect Documents		English $\square$

Summary in English: U yes 🔀 no

Wastewater Treatment Plant of IA\$I city

## 2 Investor Details

#### 2.1 Authority/Company

Name	Regia Autonomă Județeană Apă – Canal RAJAC. Iași
Address	Str. M. Constantinescu nr. 6
Telephone	032/21.54.10; 21.54.11
Fax	032/21.27.41

# 2.2 Contact persons

Gheorghe Nechita – manager Toan Teşu

## 2.3 Advisor/Consultant

PROED BUCUREȘTI – ROMÂNIA MANNESMANN- GERMANIA

### 2.4 Legal/Financial Status

State company

### 2.5 Authority/Company profile

The company is specialized on water supply and sewerage works.

Number of employees: 1538

Annual revenue (1997): 135.898.698.000 lei (15.620.000 USD) Annual expenses (1997): 115.317.172.000 lei (13.254.800 USD)

Profit (1997): 20.581.526.000 lei (2.365.630 USD)

# 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, supervising, of erection operation and maintenance of the new structures provided in the project.

#### 2.7 Institutions/Enterprises beside the Investor

MOLDOCONSTRUCT S.A - IAŞI

#### 3. PROJECT DESCRIPTION

## 3.1 Project Outline

A wastewater treatment plant for 4,2 cu.m. per second is treated biologically (at present only 1,7 cu.m per second is treated biologically)

#### 3.2 Primary Needs for the Project

The structural project will reach the standard effluent discharging in river Prut, via river Bahlui. This achievement will reduce the organic load (including nutrients) on the transboundary river Prut

#### 3.3 Status of Project Preparation

The project is under erection process

#### 3.4 Technology proposed

The technology is based on activated sludge process. The resulted sludge is stabilized by anaerobic digestion and finally disposed off on the drying beds

## 3.5 Ownership of project Site

The land is in the ownership of the titleholder.

### 3.6 Specific Project Items

The project implementation is achieved 20 percent. The last term for putting in operation is the year of 2000

# 4. Project Effects and Interactions

## 4.1 Public's Expression of Interest

The public attitude is positive

4.2 Environmental Impact Assessment			
□ yes	□ yes ⊠ no		
planned X in prog	ress  finished/completed  accepted		
rejected N Ap	1 1		
4.3 Sensitivity of Localit	y/Receptor		
	river Prut (the neighboring country: Republic of Moldova).		
The effluent quality does not	correspond to the existing norms.		
4.4 Primary Effects of P	roiect		
	700 tones of BOD 5 per year, 98 tones of N per year and		
27 tones of P per year dischar	ged into the river Prut via Bahlui river.		
5. Economic Project Justification			
5.1 Economic Project Benefits			
The economic benefits are not quantified.			
Employment/income effects			
during construction period	140 – 150 employees		
during operation period	80 – 290 employees		
Other economic benefits	· · · · · · · · · · · · · · · · · · ·		
V-1-V-1 V-0-V-1-1-1-1 × V-1-V-1-1			
5.2 Economic Internal R	Rate of Return (EIRR)		
	,  yes		
Has an EIRR been calculate	ed		
total investment costs of proje			
planned annual depreciation			
planned annual operation co			
planned annual revenues	1.900.000 USD		

6. Financial Viability			
6.1 Estimated Investment C	ost		
Investment cost	1.900 000 USD		
All	location of capital cost		
Land	0		
Construction and machinery	1.860.000 USD		
Planning and supervision	40.000 USD		
Total cost	1.900.000 USD		
On an annual basis			
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, etc.)		
Preliminary calculation			
6.2 Estimated Operational G	Cost		
Expected annual (operational) re			
` •	,		
650.000 USD			
Repair and replacement cost	30.000 USD		
Total operational cost	650.000 USD		
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, sources of information)		
The cost estimate is preliminary. The information has been obtained from the investor.			
The cost estimate is premimary. I	the information has been obtained from the investor.		
6.3 Estimate of Revenues			
Expected annual revenues (in re	al terms)		
Expected aimitual revenues (in re	ui (cimb)		
1.900.000 USD			
13,001,000 6.22			
Year of estimate	1998		
Nature of estimate (preliminary,			
•	,		
The estimate is preliminary			
1			
(AFinancial Internal D	of modernia (EIDD)		
6.4 Financial Internal Rate			
Has a FIRR been calculated?	$\square$ ves $\square$ no		

6.5 Anticipated/Proposed Funding Scheme			
Source of funding	Secured	Requested	Non- secured
	Currency [USD]		
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget		43.000.000	
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		43.0]00.000	

Development of Wastewater Treatment Plant of Reşiţa City

Date of first setting up:	1995	Date of latest update:	06.1998
	Г		
Project Title:	Development of wastewater treatment plant of Reşiţa city		f Reşiţa city

Responsible/Leg	gal Body	
Authority/Company	Municipal Council	of Reşiţa city
Name	Ing. Mircea Rădoi	
Address	Piața 1 Decembrie	1918, nr. 1, Reșița
Telephone	40.55.222903	
Fax	40.55.22.29.29	
e-mail		
<b>Project Target</b>	Abatement of organic load on the transboundary river Bârzava	
<b>Investment Costs</b>	3 500 000 USD	
<b>Status of Project</b>	ongoing	planned emerging concept
Language of Proj	ect Documents	■ Romanian    □ English    □  German  Summary in English:    □ yes    ▼ no

Development of wastewater treatment plant of Reşiţa city

#### 2 Investor Details

## 2.1 Authority/Company

Name	S.C. PRESCOM Reşiţa
Address	
Telephone	40.55.212458; 40.55.214519
Fax	40.55.214155

#### 2.2 Contact persons

Ing. Petrila Nicolae – technical director

Ing. Sallay Ladislau

#### 2.3 Advisor/Consultant

PROED București, Str. Tudor Arghezi 21, București

Tel: 40.1.2115510, Fax: 40.1.2101801

## 2.4 Legal/Financial Status

State company

#### 2.5 Authority/Company profile

The main activity of the company is water supply and wastewater collection, treatment and disposal works.

- Number of employees: 227
- Annual revenues (1997): 17 243 000 000 lei (1 982 000 USD)
- Annual expenses (1997): 15 209 900 000 lei (1 748 264 USD)
- Annual profit (1997):1 032 813 000 lei (118 714 USD)

### 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, consulting, supervising during erection, starts up operation of the new structures, operation and maintenance.

### 2.7 Institutions/Enterprises beside the Investor

PROED București, Str. Tudor Arghezi 21, sector 2, Tel: 40.1.2115510, Fax: 40.1.2101801

ICIM București - Spl. Independenței 294, Tel.: 40.1.6373020, Fax: 40.1.3121393

## 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

Structural project. The project provides the extension of the primary treatment with 750 l/s capacity and construction of secondary treatment part of the plant having 1059 l/s capacity. The site of the plant is on the bank of river Bârzava and is available for the investor.

#### 3.2 Primary Needs for the Project

The main target of the project is to reduce the organic load (including nutrients) on the transboundary river Bârzava that flows to Yugoslavia. By project implementation 1345 tones of  $BOD_5$  per year, 58 tones of Nitrogen and 16 tones of Phosphorus per year will not be discharged into the river.

## 3.3 Status of Project Preparation

The plant is in the phase of selection of construction company.

#### 3.4 Technology proposed

Activated sludge process is to be applied. Primary sedimentation of 744 l/s flow and then aeration tanks and secondary sedimentation of 1059 l/s (complete nitrification).

#### 3.5 Ownership of project Site

The site is in the ownership of the investor.

3.6 Specific Project Items
A designed efficiency of 92 percent with BOD is supposed to be achieved.
4. Project Effects and Interactions
4.1 Public's Expression of Interest
The public attitude is positive.
4.2 Environmental Impact Assessment
▼ yes □ no
☐ planned ☐ in progress ☐ finished/completed ☒ accepted ☐ rejected
4.3 Sensitivity of Locality/Receptor
Downstream the discharging point of the municipal wastewater there are draining systems which are located in the Yugoslavian territory. The groundwater table is low and the natural conditions are subjected to receive the impact of upstream pollution.
4.4 Primary Effects of Project
A reduction of 58 tones per year of Nitrogen and 16 tones per year of Phosphorus is expected to be achieved decreasing the nutrients load on the transboundary river Timiş via Bârzava.

5. Economic Project Justification			
5.1 Economic Project Benefits			
It is estimated that the economic benefits of the project is 175 000 USD annually.			
<b>Employment/income effects</b>			
during construction period	40 – 50 employees		
during operation period	20 – 30 employees		
Other economic benefits			
5.2 Economic Internal R	Rate of Return (EIRR)		
Has an EIRR been calculate	□ ves		
nas an Eikk been calculate	X no		
total investment costs of proje	ect 3 500 000 USD		
planned annual depreciation	209 000 USD		
planned annual operation co	sts 194 000 USD		
planned annual revenues	583 000 USD		
6. Financial Viability			
<b>6.1 Estimated Investmen</b>	nt Cost		
Investment cost	3 500 000 USD		
	Allocation of capital cost		
Land	0 USD		
Construction and machinery			
Planning and supervision	70 000 USD		
Total cost	3 500 000 USD		
On an annual basis	1000		
Year of cost estimate	1998		
Nature of cost estimate (pre			
Preliminary calculati			
6.2 Estimated Operation			
Expected annual (operations	al) recurrent cost (in real terms)		
Repair and replacement cos	t 30 000 USD		
Total operational cost	194 000 USD		
Year of cost estimate	1998		
Nature of cost estimate (pre	liminary, adequate, sources of information)		
	sed according to the modification which might eventually		
appears with the equipment pr	ocurement.		

<b>6.3 Estimate of Revenues</b>			
Expected annual revenues (in re-	al terms)		
583 000 USD			
Year of estimate	1998		
Nature of estimate (preliminary,	adequate, etc.)		
Nature of estimation is preliminary	7.		
6.4 Financial Internal Rate	of return (FIRR)		
Has a FIRR been calculated?	☐ yes	X no	
6.5 Anticipated/Proposed Fu	unding Scheme		
Source of funding	Secured	Requested	Non- secured
	(	Currency [USD]	1
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget		3 500 000	
7. Public grant – regional budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		3 500 000	

Wastewater Treatment Plant of Zalău City

Date of first setting up:	1997	Date of latest update :	03.1998
<b>Project Title:</b>	Wastewater treatment plant of Zalău city		
Responsible/Leg	gal Body		
Authority/Company	Council of the Să	laj county	
Name	Ing. Iancu Vioric	a	
Address	Str. Republicii, b	l. 10, ap. 4, Zalău, județul Sălaj	
Telephone	631028, 614120		
Fax	661097		
e-mail			
Project Target	Abatement of organic load on the transboundary river Someş.		
<b>Investment Costs</b>	7 000 000 USD		
<b>Status of Project</b>	ongoing	□ planned □ emerg	ing concept
		X Romanian	nglish $\square$

German

Summary in English:  $\square$  yes  $\boxtimes$  no

**Language of Project Documents** 

Wastewater treatment plant of Zalău city

#### 2 Investor Details

### 2.1 Authority/Company

Name	RAGM Zalău
Address	Str. Crişan, bl. N4, ap. 9
Telephone	661151, 092.314985
Fax	615431

#### 2.2 Contact persons

Ing. Puşcaş Gheorghe – technical director, tel: 615313

#### 2.3 Advisor/Consultant

PROED București, Str. Tudor Arghezi 21, București

Tel: 40.1.2115510, Fax: 40.1.2101801

## 2.4 Legal/Financial Status

State company

# 2.5 Authority/Company profile

The company is specialized on water supply and sewerage works.

Number of employees: 593

Annual revenue (1997): 44 606 018 000 lei (≈ 5 127 128 USD) Annual expenses (1997): 44 349 989 000 lei (≈ 5 097 699 USD)

Profit (1997): 256 029 000 lei (29 428 USD)

# 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, consulting, supervision during erection and operation of new structures.

#### 2.7 Institutions/Enterprises beside the Investor

PROED București, Str. Tudor Arghezi 21, sector 2, Tel: 40.1.2115510, Fax: 40.1.2101801

ICIM București - Spl. Independenței 294, Tel.: 40.1.6373020, Fax: 40.1.3121393

#### 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

Structural project

The capacity of the existing plant will be doubled providing primary sedimentation tanks, aeration tanks and secondary sedimentation tanks.

#### 3.2 Primary Needs for the Project

The main target of the project is to reduce organic pollution on the transboundary river Someş that flows to the Hungarian territory and finally is discharged into the Danube River.

#### 3.3 Status of Project Preparation

The project is ongoing

# 3.4 Technology proposed

Activated sludge process will be applied: primary sedimentation, aeration and secondary sedimentation. In addition to the existing capacity, 380 l/s is to be treated.

#### 3.5 Ownership of project Site

The site of the plant is in the ownership of the investor.

3.6 Specific Project Items			
The existing mechanical equipment and laboratory capability are to be revised.			
4. Project Effects and Interactions			
4.1 Public's Expression of Interest			
Public attitude is positive. The project is included in the priority list of NEAP.			
4.2 Environmental Impact Assessment			
yes □ no			
planned in progress finished/completed accepted rejected			
4.3 Sensitivity of Locality/Receptor			
The receptor – the transboundary river Crasna Someş – should reach the quality required by the neighboring countries standards which correspond to EU Directives. The plant is located upstream Hungarian territory.			
4.4 Primary Effects of Project			
The primary effect of the project will be the decrement of BOD (261 t/year), Nitrogen (28 t/year), Phosphorus (7.9 t/year) and surfactants (5.9 t/year). The effect should be regarded at the transboundary level.			
5. Economic Project Justification			
5.1 Economic Project Benefits			
It is not possible to justify because of ongoing project.			
Employment/income effects			
<b>during construction period</b> 30 – 40 employees			
<b>during operation period</b> 20 – 30 employees			
Other economic benefits			

5.2 Economic Internal Rate of Return (EIRR)			
	□ yes		
Has an EIRR been calculated	⊠ no		
total investment costs of project	7.000.000 USD		
planned annual depreciation	270.000 USD		
planned annual operation costs	250.000 USD		
planned annual revenues	1.000.000 USD		
6. Financial Viability			
6.1 Estimated Investment C	cost		
Investment cost	7.000.000 USD		
	location of capital cost		
Land	112.000 USD		
Construction and machinery	6.762.000 USD		
Planning and supervision	126.000 USD		
Total cost	7.000.000 USD		
On an annual basis			
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, etc.)		
Preliminary calculation	· ·		
6.2 Estimated Operational	Cost		
Expected annual (operational) r			
	, ,		
It is not calculated			
Repair and replacement cost	112.000 USD		
Total operational cost	250.000 USD		
Year of cost estimate	200000 002		
	nary, adequate, sources of information)		
(61 9211111	, was quality sources of miles in the same of the same		
Preliminary evaluation. The source	e of information: NEAP		
,			
<b>6.3</b> Estimate of Revenues			
<b>Expected annual revenues (in re</b>	al terms)		
1.000.000 USD			
Year of estimate	1998		
Nature of estimate (preliminary,			
	y and it is based on the present fees for wastewater		
treatment.	y and it is based on the present tees for wastewater		

6.4 Financial Internal Rate of return (FIRR)				
Has a FIRR been calculated?	ted?			
6.5 Anticipated/Proposed Fu	nding Scheme			
Source of funding	Secured	Requested	Non-	
			secured	
	C	urrency [USD]		
1. Equity of project owner				
2. National Environmental				
Fund				
3. Water Management Fund				
4. Public loan – central budget				
5. Public loan – regional budget		7.000.000		
6. Public grant – central budget				
7. Public grant – regional				
budget				
8. International loan				
9. International grant				
10. Commercial bank loan				
11. Other sources				
Total funds / requirements		7.000.000		

# **Agricultural Sector**

# Project No. AI5 - 4

**Technologies of Reclamation of Agricultural Soils Affected by Oil and Salt Water Pollution** 

Date of first setting up:	1995	Date of latest update :	05.1998
Project Title :	Technologies of and salt water po	reclamation of agricultural so llution.	oils affected by oil

Responsible/Legal Body				
Authority/Company	Ministry of Agriculture and Food			
Name	In. Rodica Matei –	director		
Address	Bd. Carol, Nr. 24, Sector 1, București			
Telephone	40.1.315.10.34			
Fax	40.1.312.44.10	40.1.312.44.10		
e-mail				
Project Target	Recovery of land affected by water polluted with oil and salt water.			
<b>Investment Costs</b>	750.000 USD			
<b>Status of Project</b>	ongoing	planned emerging concept		
Language of Proje	ect Documents	X Romanian ☐ English ☐  German  Summary in English: ☐ yes ☒ no		

# 1 Project title

Technologies of reclamation of agricultural soils affected by oil and salt water pollution.

#### 2 Investor Details

#### 2.1 Authority/Company

Name	Ministry of Agriculture and Food
Address	Bd. Carol, Nr. 24, Sector 1, București
Telephon	40.1.315.10.34
e	
Fax	40.1.312.44.10

#### 2.2 Contact persons

Ing. Rodica Matei - director

#### 2.3 Advisor/Consultant

The Institute of Pedology and Agriculture

## 2.4 Legal/Financial Status

Central Authority for Agriculture.

#### 2.5 Authority/Company profile

NA

#### 2.6 Planning/Implementing Extent/Capacity of the Investor

Co-ordination of agriculture activities, regulations and monitoring of compliance with legal acts.

## 2.7 Institutions/Enterprises beside the Investor

Ministry of Water, Forest and Environmental Protection.

#### 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

The respective non-structural project is to provide a guideline of technologies for reclamation of soil affected by oil and salt water pollution.

3.2 Primary Needs for the Project
The main target of the project is to improve ground water quality as well as the soil recovery for agricultural purposes.
3.3 Status of Project Preparation
The project is included in NEAP and is in the phase of setting up, now.
3.4 Technology proposed
NA
3.5 Ownership of project Site
NA
3.6 Specific Project Items
The project is to be based on a demonstration case study (pilot project).
4. Project Effects and Interactions
4.1 Public's Expression of Interest
Public's attitude is positive.
4.2 Environmental Impact Assessment
□ yes ⊠ no
■ planned □ in progress □ finished/completed □ accepted □ rejected
4.3 Sensitivity of Locality/Receptor
The receptor might be considered ground water in zones where soils are affected by oil or salt water pollution. Ground water is generally used for drinking purposes.
4.4 Primary Effects of Project
The owners of polluted lands will be able to apply a verified technology to re-establish the original function of the soil.

5. Economic Project Ju	5. Economic Project Justification			
5.1 Economic Project Ber	efits			
NA				
<b>Employment/income effects.</b>				
during construction period	NA			
during operation period	NA			
Other economic benefits	NA			
5.2 Economic Internal Ra	te of Return (EIRR)			
Has an EIRR been calculated	yes x no			
total investment costs of projec	t 750.000 USD			
planned annual depreciation	NA			
planned annual operation cost	s NA			
planned annual revenues	NA			
6. Financial Viability	- 1			
<b>6.1 Estimated Investment</b>	Cost			
Investment cost	750.000 USD			
	Allocation of capital cost			
Land	NA			
Construction and machinery	NA			
Planning and supervision	NA			
Total cost	NA			
On an annual basis				
Year of cost estimate				
Nature of cost estimate (prelin				
Preliminary calculation				
6.2 Estimated Operational Cost				
Expected annual (operational) recurrent cost (in real terms)				
NA				
Repair and replacement cost	NA			
Total operational cost	NA			
Year of cost estimate				
Nature of cost estimate (preliminary, adequate, sources of information)				
NA				

<b>6.3 Estimate of Revenues</b>			
<b>Expected annual revenues (in rea</b>	al terms)		
NA			
Year of estimate			
Nature of estimate (preliminary,	adequate, etc.)		
NA			
6.4 Financial Internal Rate of	of return (FIRR)		
Has a FIRR been calculated?	☐ yes	X no	
6.5 Anticipated/Proposed Fu	ınding Scheme		
Source of funding	Secured	Requested	Non-
	- C	FEIGDI	secured
	Cu	rrency [USD]	
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional		750.000	
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		750.000	

# Project No. AI5 - 5

**Ecological Reconstruction of Agricultural Soils – Baia Mare** 

Date of first setting up:	1995	Date of latest update:	01.1998
<b>Project Title:</b>	Ecological reconstruc	ction of agricultural soils	s – Baia Mare.

Responsible/Leg	gal Body	
Authority/Company	Ministry of Agricul	ture and Food
Name	Ing. Rodica Matei -	director
Address	Bd. Carol, Nr. 24, S	ector 1, București
Telephone	40.1.315.10.34	
Fax	40.1.312.44.10	
e-mail		
Project Target	Alleviation of natio	nal and transboundary impact of non- stry on water
<b>Investment Costs</b>	1.000	000 USD
<b>Status of Project</b>	ongoing	glanned emerging concept
Language of Proj	ect Documents	■ Romanian    □ English    □  German  Summary in English: □ ves    ▼ no

# 1 Project title

Ecological reconstruction of agricultural soils – Baia Mare.

#### 2 Investor Details

#### 2.1 Authority/Company

Name	Council of county Baia Mare
Address	Str. Gheorghe Şincai, nr. 46
Telephon	
e	062/212.110
Fax	

#### 2.2 Contact persons

Filipciuc Gh. Tel. 062/215.046

#### 2.3 Advisor/Consultant

ISPIF - București ICPA - București

#### 2.4 Legal/Financial Status

Local authority.

# 2.5 Authority/Company profile

NA

#### 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, supervision of the works, operation and maintenance co-ordination of activities on the county level.

#### 2.7 Institutions/Enterprises beside the Investor

Ministry of Water, Forest and Environmental Protection.

3. PROJECT DESCRIPTION
3.1 Project Outline
This structural project is in the setting up phase and consists of the affected land recovery. Besides the pollution of Săsar river will be stopped. The site of the project belongs to physical persons.
3.2 Primary Needs for the Project
The targets of the project to stop the ground water and surface water (river Săsar) pollution by heavy metals with health benefits (about 180 000 inhabitants are affected in the zone), aquatic environment and other functions in the transboundary context.
3.3 Status of Project Preparation
The project is in the phase of setting up.
3.4 Technology proposed
The technology is to be proposed. Some international assistance is expected to establish the technology to be applied.
3.5 Ownership of project Site
The project site belongs to physical and legal persons. The total affected area is about 20.000 hectares.
3.6 Specific Project Items
The project will provide the technology of treatment of affected soils to recover their original functions.
4. Project Effects and Interactions
4.1 Public's Expression of Interest
There is a positive public's attitude about 180 000 inhabitants are affected by pollution in the zone.
<b>4.2 Environmental Impact Assessment</b> ☐ yes ⋈ no

4.3 Sensitivity of Localit	y/R	eceptor	
River Săsar – the receptor of the diffuse pollution by heavy metals (Lead copper) belongs to Someş river basin and pollution is to be regarded in the transboundary context (Hungary).			
4.4 Primary Effects of P	roje	ect	
		overed for agriculture and the transboundary river its quality by heavy metals pollution.	
5. Economic Project	Jus	tification	
5.1 Economic Project Be			
It is not calculated.			
<b>Employment/income effects</b>			
during construction period	NA		
during operation period	NA		
Other economic benefits	NA	A	
5.2 Economic Internal R	ate	of Return (EIRR)	
Has an EIRR been calculate	d	□ yes ⊠ no	
total investment costs of proje	ect	1.000.000 USD	
planned annual depreciation		NA	
planned annual operation co.	sts	NA	
planned annual revenues		NA	
6. Financial Viability			
<b>6.1 Estimated Investmen</b>		ost	
Investment cost		1.000.000 USD	
	All	location of capital cost	
Land		NA	
Construction and machinery	y	NA	
Planning and supervision		NA	
Total cost		1.000.000 USD	
On an annual basis			
Year of cost estimate		1998	
Nature of cost estimate (pre		nary, adequate, etc.)	
Preliminary calculati	on		

<b>6.2 Estimated Operational C</b>	Cost		
<b>Expected annual (operational) re</b>	current cost (in re	al terms)	
NA			
Repair and replacement cost	NA		
Total operational cost	NA		
Year of cost estimate	NA		
Nature of cost estimate (prelimin	ary, adequate, sou	rces of information)	
NA			
<b>6.3 Estimate of Revenues</b>			
<b>Expected annual revenues (in rea</b>	al terms)		
NA			
Year of estimate			
Nature of estimate (preliminary,	adequate, etc.)		
NA	• /		
6.4 Financial Internal Rate of	of return (FIRR	)	
Has a FIRR been calculated?	☐ yes	X no	
6.5 Anticipated/Proposed Fu	inding Scheme		
Source of funding	Secured	Requested	Non- secured
		Currency [USD]	
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget		1 000 000	
6. Public grant – central budget 7. Public grant – regional		1.000.000	
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		1.000.000	

# Project No. AI5 - 13 Afforestation in the Copşa Mică Area

Date of first setting up:	1995	Date of latest update :	02.1998
Project Title :	Afforestation in the Copşa Mică area.		
Responsible/Leg	gal Body		
Authority/Company	Ministry of Wa	nter, Forest and Environmental Prot	ection
Name	Ing. Ion Săcele	anu – secretary of state	
Address	Bd. Libertății, l	Nr. 12, București	
Telephone	410.02.55		
Fax	410.02.82		
e-mail			
Project Target	Ecological reco	onstruction of a degraded area by th	e industrial
Investment Costs	3	142 000 USD	

planned

German

**X** Romanian

☐ emerging concept

Summary in English: ☐ yes 🛛 🗷 no

☐ English

Status of Project Status ongoing

**Language of Project Documents** 

# 1 Project title

Afforestation in the Copşa Mică area.

#### 2 Investor Details

#### 2.1 Authority/Company

Name	ROMSILAVA – București
Address	Bd. Libertății, Nr. 12, București
Telephon	40.1.410.02.55
e	
Fax	40.1.410.02.82

#### 2.2 Contact persons

Ing. Geambaşu Ion - director

#### 2.3 Advisor/Consultant

ICAS București

#### 2.4 Legal/Financial Status

State company.

#### 2.5 Authority/Company profile

ROMSILVA is a state company having the responsibility of Romanian forest administration.

# 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, supervision, operation and maintenance of forest area throughout the country.

## 2.7 Institutions/Enterprises beside the Investor

Ministry of Agriculture and Food Council of Sibiu county

3. PROJECT DESCRIPTION
3.1 Project Outline
The project is a structural one. The outline of the project is to be the recovery of 4200 hectares of unproductive land, which are to be forested. The site is around SC SOMETRA SA and CARBOSIN SA.
3.2 Primary Needs for the Project
The main target of the project is to alleviate the heavy metals (Cu, Cd) pollution of the river Târnava Mare in the Mureş River Basin. The project will influence the human health benefits aquatic environment, aesthetics of the zone and is to improve the water quality of the river Mureş that could be regarded in the transboundary context.
3.3 Status of Project Preparation
The project is ongoing.
3.4 Technology proposed
The area will be cultivated with the specific trees (fir, spruce, and pine).
3.5 Ownership of project Site
The site is in the ownership of Sibiu county council.
3.6 Specific Project Items
4. Project Effects and Interactions
4.1 Public's Expression of Interest
There is a positive public's attitude.
4.2 Environmental Impact Assessment
yes 🗵 no not necessary
☐ planned in progress ☐ finished/completed ☐ accepted ☐ rejected
4.3 Sensitivity of Locality/Receptor
River Târnava Mare discharges its water in Mureş, which is a transboundary river.

4.4 Primary Effects of Project			
•	nectares) is to be transformed with new functions		
(recreational area) and the rive	r pollution is to be alleviated.		
5. Economic Project J	ustification		
<b>5.1 Economic Project Be</b>	nefits		
Not calculated.			
<b>Employment/income effects</b>			
during construction period	NA		
during operation period	NA		
Other economic benefits			
5.2 Economic Internal R	ate of Return (EIRR)		
	,  uges		
Has an EIRR been calculated	d × no		
total investment costs of proje			
01 0	NA		
planned annual depreciation			
planned annual operation cos			
planned annual revenues	NA		
<b>6. Financial Viability</b>			
<b>6.1 Estimated Investmen</b>	t Cost		
Investment cost 3 142 000 USD			
Allocation of capital cost			
Land	NA		
Construction and machinery			
Planning and supervision	rvision NA		
Total cost			
On an annual basis			
Year of cost estimate	1998		
Nature of cost estimate (preliminary, adequate, etc.)			
Preliminary calculation			
6.2 Estimated Operational Cost			
Expected annual (operational) recurrent cost (in real terms)			
NA			
Repair and replacement cost	NA		
Total operational cost	NA		
Year of cost estimate	NA		
Nature of cost estimate (preliminary, adequate, sources of information)			
N A			
NA			

6.3 Estimate of Revenues			
Expected annual revenues (in real terms)			
NA			
Year of estimate			
Nature of estimate (preliminary,	adequate, etc.)		
NA			
6.4 Financial Internal Rate of	of return (FIRR)		
Has a FIRR been calculated?	☐ yes	$\mathbf{X}$ no	
6.5 Anticipated/Proposed Fu	ınding Scheme		
Source of funding	Secured	Requested	Non-
		rugbi	secured
	Cu	rrency [USD]	
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget		3 142000	
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
		_	

# Project No. AII1 - 7

**Agricultural Turning to Good Account of Zootechnical Waste at ROMSUIN TEST PERIŞ** 

Date of first setting up:	1995	Date of latest update :	02.1998
Project Title :	Agricultural turning to good account of zootechnical waste at ROMSUIN TEST PERIŞ.		

Responsible/Legal Body				
Authority/Company	Ministry of Agriculture and Food			
Name	Ing. Rodica Matei – director			
Address	Bd. Carol, Nr. 24, Sector 1, București			
Telephone	40.1.315.10.34			
Fax	40.1.312.44.10			
e-mail				
Project Target	Reduction of water pollution through improved land management.			
<b>Investment Costs</b>	1 297 000 USD			
<b>Status of Project</b>	ongoing	planned emerging concept		
<b>Language of Project Documents</b>		X Romanian ☐ English   German   Summary in English: ☐ yes   X no		

## 1 Project title

Agricultural turning to good account of zootechnical waste at ROMSUIN TEST PERIŞ.

#### 2 Investor Details

## 2.1 Authority/Company

Name	SUINPROD PERIŞ
Address	PERIŞ, judeţul Ilfov
Telephon	614.15.63
e	615.37.60
Fax	311.23.83

#### 2.2 Contact persons

Aureliu Constantin - director

#### 2.3 Advisor/Consultant

The Institute of Agriculture "Nicolae Bălcescu"; ICIM București

#### 2.4 Legal/Financial Status

State company.

#### 2.5 Authority/Company profile

NA

#### 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, supervision of erection, operation and maintenance of new structures.

#### 2.7 Institutions/Enterprises beside the Investor

Ministry of Water, Forest and Environmental Protection.

#### 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

The project is a structural project. It contains the facilities and devices to dispose off the solid and liquid wastes on the agricultural land. The site of the project will be included in the existing site of the titleholder.

3.2 Primary Needs for the Project
The target of the project is to reduce ground and surface water pollution by nitrates and phosphorous coming from chemical fertilizers.
3.3 Status of Project Preparation
The project is in the phase of setting up.
3.4 Technology proposed
NA
3.5 Ownership of project Site
The site is in the ownership of the titleholder.
3.6 Specific Project Items
The project is to be considered as a demonstration project.
4. Project Effects and Interactions
4.1 Public's Expression of Interest
There is a positive attitude of public,
4.2 Environmental Impact Assessment
□ yes ☒ no
■ planned    □ in progress    □ finished/completed    □ accepted    □ rejected
4.3 Sensitivity of Locality/Receptor
The receptor – river Ialomița is considered a degraded river downstream (section Țăndărei).
4.4 Primary Effects of Project
The primary effects will consist in a decrease of diffuse pollution caused by the chemical fertilizers.

5. Economic Project Justification				
5.1 Economic Project Benefits				
It is not calculated.				
<b>Employment/income effects</b>				
during construction period	NA			
during operation period	NA			
Other economic benefits	NA	A		
<b>5.2 Economic Internal R</b>	late	of Return (I	EIRR)	
Has an EIRR been calculate	d	yes x no		
total investment costs of proje	ect		1 297 000 USD	
planned annual depreciation			NA	
planned annual operation co.	sts		NA	
planned annual revenues			NA	
6. Financial Viability	l l			
6.1 Estimated Investmen		ost		
Investment cost 1 297 000 USD				
Allocation of capital cost				
Land				
Construction and machinery	y		1 200 000 USD	
Planning and supervision			97 000 USD	
Total cost			1 297 000 USD	
On an annual basis			NA	
Year of cost estimate			1998	
Nature of cost estimate (prel		ary, adequate	, etc.)	
Preliminary calculation				
6.2 Estimated Operational Cost				
Expected annual (operational) recurrent cost (in real terms)				
NA				
Repair and replacement cos	t	NA		
Total operational cost		NA		
Year of cost estimate		NA		
Nature of cost estimate (preliminary, adequate, sources of information)				
NA				

<b>6.3 Estimate of Revenues</b>			
<b>Expected annual revenues (in rea</b>	al terms)		
NA			
Year of estimate			
Nature of estimate (preliminary,	adequate, etc.)		
NA			
6.4 Financial Internal Rate of	of return (FIRR)		
Has a FIRR been calculated?	☐ yes	X no	
6.5 Anticipated/Proposed Fu	anding Scheme		
Source of funding	Secured	Requested	Non-
	C		secured
4.77	Cu	rrency [USD]	
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget		1 297 000	
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		1 297 000	

# Project No. BII1 - 1

Capacity Increase of WWTP of COMTOM ZotecZh

Date of first setting up:	1995	Date of latest update:	11.1997
	T		
Project Title:	Capacity increas	e of WWTP of COMTOM T	OMEȘTI
Responsible/Leg	gal Body		
Authority/Company	S.C. CONTOM	S.A. TOMEŞTI	

Reduction of organic load including nutrients

10.000.000 USD

 $\square$ planned

German

X Romanian

emerging concept

Summary in English:  $\square$  yes  $\boxtimes$  no

☐ English

Loc. Tomești jud. Iași

032/14.75.41

032/14.61.90

**X**ongoing

**Language of Project Documents** 

Address

Telephone

Fax

e-mail

**Project Target** 

**Investment Costs** 

**Status of Project** 

# 1 Project title

Capacity increase of WWTP of COMTOM TOMEŞTI

## 2 Investor Details

#### 2.1 Authority/Company

Name	S.C. COMTOM S.A. TOMEŞTI
Address	Localitatea Tomești, județul Iași
Telephon e	032.14.75.41, 032.14.78.11, 032.14.72.26
Fax	032.14.61.90,.032.21.00.33

## 2.2 Contact persons

Ing. Toma Cocârță - director

#### 2.3 Advisor/Consultant

ICIM – București, spl. Independenței nr. 294, tel. 40.1.637.30.20, Fax: 40.1.312.13.93

## 2.4 Legal/Financial Status

Private company

## 2.5 Authority/Company profile

The company is a pig form

- Number of employees(1997): 700
- Annual revenue (1997): 86.119.590.000 lei (9.898.000 USD)
- Annual expenses (1997): 126.644.649.000 lei (14.556.000 USD)
- Losses: 40.525.059.000 lei (4.658.000 USD)

## 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, supervision of the plant erection, operation and maintenance of the new structures

#### 2.7 Institutions/Enterprises beside the Investor

• ICIM București, Splaiul Independenței 294, sector 6.

Tel: 40.1.6 37 30 20. Fax: 40.1.3 12 13 93.

## 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

Structural project, the project comprises a wastewater treatment plant for 800.000 population equivalent. The effluent is to achieve the requirements of quality according to TNWP 002. The site of the plant is to be included in the existing site of the farm.

#### 3.2 Primary Needs for the Project

The target of the project is to diminish the organic load (including nutrients) on the river Prut that is a boundary river (R: Moldavia). The project will have effects on human health, aquatic environment, aesthetics, economic development of riparian downstream the discharging point

#### 3.3 Status of Project Preparation

The status of project preparation is feasibility study

#### 3.4 Technology proposed

The technology proposed consists of biological treatment of wastewater followed by tertiary treatment for phosphorous removal by precipitation

# 3.5 Ownership of project Site

The project site is in the ownership of the title holder

3.6 Specific Project Item	ns
The plant will comprise the te	rtiary treatment for phosphorous removal
4. Project Effects and	I Interactions
4.1 Public's Expression	of Interest
There is a positive publics atti	tude for the project implementation
4.2 Environmental Impa	act Assessment
□ yes	X no
Not necessa	
4.3 Sensitivity of Localit	
4.5 Sensitivity of Localit	y/Receptor
1 *	e treated wastewater of COMTOM – is a boundary river, ined in the first class of water quality river.
4.4 Primary Effects of P	roject
	implementation is to be a reduction of the following OD 5 per year, 640 tones of N per year and 648 tones of P
5. Economic Project .	Justification
5.1 Economic Project Be	enefits
Because the project is ongoing	g now, the economic benefits have not been calculated
<b>Employment/income effects</b>	
during construction period	40-50 employees
during operation period	20 – 30 employees

<b>5.2 Economic Internal Rate</b>	of Return (EIRR)		
	☐ yes		
Has an EIRR been calculated	⊠ no		
total investment costs of project	10.000.000 USD		
planned annual depreciation	NA		
planned annual operation costs	400.000 USD		
planned annual revenues	1.600.000 USD		
6. Financial Viability			
6.1 Estimated Investment C	ost		
Investment cost	10.000.000 USD		
All	location of capital cost		
Land	0		
Construction and machinery	9.850.000.USD		
Planning and supervision	150.000 USD		
Total cost	10.000.000 USD		
On an annual basis			
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, etc.)		
Preliminary calculation			
6.2 Estimated Operational Cost			
Expected annual (operational) recurrent cost (in real terms)			
NA			
Repair and replacement cost	10.000 USD		
Total operational cost	400.000 USD		
Year of cost estimate 1998			
Nature of cost estimate (prelimin	nary, adequate, sources of information)		
*	•		
The cost estimate is preliminary. The source of information: NEAP			
6.3 Estimate of Revenues			
Expected annual revenues (in real terms)			
•			
1.600.000 USD			
Year of estimate 1998			
Nature of estimate (preliminary,	adequate, etc.)		

The estimation of	annual revenue is p	reliminary	
6.4 Financial Internal Rate o	f return (FIRR)		
Has a FIRR been calculated?	☐ yes	× no	
6.5 Anticipated/Proposed Fu	nding Schomo		
Source of funding	Secured	Requested	Non-
Source of funding	Secureu	Kequesteu	secured
	C	Currency [USD]	5000200
1. Equity of project owner		10.000.000	
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		10.000.000	

# Project No. AI5 - 10

**Recycling and Management of Available Waste** from Breeding Farms

Date of first setting up:	1995	Date of latest update:	04.1998
Project Title:	Recycling and manag farms.	gement of available wast	e from breeding

Responsible/Leg	gal Body	
Authority/Company	Ministry of Agricu	Iture and Food
Name	Ing. Rodica Matei	- director
Address	Bd. Carol, Nr. 24,	Sector 1, București
Telephone	40.1.315.10.34	
Fax	40.1.312.44.10	
e-mail		
<b>Project Target</b>	Prevention of wate	r pollution from agricultural diffuse sources.
<b>Investment Costs</b>	2 460	0000 USD
<b>Status of Project</b>	ongoing	planned emerging concept
Language of Proje	ect Documents	⊠ Romanian    □ English    □  German  Summary in English: □ yes    ☒ no

# 1 Project title

Recycling and management of available waste from breeding farms.

## 2 Investor Details

#### 2.1 Authority/Company

Name	Universitatea de Agronomie și Medicină Veterinară – Ferma didactică Belciugatele
Address	Bd. Mărăști, Nr. 35
Telephon	222.37.00
e	314.64.69
Fax	

## 2.2 Contact persons

Prof. dr. ing. Hâncu Simion - 40.1.637.30.20

Prof. Diaconu Ion - 222.37.00

#### 2.3 Advisor/Consultant

ICIM - București

ICPA - București

## 2.4 Legal/Financial Status

State company.

# 2.5 Authority/Company profile

The company is specialized in breeding animals, comprising 3000 pigs, 100 0000 per year poultry, 400 cows and 200 sheep.

Number of employees: 40 employees.

Annual revenue: 4 000 000 000 lei (450 000 USD). Annual expenses: 3 700 000 000 lei (425 000 USD).

Profit: 200 000 000 lei (22 000 USD).

## 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, supervision of erection, operation and maintenance of new structures.

2.7 Institutions/Enterprises beside the Investor
Academy of Agriculture a Sylvic Sciences.
3. PROJECT DESCRIPTION
3.1 Project Outline
This structural project will provide the necessary means for liquid and solid wastes resulted from the breeding farm to be used on agricultural land as natural fertilizers. The project is to include the self-monitoring network.
3.2 Primary Needs for the Project
The target of the project is to demonstrate the reduction of diffuse sources of water pollution by recycling in nature the wastes resulted from breeding farms. The project will contribute to economic development of the respective regions.
3.3 Status of Project Preparation
The project is in the phase of setting up.
3.4 Technology proposed
The technology proposed consists in plain sedimentation with sludge digestion and then final disposal of the stabilized sludge on agricultural land. The liquid will be used after treatment for irrigation.
3.5 Ownership of project Site
The site is in the ownership of the titleholder.
3.6 Specific Project Items
The project will comprise the pumping stations, ponds and the self-monitoring network and is supposed to be a demonstration project.
4. Project Effects and Interactions
4.1 Public's Expression of Interest
Public's attitude seems to be positive.
<b>4.2 Environmental Impact Assessment</b> ☐ yes ☒ no
∑ planned

# 4.3 Sensitivity of Locality/Receptor

The receptor will be finally the surface water, but ground water receives primarily the impact of pollution resulted from fertilizers. Generally, in Romania ground water is used for drinking purposes, especially in the rural area.

## **4.4 Primary Effects of Project**

The effects on the local level will be reflected on the groundwater used by the individuals especially in the rural area. On regional and transboundary levels the effects are the decreasing of N and P in the surface water.

## 5. Economic Project Justification

#### **5.1 Economic Project Benefits**

There will be a "win – win" process. On one hand there will be cheaper to fertilize the land by using natural fertilizers and on the other hand the waste is disposed off in a useful way.

Employment/income effects The benefits are not yet quantified.			
during construction period	<b>during construction period</b> 30 – 40 employees		
during operation period	10 – 15 employees		
Other economic benefits	NA		

## 5.2 Economic Internal Rate of Return (EIRR)

Has an EIRR been calculated	□ yes ⊠ no
total investment costs of project	2 460 000 USD
planned annual depreciation	NA
planned annual operation costs	140 000 USD
planned annual revenues	410 000 USD

## **6. Financial Viability**

## **6.1 Estimated Investment Cost**

Investment cost	2 460 000 USD			
Allocation of capital cost				
Land	Land 0 USD			
Construction and machinery	2 420 000 USD			
Planning and supervision	40 000 USD			
Total cost	tal cost 2 460 000 USD			
On an annual basis				
Year of cost estimate 1998				
Nature of cost estimate (preliminary, adequate, etc.)				
Preliminary calculation				

<b>6.2 Estimated Operational C</b>	Cost		
Expected annual (operational) re	current cost (in real	terms)	
140 000 USD			
Repair and replacement cost	15 000 USD		
Total operational cost	140 000 USD		
Year of cost estimate	1998		
Nature of cost estimate (prelimin	ary, adequate, sourc	es of information)	
The cost estimation is preliminary	and the total cost is pu	t into evidence in NE	EAP.
<b>6.3 Estimate of Revenues</b>			
<b>Expected annual revenues (in rea</b>	al terms)		
	,		
410 000 USD			
Year of estimate			
Nature of estimate (preliminary,	adequate, etc.)		
The revenues estimation is prelimin	nary.		
6.4 Financial Internal Rate of	of return (FIRR)		
Has a FIRR been calculated?	☐ yes	X no	
	<b>—</b> yes		
6.5 Anticipated/Proposed Fu	ınding Scheme		
Source of funding	Secured	Requested	Non-
Source of funding	Secured	Requested	secure
			d
	Cu	rrency [USD]	
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		2 460 000	

# Project No. AI5 - 1

**Ecological Reconstruction of Poor Agriculture**Land

Date of first setting up:	1995	Date of latest update:	02.1998
Project Title :	Ecological recons	struction of poor agriculture	land
Responsible/Leg	gal Body		
Authority/Company	Ministry of Agric	culture and Food.	
Name	Ing. Rodica Mate	i	
Address	Bd. Carol Nr. 24	sector 1, București	
Telephone	40.1.315.10.34 40.1.314.40.20		
Fax	40.1.312.44.10		
e-mail			
<b>Project Target</b>	Rehabilitation po	or agriculture land	
<b>Investment Costs</b>	2.74	40.000 USD	
<b>Status of Project</b>	Ongoing	planned emerg	ging concept
Language of Proje	ect Documents	Romanian German	English

Summary in English:  $\square$  yes  $\boxtimes$  no

# 1 Project title

Ecological reconstruction of poor agriculture land

## 2 Investor Details

## 2.1 Authority/Company

Name	Ministry of Agriculture and Food.
Address	Bd. Carol Nr. 24 sector 1, București
Telephon e	40.1.315.10.34 40.1.314.40.20
Fax	40.1.312.44.10

#### 2.2 Contact persons

Ing. Rodica Matei

#### 2.3 Advisor/Consultant

Institututl de Cercetări și Ingineria Mediului ICIM – București ISPIF - București Institutul de Cercetăpri Pedologice și Agricole – ICPA - București

## 2.4 Legal/Financial Status

Co-ordination and regulation within the framework of agriculture activities

## 2.5 Authority/Company profile

Co-ordination and monitoring of agriculture activities

## 2.6 Planning/Implementing Extent/Capacity of the Investor

The ministry has representatives in each county. These institutions are responsible for the implementation of the respective project

#### 2.7 Institutions/Enterprises beside the Investor

- Ministry of Water, Forest and environmental Protection
- Ministry of Public Works and Territorial Planning

## 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

The project is non-structural. The project outline will consist of guidelines comprising design criteria for poor agricultural land rehabilitation. Modification in bio-diversity will be also put into evidence.

#### 3.2 Primary Needs for the Project

Land affected by erosion will be rehabilitated according to the designing indications and will have influence at the local and region level, white sliding land will extent its effects for all level.

#### 3.3 Status of Project Preparation

The project is in the setting up process

#### 3.4 Technology proposed

The project being an the setting up phase, the technology is to be proposed

## 3.5 Ownership of project Site

Not applicable.

3.6 Specific Project Item	ns
I	ites will by included in the project. An external assistance sh technologies for bio-diversity rehabilitation. The project case study
4. Project Effects and	I Interactions
4.1 Public's Expression	of Interest
There is a positive attitude of	public for this project
4.2 Environmental Impa	act Assessment
	X no
Not necessar	
<b>⊠</b> planned □in progress	s $\square$ finished/completed $\square$ accepted $\square$ rejected
4.3 Sensitivity of Localit	
economic development of the	fected by the fact that poor agricultural lands diminish the respective zones. The land affected by erosion or sliding nality of water quality and may put in danger human life
4.4 Primary Effects of P	roject
	to be the availability of general technical solutions by or other means according to the specific conditions, in an
5. Economic Project	Justification
5.1 Economic Project Be	
	s have not been quantified because the project is in the
<b>Employment/income effects</b>	
during construction period	Nap
during operation period	NAp

5.2 Economic Internal Rate of Return (EIRR)				
	□ yes			
Has an EIRR been calculated	∑ no			
total investment costs of project	2,640.000 USD			
planned annual depreciation	NAp			
planned annual operation costs	NAp			
planned annual revenues	NAp			
6. Financial Viability				
6.1 Estimated Investment C	ost			
Investment cost	2.740.000.USD			
All	ocation of capital cost			
Land	100.000 USD			
Construction and machinery	2.600.000.USD			
Planning and supervision	40.000 USD			
Total cost	2.740.000 USD			
On an annual basis				
Year of cost estimate	1998			
Nature of cost estimate (prelimin	nary, adequate, etc.)			
Preliminary calculation				
6.2 Estimated Operational (	Cost			
Expected annual (operational) re				
(o <b>F</b>	(			
NAp				
-				
Repair and replacement cost	NAp			
Total operational cost	NAp			
Year of cost estimate	11119			
	nary, adequate, sources of information)			
(P20111111111111111111111111111111111111	, was quared, 2002 02 22202 2220			
	NAp			
<b>6.3 Estimate of Revenues</b>				
<b>Expected annual revenues (in re</b>	al terms)			
	NAp			
Year of estimate				
Nature of estimate (preliminary,	adequate, etc.)			
	NAp			

6.4 Financial Internal Rate of	f return (FIRR)		
Has a FIRR been calculated?	☐ yes	X no	
6.5 Anticipated/Proposed Fun	nding Scheme		
Source of funding	Secured	Requested	Non-
			secure
			d
	(	Currency [USD]	
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget		2.740.000	
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		2.740.000	

# Project No. AI3 - 16

Monitoring System Development of Chemical soil Pollution in Agricultural Area

Date of first setting up:	1995	Date of latest update :	03.1998	
Project Title:	Monitoring system development of chemical soil pollution agricultural area			

Responsible/Le	gal Body		
Authority/Company	Ministry of Agricul	ture and Food.	
Name	Ing. Rodica Matei		
Address	Bd. Carol Nr. 24 se	ctor. 1, București	
Telephone	40.1.315.10.34 40.1.314.40.20		
Fax	40.1.312.44.10		
e-mail			
<b>Project Target</b>	Prevention of water and chemical fertili	pollution by diffuse source with pesticides zers	
<b>Investment Costs</b>	676.0	00 USD	
<b>Status of Project</b>	Ongoing	planned emerging concept	
<b>Language of Project Documents</b>		⊠ Romanian  □ English  □     German     Summary in English: □ yes  ☒ no	

# 1 Project title

Monitoring system development of chemical soil pollution in agricultural area

## 2 Investor Details

## 2.1 Authority/Company

Name	Ministry of Agriculture and Food.
Address	Bd. Carol Nr. 24 sector. 1, București
Telephone	40.1.315.10.34 40.1.314.40.20
Fax	40.1.312.44.10

## 2.2 Contact persons

Ing. Rodica Matei

#### 2.3 Advisor/Consultant

Institututl de Cercetări și Ingineria Mediului ICIM – București

Institutul de Cercetăpri Pedologice și Agricole – ICPA - București

## 2.4 Legal/Financial Status

**Control Authority** 

## 2.5 Authority/Company profile

Co-ordination and monitoring of agriculture activities

# 2.6 Planning/Implementing Extent/Capacity of the Investor

The ministry subordinates representatives in each county which could control the implementation of project

#### 2.7 Institutions/Enterprises beside the Investor

- Ministry of Water, Forest and environmental Protection
- Academy of Agricultural and Silvic Sciences

## 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

It is a non-structural project. The project outline is a guideline comprising the design criteria for the monitoring network in the agricultural area. The guidelines are to be justified by a demonstration case.

# 3.2 Primary Needs for the Project

The target of the project is to prevent pollution by diffuse source. The pollution could be prevented by realizing where chemical fertilizers had been applied in excess. The overtaking of nitrates allowable concentration will make possible to warn the water users about the danger of metheminoglobimia, etc. (health benefits). Besides aquatic life, aesthetics of surface water affected by eutrophication process could be avoided.

## 3.3 Status of Project Preparation

The project is in the setting up phase

## 3.4 Technology proposed

Not applicable.

#### 3.5 Ownership of project Site

The project site is in the ownership of the State.

3.6 Specific Project Item	ns			
A "Demo" Project of a certain zone which is to be established will permit the extension of the project throughout the country				
4. Project Effects and	l Interactions			
4.1 Public's Expression				
Public attitude is positive				
<b>4.2 Environmental Impa</b> yes				
Not necessar    X   planned	· — — — —			
4.3 Sensitivity of Localit	y/Receptor			
The ultimate receptor is surfact mostly affected if the eutrophi				
4.4 Primary Effects of P	roject			
* *	a causing the deterioration of water quality will be s will have the necessary guidelines available for water			
5. Economic Project Justification				
5.1 Economic Project Benefits				
The project is in the setting up phase and the economic project benefits have not been calculated.				
Employment/income effects				
during construction period	Nap			
during operation period	NAp			

5.2 Economic Internal Rate of Return (EIRR)			
H DIDD! I I I I	☐ yes		
Has an EIRR been calculated	⊠ no		
total investment costs of project	676.000 USD		
planned annual depreciation	NAp		
planned annual operation costs	NAp		
planned annual revenues	NAp		
6. Financial Viability			
6.1 Estimated Investment C	ost		
Investment cost	NAp.		
All	location of capital cost		
Land	0		
Construction and machinery	576.000.USD		
Planning and supervision	100.000 USD		
Total cost	676.000 USD		
On an annual basis			
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, etc.)		
Preliminary calculation			
<b>6.2 Estimated Operational </b>	Cost		
Expected annual (operational) re			
•	,		
NAp			
Repair and replacement cost	NAp		
Total operational cost	NAp		
Year of cost estimate	NAp		
Nature of cost estimate (preliminary, adequate, sources of information)			
	NAp		
NAP			
<b>6.3 Estimate of Revenues</b>			
Expected annual revenues (in real terms)			
NIA m			
	NAp		
Year of estimate	1998		
Nature of estimate (preliminary, adequate, etc.)			
	NA		
	NAp		

6.4 Financial Internal Rate o	f return (FIRR)	)	
Has a FIRR been calculated?	☐ yes	X no	
	<b>—</b> ) es	<u> </u>	
6.5 Anticipated/Proposed Funding Scheme			
Source of funding	Secured	Requested	Non-
			secured
		Currency [USD]	
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget		676.000	
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		676.000	

# Project No. AI5 - 14

**Bio-diversity Recovery of Agricultural Ecosystems Affected by Drought** 

Date of first setting up:	1995	Date of latest update:	01.1998
Project Title :	Bio-diversity recove drought.	ry of agricultural ecosyst	ems affected by

Responsible/Leg	gal Body	
Authority/Company	Ministry of Agricul	ture and Food
Name	Ing. Rodica Matei	
Address	B-dul Carol, nr. 24,	sector 1, București
Telephone	40.1.315.10.34 /41.00.255	
Fax	40.1.312.44.10	
e-mail		
Project Target	Rehabilitation of agar-fauna in the agricultural land affected by drought	
<b>Investment Costs</b>	2.928. 000 USD	
<b>Status of Project</b>	ongoing	🗵 planned 🔲 emerging concept
Language of Proje	ect Documents	⊠ Romanian    □ English    □  German  Summary in English:  □ yes    ☒ no

Bio-diversity recovery of agricultural ecosystems affected by drought.

#### 2 Investor Details

#### 2.1 Authority/Company

Name	Environmental Protection Agencies (EPA)
Address	EPAs are located in each county (42) being subordinated to MWFEP
Telephon e	All telephones numbers are available at the MWFEP
Fax	All Fax numbers are available at the MWFEP

#### 2.2 Contact persons

Biolog Borş Ileana

#### 2.3 Advisor/Consultant

The Research Institute for Biology ICEBIOL

#### 2.4 Legal/Financial Status

State institutions

#### 2.5 Authority/Company profile

Each EPA has the responsibility of the supervision of all components of the respective county

# 2.6 Planning/Implementing Extent/Capacity of the Investor

Each EPA has the task components of environmental and inspection of how the legal acts into force are complied with.

2.7 Institutions/Enterprises beside the Investor
Ministry of Agriculture and Food Councils of 41 counties plus Bucharest
3. PROJECT DESCRIPTION
3.1 Project Outline
The outline of these non-structural project guidelines consists of a number of specific pilot projects for each zone of the country. There will be a bio-diversity inventory in each zone of the country
3.2 Primary Needs for the Project
The target of the project is rehabilitation of agar-fauna in the agricultural zones affected by drought, improving the bio-diversity index
3.3 Status of Project Preparation
The project sites as in arch county
3.4 Technology proposed
Not applicable (NAp).
3.5 Ownership of project Site
The project sites in each county

3.6 Specific Project Item	<b>IS</b>	
The project will comprise a de	emonstration case in some region of the country. External	
assistance is needed		
4. Project Effects and	l Interactions	
4.1 Public's Expression		
<b>1</b>		
Publics` attitude is positive.		
•		
4.2 Environmental Impa	act Assessment	
□yes	X no	
Not necessary		
	mass	
	ress	
rejected	/D /	
4.3 Sensitivity of Localit	y/Receptor	
The sensitivity of locality concerns the climatic conditions where biocenoses have to be adapted		
4.4 Primary Effects of P	roject	
	2 of sect	
	are well-defined inventories of existing bio-diversity of nes for rehabilitation of the ecosystems	
5. Economic Project Justification		
5.1 Economic Project Be		
3.1 Economic 1 Toject Be	chents	
It is not quantified		
it is not quantified		
Employment/income effects		
during construction period	Not applicable (NAp)	
during operation period	NAp	
Other economic benefits	NAp	

5.2 Economic Internal Rate	of Return (EIRR)
Has an EIRR been calculated	☐ yes
	⊠ no
total investment costs of project	2.928.000 USD
planned annual depreciation	NAp
planned annual operation costs	NAp
planned annual revenues	NAp
6. Financial Viability	
<b>6.1 Estimated Investment C</b>	ost
Investment cost	2.928.000 USD
All	location of capital cost
Land	2.000.000 USD
Construction and machinery	98.000 USD
Planning and supervision	200 000 USD
Total cost	2.928.000 USD
On an annual basis	
Year of cost estimate	1998
Nature of cost estimate (prelimin	nary, adequate, etc.)
Preliminary calculation	
<b>6.2 Estimated Operational </b>	Cost
<b>Expected annual (operational) r</b>	ecurrent cost (in real terms)
NAp	
Repair and replacement cost	NAp
Total operational cost	NAp
Year of cost estimate	NAp
Nature of cost estimate (prelimin	nary, adequate, sources of information)
Source of information: NEAP	

<b>6.3 Estimate of Revenues</b>			
Expected annual revenues (in real terms)			
NAp			
Year of estimate			
Nature of estimate (preliminary,	adequate, etc.)		
NAp			
6.4 Financial Internal Rate o	f return (FIRR)		
Has a FIRR been calculated?	☐ yes	X no	
6.5 Anticipated/Proposed Fu	nding Scheme		
Source of funding	Secured	Requested	Non- secured
	Cı	ırrency [USD]	
1. Equity of project owner			
2. National Environmental Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget		2.928.000	
6. Public grant – central budget			
7. Public grant – regional			
budget			
8. International loan			
8. International loan 9. International grant			
8. International loan 9. International grant 10. Commercial bank loan			
8. International loan 9. International grant		2 928 000	

# Project No. AI5 - 15 Ecological Reconstruction at Zlatna

Date of first setting up:	1995	Date of latest update:	03.1998
Project Title:	Ecological recons	struction at Zlatna	
Responsible/Leg	gal Body		
Authority/Company	Ministry of Agric	culture and Food	
Name	Ing. Rodica Mate	i	
Address	Bd. Carol nr. 24 s	sector. 1, București	
Telephone	40.1.315.10.34		
Fax	40.1.312.44.10		
e-mail			
Project Target	Reduction of heavy metals pollution of the transboundary river Mureş.  Ecological reconstruction rehabilitating flora and fauna on a degraded land at Zlatna		
<b>Investment Costs</b>	2.4:	50.000 USD	
<b>Status of Project</b>	Ongoing	🗵 planned 🔲 emergir	ng concept
		■ Romanian    □ I	English $\square$

German

Summary in English:  $\square$  yes  $\boxtimes$  no

**Language of Project Documents** 

Ecological reconstruction at Zlatna

#### 2 Investor Details

#### 2.1 Authority/Company

Name	Council of Alba Iulia country
Address	Piața Ion I.C. Brătianu, nr. 1
Telephon e	058/81.33.80
Fax	058/81/33/25

# 2.2 Contact persons

Dr. Ilea Ilarie. Str. Vasile Goldiş nr. 8B Alba Iulia; tel: 058/83.08.47; 058/83.08.41

#### 2.3 Advisor/Consultant

ICPA, București ICAS, București, ICEBIOL, București

### 2.4 Legal/Financial Status

State institution

#### 2.5 Authority/Company profile

Administration, inspection, consulting with public works

### 2.6 Planning/Implementing Extent/Capacity of the Investor

The investor will implement the project by means of local authorities and local companies in Zlatna.

#### 2.7 Institutions/Enterprises beside the Investor

- Ministry of Water, Forest and Environmental Protection
- Academy of Agricultural and Silvic Sciences
- Ministry of Public Works and Territorial Planning

#### 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

The outline of this structural project is the rehabilitation of 1200 hectares of land, which are degraded completely. The new function of the rehabilitated land is to be established by the project

#### 3.2 Primary Needs for the Project

The main targets of the project is the reduction of pollution of river Mureş with Pb, Zn, Cu, Cd, and As, and the ecological rehabilitation of the degraded land (1200 ha). Without this project the human health, aquatic life, the recreation, aesthetics biodiversity will be affected in the national and transboundary context.

#### 3.3 Status of Project Preparation

The project is in the setting up process

#### 3.4 Technology proposed

The technology proposed has not been defined. An external assistance seems to be needed

#### 3.5 Ownership of project Site

The site is in the ownership of the local authority

3.6 Specific Project Item	ns	
It seems that external assistance	ce would be useful to approach the project.	
4. Project Effects and	Interactions	
4.1 Public's Expression	of Interest	
Public attitude is positive		
4.2 Environmental Impa	act Assessment	
□ yes	X no	
Not necessar	ry	
<b>∑</b> planned □ in progress	s $\square$ finished/completed $\square$ accepted $\square$ rejected	
4.3 Sensitivity of Localit	y/Receptor	
1	ges its water into the river Mureş is degraded. The recovery the quality of the river water, too.	
4.4 Primary Effects of P	roject	
The primary effects of the project implementation will be the rivers, Ampoi and Mureş water quality improvement and expansion of natural capital with 1200 hectares.		
5. Economic Project .	Justification	
5.1 Economic Project Be	enefits	
The project benefits hove not been quantified		
Employment/income effects		
during construction period	100 –120 employees	
during operation period	40 –50 employees	

5.2 Economic Internal Rate of Return (EIRR)		
	yes	
Has an EIRR been calculated	⊠ no	
total investment costs of project	2.450.000 USD	
planned annual depreciation	NA	
planned annual operation costs	97.000 USD	
planned annual revenues	400.000. USD	
6. Financial Viability		
6.1 Estimated Investment C	lost	
Investment cost	2.450.00 USD	
Al	location of capital cost	
Land	0	
Construction and machinery	(soil treatment and plantation) 2.250.000 USD	
Planning and supervision	200.000 USD	
Total cost	2.450.000 USD	
On an annual basis		
Year of cost estimate	1998	
Nature of cost estimate (prelimin	nary, adequate, etc.)	
Preliminary calculation		
<b>6.2 Estimated Operational</b>		
<b>Expected annual (operational) r</b>	ecurrent cost (in real terms)	
Repair and replacement cost	50.000 USD	
Total operational cost	100.000 USD	
Year of cost estimate	1998	
Nature of cost estimate (preliminary, adequate, sources of information)		
The cost estimate is preliminary a	nd the total cost put into evidence in the NEAP	
The cost estimate is premimary as	id the total cost put into evidence in the 1427 if	
<b>6.3 Estimate of Revenues</b>		
Expected annual revenues (in real terms)		
2. Peered difficult Teveniues (in Te	wi volimb)	
400.000 USD		
Year of estimate	1998	
Nature of estimate (preliminary	, adequate, etc.)	
The revenue is preliminary estimated		

6.4 Financial Internal Rate of return (FIRR)			
Has a FIRR been calculated?	☐ yes	X no	
	<b>,</b>		
6.5 Anticipated/Proposed Fu	nding Scheme		
Source of funding	Secured	Requested	Non- secured
	C	urrency [USD]	
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget		2.450.000	
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		2.450.000	

# Project No. AI3 - 17 Protected Area Monitoring

Date of first setting up:	1995		Date of latest	update :	02.1998
Project Title:	Protected area monitoring				
Responsible/Leg	gal Body				
Authority/Company	Ministry of W	<sup>7</sup> ater, I	Forest and Envir	onmental Pro	tection
Name	Borsz Ileana				
Address	Bd. Libertății	nr. 12	, București		
Telephone	41.00.255				
Fax	40.1.41.00.28	2			
e-mail					
Project Target	Nature conservation. Providing knowledge for the state of environmental in the main protected areas.				
<b>Investment Costs</b>	679.000 USD				
<b>Status of Project</b>	ongoing	Σ	planned	emerging	g concept
Language of Proje	ect Docume	nts	Romania German	an $\square$ En	glish $\square$

Summary in English:  $\square$  yes  $\boxtimes$  no

Protected area monitoring

#### 2 Investor Details

#### 2.1 Authority/Company

Name	Councils of counties in Romania
Address	The addresses of cash residence could be found from the contact persons
Telephon e	The phone numbers of each Council residence could be found from contact persons
Fax	The fax numbers could be found from the contact persons

#### 2.2 Contact persons

Vasilache Georgeta tel: 40.1.301.16.05

Ioniță Jeni tel: 40.1.301.16.26

#### 2.3 Advisor/Consultant

Romanian Academy ICEBIOL ICIM, București

# 2.4 Legal/Financial Status

State institutions

#### 2.5 Authority/Company profile

Co-ordination, supervision and maintenance of protected areas

# 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration supervision and control of protected areas

#### 2.7 Institutions/Enterprises beside the Investor

Romanian Academy Ministry of Culture Ministry of Public Works and Territorial Planning

#### 3. PROJECT DESCRIPTION

# 3.1 Project Outline

This structural project will provide the monitoring networks for the declared protected areas, which are possible to be polluted with heavy metals, pesticides and nutrients.

#### 3.2 Primary Needs for the Project

The target of the project is to provide knowledge of the state of environment in the protected areas in order to take measures to avoid damages of the aquatic environmental, recreational areas, aesthetics and bio-diversity in the national and transboundary context

#### 3.3 Status of Project Preparation

The project is in the setting up phase

# 3.4 Technology proposed

Not Applicable (Nap)

#### 3.5 Ownership of project Site

The project sites belong generally to the public

3.6 Specific Project Items		
It is supposed that external assistance is needed to approach this project		
4. Project Effects and Interactions		
4.1 Public's Expression of Interest		
The publics` attitude is positive for this project		
4.2 Environmental Impact Assessment		
□ yes 区 no		
4.3 Sensitivity of Locality/Receptor		
Declared protected areas are the most sensitive zones due to the importance of natural capital to be conserved.		
4.4 Primary Effects of Project		
The primary effects will consist of decisions taken in the right time to prevent damages on protected areas, on local regional and International levels		
5. Economic Project Justification		
5.1 Economic Project Benefits		
It is not calculated.		
Employment/income effects		
during construction period 170 – 180 employees		
during operation period 70 – 80 employees		
Other economic benefits		

5.2 Economic Internal Rate of Return (EIRR)			
Has an EIRR been calculated	□ yes ⊠ no		
total investment costs of project	679.000 USD		
planned annual depreciation	NA		
planned annual operation costs	40.000 USD		
planned annual revenues	1.000.000 USD		
6. Financial Viability			
6.1 Estimated Investment C	ost		
Investment cost	679.000 USD		
	ocation of capital cost		
Land	0		
Construction and machinery	619.000 USD		
Planning and supervision	60 000 USD		
Total cost	679.000 USD		
On an annual basis			
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, etc.)		
Preliminary calculation			
<b>6.2 Estimated Operational </b>	Cost		
Expected annual (operational) re			
40.000 USD			
Repair and replacement cost	NA		
Total operational cost	NA		
Year of cost estimate	NA		
Nature of cost estimate (preliminary, adequate, sources of information)			
The cost estimated is preliminary			
<b>6.3 Estimate of Revenues</b>			
<b>Expected annual revenues (in re</b>	Expected annual revenues (in real terms)		
100.000 USD	·		
Year of estimate	1998		
Nature of estimate (preliminary,	adequate, etc.)		
The estimation is preliminary			

( 4 E)	e / (EIDD)	\	
6.4 Financial Internal Rate o	t return (FIRR	)	
Has a FIRR been calculated?	☐ yes	X no	
	<b>—</b> <i>y</i> es	<b>—</b> 110	
	1' C I		
6.5 Anticipated/Proposed Fu	naing Scheme		
Source of funding	Secured	Requested	Non-
_		_	secured
	(	Currency [USD]	
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget		679.000	
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		679.000	

# Project No. AI3 - 21

**Development of Existing Forests Monitoring Ecosystems** 

Date of first setting up:	1995	Date of latest update:	04.1998
<b>Project Title:</b>	Development of existing forests monitoring ecosystems		
Responsible/Leg	gal Body		
Authority/Company	Ministry of Water	r, Forest and Environmental Pr	rotection
Name	Ing. Anton Vlad		
Address	Bd. Libertății nr.	12, București	
Telephone	40.1.41.00.255		
Fax	40.1.41.00.282		
e-mail			
Project Target	Forest management by preventing degradation knowing the state of environmental in the forested areas		
<b>Investment Costs</b>	317.000 USD		
<b>Status of Project</b>	ongoing	▼ planned □ emergin	ng concept
		X Romanian D E	English $\square$

German

Summary in English:  $\square$  yes  $\boxtimes$  no

**Language of Project Documents** 

Development of existing forests monitoring ecosystems

#### 2 Investor Details

#### 2.1 Authority/Company

Name	ROMSYLVA – REGIE AUTONOMĂ
Address	Bd. Libertății, nr. 12, București
Telephon e	40.1.41.00.255/ 40.1-312.95.44
Fax	40.1.41.00.282

#### 2.2 Contact persons

Benes Dominic 40.1.312.95.44

# 2.3 Advisor/Consultant

ICAS (The Agro – Sylvic Research Institute)

#### 2.4 Legal/Financial Status

State company

#### 2.5 Authority/Company profile

The company is specialized in the management of forest areas.

Number of employees: 47.000 employees

- Annual revenue (1997): 1,2 x 10<sup>12</sup> lei (137.000.000 USD)
  Annual expenses (1997): 1,15 x 10<sup>12</sup> lei (132.000.000 USD)
  annual profit (1997): 22 x10<sup>9</sup> lei (2.500.000 USD)



Administration, supervising, operation and control of forest areas

#### 2.7 Institutions/Enterprises beside the Investor

Council each county in Romania

#### 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

The outline of this non-structural project is a guideline concerning the design criteria for the monitoring network of environmental in the forested areas. This guideline is based on a demonstrative project (a specific case study)

#### 3.2 Primary Needs for the Project

The target of the project is to prevent forest degradation and to conserve the existing biodiversity knowing the state of environmental in the forest area. Forest belts along the Danube river and other inland rivers in the Danube river basin will have a specific monitoring system. The functions covered by the mentioned target are to be recreation, aesthetics, bio-diversity and economic development

#### 3.3 Status of Project Preparation

The project is on the setting up phase and was included in the list of short – term projects in the NEAP

#### 3.4 Technology proposed

Not Applicable (Nap)

3.5 Ownership of project Site
The project sites are in the ownership of ROMSILVA
The project sites belong generally to the public
3.6 Specific Project Items
The project comprises a demonstration case study
4. Project Effects and Interactions
4.1 Public's Expression of Interest
There is a positive attitude of public with the respective project
4.2 Environmental Impact Assessment
yes 🗵 no
planned in progress if finished/completed accepted rejected
4.3 Sensitivity of Locality/Receptor
The forest area could be regarded as a sensitive zone due to the specific natural conditions which are to be maintained for keeping and improving the existing biodiversity
4.4 Primary Effects of Project
The primary effects of the project consists of implementation an unitary and compatible system to put into evidence all the elements of the forest ecosystems

5. Economic Project	Justification		
5.1 Economic Project Bo	enefits		
The project being in the setting up process, the economic benefits have not been quantified.			
Employment/income effects			
during construction period	NAp		
during operation period	insignificant		
Other economic benefits			
5.2 Economic Internal B	Rate of Return (EIRR)		
	,		
Has an EIRR been calculate	ed S yes no		
total investment costs of proje			
planned annual depreciation			
	planned annual operation costs NAp		
planned annual revenues NAp			
	6. Financial Viability		
	6.1 Estimated Investment Cost		
Investment cost 317.000 USD			
Allocation of capital cost			
Land Construction and machiner	0 250,000 LISD		
Construction and machiner Planning and supervision	y 250.000 USD 67 000 USD		
Total cost	317.000 USD		
On an annual basis	317.000 CSD		
Year of cost estimate	1998		
Nature of cost estimate (pre			
Preliminary calculate			
6.2 Estimated Operational Cost			
<b>Expected annual (operation</b>	al) recurrent cost (in real terms)		
NAp			
Repair and replacement cos	t NAp		
Total operational cost	NAp		
Year of cost estimate			
Nature of cost estimate (pre	liminary, adequate, sources of information)		
NAp			

<b>6.3 Estimate of Revenues</b>			
Expected annual revenues (in real terms)			
NAp			
	1000		
Year of estimate	1998		
Nature of estimate (preliminary,	adequate, etc.)		
NAp			
NAP			
6.4 Financial Internal Rate o	f roturn (FIRR)		
Has a FIRR been calculated?		[V]	
mas a rinn been calculated.	☐ yes	× no	
6.5 Anticipated/Proposed Fu			ı
6.5 Anticipated/Proposed Fu Source of funding	nding Scheme Secured	Requested	Non-
•	Secured	•	Non- secured
Source of funding	Secured	Requested	
Source of funding  1. Equity of project owner	Secured	•	
Source of funding  1. Equity of project owner 2. National Environmental	Secured	•	
Source of funding  1. Equity of project owner 2. National Environmental Fund	Secured	•	
Source of funding  1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund	Secured	urrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget	Secured	•	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget	Secured	urrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget	Secured	urrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional	Secured	urrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget	Secured	urrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan	Secured	urrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget	Secured	urrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant	Secured	urrency [USD]	

# Project No. AI5 - 11

Fight against Soil Erosion in Tazlău River Basin

Date of first setting up:	1995	Date of latest update :	02.1998
Project Title :	Fight against soil erosion in Tazlău River basin		

Responsible/Leg	gal Body	
Authority/Company	Ministry of Water,	Forest and Environmental Protection
Name	Ing. Octavian Ceachir - director	
Address	Bd. Libertății nr. 12	e, București
Telephone	41.00.255	
Fax	40.1.41.00.282	
e-mail		
Project Target	Protection of human river	n health and goods in the zone of Tazlău
<b>Investment Costs</b>	3.428	.000 USD
<b>Status of Project</b>	ongoing [	planned emerging concept
Language of Proje	ect Documents	⊠ Romanian    □ English    □  German  Summary in English:    □ yes    ▼ no

Fight against soil erosion in Tazlău river basin.

#### 2 Investor Details

#### 2.1 Authority/Company

Name	Regia Autonomă "Apele Române"
Address	Str. Edgar Quinet, nr. 6, București, cod 70106
Telephon e	40.1.315.55.35
Fax	40.1.312.21.74

#### 2.2 Contact persons

Dr. ing. Gheorghe Bărau - general director

#### 2.3 Advisor/Consultant

AQUA Project, Spl. Independenței nr. 294, București

#### 2.4 Legal/Financial Status

State company

#### 2.5 Authority/Company profile

The company is responsible for water management throughout the country. The company comprises 11 branches responsible for water management in the main inland river basins.

- Number of employees(1997): 13500 employees
- Annual revenue (19997): 299215 x 10<sup>6</sup> lei ( 34.000.000 USD)
- Annual expenses (1997): 279823 x 10<sup>6</sup> lei (32.000.000 USD)
- •Profit (1997): 19392 x 10<sup>6</sup> lei (2.200.000 USD)

#### 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration supervision, operation and maintenance of hydraulic structures related to the inland rivers

#### 2.7 Institutions/Enterprises beside the Investor

- •Environmental protection Agencies located in each country. The addresses, phone and fax numbers are available at the contact person
- •AQUAPROJECT tel. 40.1.637.31.45; Fax: 40.1.637.79.65

#### 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

The outline of this structural project is the design. erection and putting into operation of hydraulic structures of which are to protect the soil in the area of Tazlău river basin (about 400 sg. km)

#### 3.2 Primary Needs for the Project

The target of the project is protecting human health and goods, and the project contributes .to economic development in the respective zone.

#### 3.3 Status of Project Preparation

The project is at the feasibility level

#### 3.4 Technology proposed

The technology provided to build up the respective hydraulic structures is a traditional one

3.5 Ownership of project Site
3.5 Ownership of project Site
2.CC '6" D ' 4.T4
3.6 Specific Project Items
The river length that is to be taken into consideration with the project is about 5,3 km
4. Project Effects and Interactions
4.1 Public's Expression of Interest
4.11 ubile s Expression of Interest
The inhabitants in the zone are interested to the project achievement due to the fact that
they are exposed to food and other damages.
and one of the same of the sam
4.2 Environmental Impact Assessment
□ yes ⊠ no
Not necessary
X planned
4.3 Sensitivity of Locality/Receptor
The river Tazlău area is sensitive with its specific bio-diversity and with its agriculture
potential in the Bacău county.
4.4 Primary Effects of Project
4.4 I Timary Effects of Troject
The soil affected by erosion is to be put in value the population is to be protected against
flood.

5. Economic Project Justification			
5.1 Economic Project Benefits			
V			
The project is ongoing now ar	d th	e economic benefits have not been calculated	
<b>Employment/income effects</b>			
during construction period	70	–80 employees	
during operation period	5 –	6 employees	
Other economic benefits			
<b>5.2 Economic Internal R</b>	ate	of Return (EIRR)	
		yes	
Has an EIRR been calculate	d	⊠ no	
total investment costs of proje	ect	3.428.000 USD	
planned annual depreciation		NA	
planned annual operation co.	sts	80.000 USD	
planned annual revenues		570.000. USD	
6. Financial Viability			
<u> </u>		ost	
6.1 Estimated Investment Cost Investment cost 3.428.00 USD			
Allocation of capital cost			
Land		100.000 USD	
Construction and machinery	y	3.428.000 USD	
Planning and supervision 80.000 USD			
<b>Total cost</b> 3.428.000 USD			
On an annual basis			
Year of cost estimate 1998			
Nature of cost estimate (pre		nary, adequate, etc.)	
Preliminary calculati			
6.2 Estimated Operational Cost			
<b>Expected annual (operations</b>	al) r	ecurrent cost (in real terms)	
80.000 USD			
Repair and replacement cos	Repair and replacement cost 20.000 USD		
Total operational cost			
Year of cost estimate		1998	
Nature of cost estimate (preliminary, adequate, sources of information)			
The estimation of cost is preliminary and the source of information is NEAP			

6.3 Estimate of Revenues				
Expected annual revenues (in real terms)				
570 000 HgD				
570.000 USD				
Year of estimate	1998			
Nature of estimate (preliminary,				
Tractare of estimate (premimary,	udequate, etc.)			
The estimation of annual revenue is	preliminary			
6.4 Financial Internal Rate o	<u>f return (FIRR)</u>			
Has a FIRR been calculated?	☐ yes	$\mathbf{X}$ no		
	-			
6.5 Anticipated/Proposed Fu	nding Scheme			
Source of funding	Secured	Requested	Non-	
Source of funding		_	Non- secured	
		Requested Currency [USD]		
1. Equity of project owner		_		
1. Equity of project owner 2. National Environmental		_		
1. Equity of project owner 2. National Environmental Fund		Currency [USD]		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund		_		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget		Currency [USD]		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget		Currency [USD]		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget		Currency [USD]		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget		Currency [USD]		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional		Currency [USD]		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant		Currency [USD]		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant 10. Commercial bank loan		Currency [USD]		
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant		Currency [USD]		

# Project No. AI3 - 7

Rapid Data Collection by Satellites Applied on Dangerous Hydro-Meteo Phenomena

Date of first setting up:	1995	Date of latest update:	01.1998
Project Title :	Rapid data collection meteo phenomena	by satellites applied on	dangerous hydro-

Responsible/Leg	gal Body		
Authority/Company	Ministry of Water,	Forest and Environmental Protection	
Name	Ing. Octavian Ceacl	nir	
Address	Bd. Libertății nr. 12	e, București	
Telephone	40.1.41.00.255		
Fax	40.1.41.00.282		
e-mail			
Project Target	Human health and goods protection by warning about dangerous phenomena in time		
<b>Investment Costs</b>	130.000 USD		
<b>Status of Project</b>	ongoing	I planned	
Language of Proje	ect Documents	⊠ Romanian    □ English    □  German  Summary in English: □ yes    ☒ no	

# 1 Project title

Rapid data collection by satellites applied on dangerous hydro-meteo phenomena

# 2 Investor Details

# 2.1 Authority/Company

Name	Regia Autonomă "Apele Romane"
Address	Str. Edgar Quinet, nr. 6, București, cod 70106
Telephone	40.1.315.55.35/ 40.1-312.21.74
Fax	40.1.41.00.282

# 2.2 Contact persons

Dr. ing. Gheorghe Bârău – director general

### 2.3 Advisor/Consultant

Hydrology and Meteorology National Institute (Institutul Național de Meteorologie și Hidrologie – INMH)

# 2.4 Legal/Financial Status

State company

# 2.5 Authority/Company profile

The company is responsible for water management and for monitoring of meteorological and hydrological data. INMH is subordinated to RAAR

- Number employees: 13.500 employees
- Annual revenue (1997): 299215 x 10<sup>6</sup> lei( 34.000.000USD)
- Annual expenses (1997): 279823 x 10<sup>6</sup> lei (32.000.000 USD)
- Profit (1997): 19392 x10<sup>6</sup> lei (2.200.000 USD)

# 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration co-ordination of hydro –meteo monitoring activities. There are 178 synoptic meteorological stations and 900 hydrometric stations spread out the whole territory of the country which get the hydro-meteo information

## 2.7 Institutions/Enterprises beside the Investor

National Council for Defense against Natural Calamities. Ministry of National Defense

# 3. PROJECT DESCRIPTION

## 3.1 Project Outline

This non-structural project comprises a national system organized for rapid collection of data regarding hydro – meteo data using satellites. The project contains also the warning system for public information on dangerous phenomena.

## 3.2 Primary Needs for the Project

The target of the project (public information on dangers caused by hydro – meteo)is related to health protection in the national and transboundary context

## 3.3 Status of Project Preparation

The project is ongoing, now

#### 3.4 Technology proposed

Not Applicable (Nap)

3.5 Ownership of project Site
The project sites (hydro – meteo station) are in the ownership of the investor
3.6 Specific Project Items
3.0 Specific 1 Toject Items
The project comprises a demonstration case study
4. Project Effects and Interactions
4.1 Public's Expression of Interest
There is a positive attitude of public with the respective project
2.1020 to the positive distribution of particular the respective project
4.2 Environmental Impact Assessment
□ yes 区 no
planned in progress in finished/completed accepted
rejected 4.3 Sensitivity of Locality/Receptor
4.5 Sensitivity of Locality/Receptor
Not Applicable (NAp)
Tot Applicable (TVIP)
A A Duite and Effect of During
4.4 Primary Effects of Project
The new system organized is to inform the notential affected population earlier than the
The new system organized is to inform the potential affected population earlier than the actual system. This will make possible to take actions in proper time and to ovoid major
injuries

5. Economic Project Justification			
5.1 Economic Project Benefits			
It is not evaluated			
<b>Employment/income effects</b>			
during construction period	NA		
during operation period	insignificant		
Other economic benefits			
5.2 Economic Internal R	ate of Return (EIRR)		
Has an EIRR been calculate	□ ves		
total investment costs of proje	ect 130.000 USD		
planned annual depreciation	NA		
planned annual operation co.	sts NA		
planned annual revenues	NAp		
6. Financial Viability	•		
6.1 Estimated Investmen			
Investment cost	130.000 USD		
	Allocation of capital cost		
Land	0		
<b>Construction and machinery</b>	0		
Planning and supervision	130.000 USD		
Total cost	130.000 USD		
On an annual basis	1000		
Year of cost estimate	1998		
Nature of cost estimate (pre			
Preliminary calculati			
6.2 Estimated Operation			
Expected annual (operational) recurrent cost (in real terms)			
NA			
Repair and replacement cos	t NA		
Total operational cost	NA		
Year of cost estimate			
Nature of cost estimate (preliminary, adequate, sources of information)			
NA			

6.3 Estimate of Revenues			
Expected annual revenues (in real terms)			
NAp			
Year of estimate			
Nature of estimate (preliminary,	adequate, etc.)		
NAp			
6.4 Financial Internal Rate o	f return (FIRR)		
Has a FIRR been calculated?	☐ yes	X no	
6.5 Anticipated/Proposed Fu	nding Scheme		
6.5 Anticipated/Proposed Fu Source of funding	nding Scheme Secured	Requested	Non- secured
	Secured	Requested rrency [USD]	_
	Secured		_
Source of funding	Secured		_
1. Equity of project owner 2. National Environmental	Secured		_
1. Equity of project owner 2. National Environmental Fund	Secured	rrency [USD]	_
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget	Secured	rrency [USD]	_
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund	Secured	rrency [USD]	_
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget	Secured	rrency [USD]	_
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget	Secured	rrency [USD]	_
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional	Secured	rrency [USD]	_
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant	Secured	rrency [USD]	_
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan	Secured	rrency [USD]	_
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant	Secured	rrency [USD]	_

# Project No. AI3 - 2

**Development of Hydrological Database Using GIS** 

Date of first setting up:	1995	Date of latest update:	04.1998
Project Title:	Development of hydr	ological data base using	GIS

Responsible/Legal Body			
Authority/Company	Ministry of Water,	Forest and Environmental Protection	
Name	Ing. Octavian Ceac	hir	
Address	B-dul Libertății, nr.	12, București	
Telephone	40.1.41.00.255		
Fax	40.1.41.00.282		
e-mail			
Project Target	Availability of compatible data for computation of hydraulic structures		
<b>Investment Costs</b>	290 000 USD		
<b>Status of Project</b>	ongoing	■ planned □ emerging concept	
Language of Proje	ect Documents	⊠ Romanian    □ English    □  German  Summary in English: □ yes    ▼ no	

# 1 Project title

Development of hydrological data base using GIS

## 2 Investor Details

## 2.1 Authority/Company

Name	Regia Autonomă "Apele Române"
Address	Str. Edgar Quinet, nr. 6, Bucureşti, cod. 70106
Telephon	
e	40.1.315.55.35.
Fax	40.1.312.21.74

## 2.2 Contact persons

Dr. Ing. Gheorghe Bârau - director general

#### 2.3 Advisor/Consultant

National Institute of Meteorology and Hydrology (Institutul Național de Meteorologie și Hidrologie – INMH)

# 2.4 Legal/Financial Status

State company

## 2.5 Authority/Company profile

The company is responsible for water management throughout the territories of the country

- Number of employees (1997): 13500 employees
- Annual revenue (1997): 299215x 10<sup>6</sup> lei (34.000.000.USD)
- •Annual expenses (1997): 279823 x 10<sup>6</sup> lei (32.000.000.USD)
- •Profit (1997): 19392x 10<sup>6</sup> lei (2.200.000.USD)

# 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration and co-ordination of hydrological activities. There are 11 branches of the company corresponding to each Inland river basins and 900 hydrometric station covering the whole territory of the country.

2.7 Institutions/Enterprises beside the Investor
-Ministry of Agriculture and Food - ISPIF - București
3. PROJECT DESCRIPTION
3.1 Project Outline
The outline of this non-structural project is the organization of data base using GIS
3.2 Primary Needs for the Project
The target of the project – to have or new organized hydrological data bas-is related to the design all hydraulic structures at the national and transboundary levels
3.3 Status of Project Preparation
The project is in the setting up phase.
3.4 Technology proposed
Not applicable (NAp).
3.5 Ownership of project Site
The project site is in the ownership of the investor.

3.6 Specific Project Items			
It is supposed that the project will need external assistance			
4. Project Effects and Interactions			
4.1 Public's Expression of Interest			
Public's attitude is positive.			
4.2 Environmental Impact Assessment			
$\square_{\mathrm{yes}}  \boxtimes \text{ no}$			
Not necessary			
□ planned □ in progress □ finished/completed □ accepted □			
4.3 Sensitivity of Locality/Receptor			
Not Applicable (NAp)			
4.4 Primary Effects of Project			
Unitary and compatible system to get a data base availability of hydrological data for computations.			
5. Economic Project Justification			
5.1 Economic Project Benefits			
The economic project benefits have not been quantified.			
Employment/income effects			
during construction period NAp			
during operation period NAp			
Other economic benefits			

5.2 Economic Internal Rate of Return (EIRR)			
	☐ yes		
Has an EIRR been calculated	⊠ no		
total investment costs of project	290 000 USD		
planned annual depreciation	NA		
planned annual operation costs	NAp		
planned annual revenues	NAp		
6. Financial Viability			
6.1 Estimated Investment C	ost		
Investment cost	290 000 USD		
All	location of capital cost		
Land	0 USD		
Construction and machinery	insignificant		
Planning and supervision	290 000 USD		
Total cost	290.000 USD		
On an annual basis			
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, etc.)		
Preliminary calculation			
6.2 Estimated Operational (	Cost		
Expected annual (operational) recurrent cost (in real terms)			
· · · · · · · · · · · · · · · · · · ·			
NAp			
Denoise and vanlagement aget	NAn		
Repair and replacement cost	NAp		
Total operational cost	NAp		
Year of cost estimate			
Nature of cost estimate (prelimit	nary, adequate, sources of information)		
NAp			
11AP			
6.3 Estimate of Revenues			
Expected annual revenues (in real terms)			
NAp			
Year of estimate	1998		
Nature of estimate (preliminary,	adequate, etc.)		
NAp			

6.4 Financial Internal Rate of return (FIRR)				
Has a FIRR been calculated?	☐ yes	X no		
6.5 Anticipated/Proposed Funding Scheme				
Source of funding	Secured	Requested	Non- secured	
		Currency [USD]		
1. Equity of project owner		290 000		
2. National Environmental				
Fund				
3. Water Management Fund				
4. Public loan – central budget				
5. Public loan – regional budget				
6. Public grant – central budget				
7. Public grant – regional				
budget				
8. International loan				
9. International grant				
10. Commercial bank loan				
11. Other sources				
Total funds / requirements		290.000		

# Project No. AI3 - 7

**Development of Rapid Dissemination of Information about Flood Propagation** 

Date of first setting up:	1995	Date of latest update:	02.1998
Project Title:	Development of rapid propagation.	d dissemination of inform	mation about flood

Responsible/Leg	gal Body	
Authority/Company	Ministry of Water,	Forest and Environmental Protection
Name	Ing. Octavian Ceac	hir
Address	Bd. Libertății nr. 12	2, București
Telephone	40.1.41.00.255	
Fax	40.1.41.00.282	
e-mail		
Project Target Protection of human health and goods by rapid information about flood propagation waves in time		
<b>Investment Costs</b>	212.0	000 USD
<b>Status of Project</b>	▼ ongoing	planned emerging concept
<b>Language of Project Documents</b>		⊠ Romanian    □ English    □  German  Summary in English: □ ves    ☒ no

# 1 Project title

Development of rapid dissemination of information about flood propagation.

# 2 Investor Details

# 2.1 Authority/Company

Name	Regia Autonomă "Apele Române"
Address	Str. Edgar Quinet, nr. 6, București
Telephon e	40.1.315.55.35
Fax	40.1.312.21.74

### 2.2 Contact persons

Dr. ing. Gheorghe Bârău – director general

#### 2.3 Advisor/Consultant

AQUA Project, Spl. Independenței nr. 294, București

ICIM - București Spl. Independenței nr. 294,

INMH Bucureşti , Şos. Bucureşti- Ploieşti ,km

# 2.4 Legal/Financial Status

State company

# 2.5 Authority/Company profile

The company is responsible for water management throughout the territory of Romania

- Number of employees(1997): 13500 employees
- Annual revenue (19997): 299215 x 10<sup>6</sup> lei ( 34.000.000 USD)
- Annual expenses (1997): 279823 x 10<sup>6</sup> lei (32.000.000 USD)
- •Profit (1997): 19392 x 10<sup>6</sup> lei ( 2.200.000 USD)

# 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration of hydrological data, and responsibility of the warning system

2.7 Institutions/Enterprises beside the Invest	2.7	7 Institutions	/Enterprises	beside the	Investo
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ROMTELECOM, Bd. Libertății 14, tel. 40.1.411.12.62 National Radio TV Council, str. Nuferilor nr. 24

# 3. PROJECT DESCRIPTION

## 3.1 Project Outline

The outline of this non structural project is a coordinated system for rapid information about food propagation in the rivers

# 3.2 Primary Needs for the Project

The main target of the project – protection of human health and goods as well as the economic development in the possible affected zones by flood is to be treated in the transboundary context.

# 3.3 Status of Project Preparation

The project is in the setting up process.

# 3.4 Technology proposed

Not applicable

# 3.5 Ownership of project Site

Not Applicable.

3.6 Specific Project Item	as .	
The information system is to be adopted after the Government approval. The project is supposed to be approached in the transboundary context		
4 D. A. Dec. 4	IT . 4 4	
4. Project Effects and 4.1 Public's Expression of		
4.1 Fublic 8 Expression (	or interest	
The attitude of the public for t	he respective project is positive.	
4.2 Environmental Impa	act Assessment	
☐ yes	× no	
Not necessar		
□ □ planned □ □ in progress		
4.3 Sensitivity of Localit	y/Receptor	
Not Applicable (Nap)		
11 (1)		
4 4 Drimowy Effects of D	maion4	
4.4 Primary Effects of P	roject	
The primary effect of project is coherent system for rapid information of the downstream riparian about the food propagation along the rivers		
5. Economic Project Justification		
5.1 Economic Project Benefits		
The economic project benefits hove not been calculated		
Employment/income offeets		
Employment/income effects during construction period	NAp	
during operation period	NAp	
	NAp	
	1	

5.2 Economic Internal Rate of Return (EIRR)			
	☐ yes		
Has an EIRR been calculated	X no		
total investment costs of project	212.000 USD		
planned annual depreciation	NAp		
planned annual operation costs	NAp		
planned annual revenues	NAp		
6. Financial Viability			
<b>6.1 Estimated Investment C</b>	ost 212.000 USD		
Investment cost	212.00 USD		
All	ocation of capital cost		
Land	NAp		
Construction and machinery	150.000 USD		
Planning and supervision	62.000 USD		
Total cost	150.000 USD		
On an annual basis			
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, etc.)		
Preliminary calculation			
<b>6.2 Estimated Operational </b>	Cost		
Expected annual (operational) recurrent cost (in real terms)			
NAp			
Repair and replacement cost	NAp		
Total operational cost	NAp		
Year of cost estimate	1998		
Nature of cost estimate (preliminary, adequate, sources of information)			
Nap			
6.3 Estimate of Revenues			
Expected annual revenues (in real terms)			
NI A			
NAp			
Year of estimate			
Nature of estimate (preliminary,	adequate, etc.)		
NT A			
NAp			

6.4 Financial Internal Rate of return (FIRR)			
Has a FIRR been calculated?	☐ yes	X no	
6.5 Anticipated/Proposed Fu	nding Scheme		
Source of funding	Secured	Requested	Non- secured
	C	urrency [USD]	
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund		212.000	
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		212.000	

# Project No. AI5 - 3

**Ecological Reconstruction of Polluted Zone around SC ROMFOSFOCHIM SA Valea Tazlăau Riva** 

Date of first setting up:	1995	Date of latest update :	02.1998
Project Title :	Ecological recons	struction of polluted zone ard IM SA Valea Călugărească	ound SC

Responsible/Leg	gal Body			
Authority/Company	Ministry of Ag	gricul	ture and Food	
Name	Ing. Rodic	a Ma	tei	
Address	Bd. Carol, nr.	24, se	ector 1, București	
Telephone	40.1.315.10.34	4/40.1	1.410.02.55	
Fax	40.1.312.44.10	O		
e-mail				
<b>Project Target</b>	Abatement of and bio-divers		phorous diffusion in water, agr onservation	icultural load
<b>Investment Costs</b>		2.800	.000 USD	
<b>Status of Project</b>	ongoing	[>	▼ planned □ emerging	concept
Language of Proj	ect Docume	nts	Romanian	

# 1 Project title

Ecological reconstruction of polluted zone around SC ROMFOSFOCHIM SA Valea Călugărească

# 2 Investor Details

# 2.1 Authority/Company

Name	Council of Prahova Country
Address	Bd. Republicii, nr. 2, Ploiești
Telephon e	044/12.15.40; 044/12.15.41
Fax	

## 2.2 Contact persons

Ing. Cazacu Alexandru

### 2.3 Advisor/Consultant

ICPA – București

ISPIF - București

# 2.4 Legal/Financial Status

Local Authority

# 2.5 Authority/Company profile

Co-ordination of activities in the county

## 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration of public land and works

## 2.7 Institutions/Enterprises beside the Investor

Ministry of Water, Forest and Environmental Protection Ministry of Public Works and Territorial Planning ROMFOSFOCHIM SA – Valea Călugărească

## 3. PROJECT DESCRIPTION

## 3.1 Project Outline

This structural project will consist of works for soil treatment to recover about 50 hectares polluted by phosphorous compounds and heavy metals (Pb, Co, Cd, Cu, Zn, Ni)

# 3.2 Primary Needs for the Project

The target of the project is to recover about 50 hectares of polluted land and to diminish water pollution by phosphorous and these achievement are related to human health benefits, aquatic environmental, bio-diversity and economic development functions.

#### 3.3 Status of Project Preparation

Feasibility study prepared by KREBS

# 3.4 Technology proposed

The technology proposed is based, firstly, on the development of the incineration plant by adopting the technology of fluidized bed and modernizing the existing wastewater treatment plants and secondly of soil treatment and replacement the recovered material.

3.5 Ownership of project Site
The site is in the ownership of the investor and some private persons.
3.6 Specific Project Items
An external assistance is needed to finalize technical solution for soil recovery.
4. Project Effects and Interactions
4.1 Public's Expression of Interest
Public expression of interest is positive.
<b>4.2 Environmental Impact Assessment</b> ☐ yes ⋈ no
□ planned ■ in progress □ finished/completed □ accepted □ rejected
4.3 Sensitivity of Locality/Receptor
River Teleajen is definitely changed from the 3 <sup>rd</sup> category of quality to the degraded river on a distance of 30 Km where discharges its water into the river Prahova
4.4 Primary Effects of Project
Primary effect of the project is 50 hectares of land put in its real value, mainly with the agricultural function.

5. Economic Project Justification				
5.1 Economic Project Benefits				
Economic project benefits hor the feasibility study phase	s not been calculated due to the fact that the project is in			
<b>Employment/income effects</b>				
during construction period	80 – 90 employees			
during operation period	10 – 15 employees			
Other economic benefits	· ·			
5.2 Economic Internal R	ate of Return (EIRR)			
Has an EIRR been calculate	□ ves			
total investment costs of proje	2.800.000 USD			
planned annual depreciation	NA			
planned annual operation co	sts 50.000 USD			
planned annual revenues	450.000 USD			
6. Financial Viability	•			
6.1 Estimated Investmen	nt Cost			
Investment cost	2.800.00 USD			
	Allocation of capital cost			
Land	150.000 USD			
Construction and machinery	2.470.000 USD			
Planning and supervision	180.000 USD			
Total cost	2.800.000 USD			
On an annual basis				
Year of cost estimate	1998			
Nature of cost estimate (preliminary, adequate, etc.)				
Preliminary calculati	on			
<b>6.2 Estimated Operation</b>				
Expected annual (operational) recurrent cost (in real terms)				
50.000 USD				
Repair and replacement cos				
Total operational cost	50.000 USD			
Year of cost estimate	1998			
Nature of cost estimate (pre	iminary, adequate, sources of information)			
The cost estimation is prelimi cost is put into evidence	nary and the source of information is NEAP where the total			

<b>6.3 Estimate of Revenues</b>			
<b>Expected annual revenues (in rea</b>	l terms)		
450 000 Hab			
450.000 USD			
Year of estimate			
Nature of estimate (preliminary, a	adaguata atc)		
Trature of estimate (premimary,	aucquaic, cic.)		
The revenue estimate is preliminary	7		
-			
<b>6.4 Financial Internal Rate o</b>	f return (FIRR)		
Has a FIRR been calculated?	□ yes	$\mathbf{X}_{no}$	
	,		
6.5 Anticipated/Proposed Fu	nding Scheme		
Source of funding	Secured	Requested	Non-
			secured
	C	urrency [USD]	
1. Equity of project owner			
2. National Environmental			
Fund			
Fund 3. Water Management Fund			
Fund 3. Water Management Fund 4. Public loan – central budget		800.000	
Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget		800.000	
Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget		800.000	
Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional		800.000	
Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget		800.000	
Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan		800.000	
Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant		800.000	
Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant 10. Commercial bank loan			
Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant		2.000.000 X 2.800.000	

 $\boldsymbol{X}$  This fund is to be requested from the polluter that is ROMFOSFOCHIM – Valea Călugărească

# Project No. AI5 - 16

Consolidation and Rehabilitation of Sliding Lands in Zalău City

Date of first setting up:	1995	Date of latest update :	01.1998
z we or more seeming where	2370	2 uit 32 iuitest apame t	0111290
Project Title :	Consolidation a	and rehabilitation of sliding land	s in Zalău city
Responsible/Le	gal Body		
Authority/Company	Ministry of Pul	olic Works and Territorial Planni	ing
Name	Ing. Georgeta V	Vasilache	
Address	Str. Apolodor,	nr. 17, București	
Telephone	40.1.301.16.05		
Fax			
e-mail			
Project Target	Protection of h	uman health and goods of polluti	ion living the

3.200.000 USD

Ongoing

**Language of Project Documents** 

X planned

German

**X** Romanian

☐ emerging concept

Summary in English:  $\square$  yes  $\boxtimes$  no

 $\square$  English

**Investment Costs** 

**Status of Project** 

# 1 Project title

Consolidation and rehabilitation of sliding lands in Zalău city

## 2 Investor Details

# 2.1 Authority/Company

Name	The Council of Sălaj Country
Address	Piața 1 Decembrie 1918
Telephon e	614.120
Fax	661.097

# 2.2 Contact persons

Viorica Iannu

#### 2.3 Advisor/Consultant

ISPIF - București

## 2.4 Legal/Financial Status

Local Authority

## 2.5 Authority/Company profile

The council of Sălaj country co-ordination the social and economic activities in the respective zones especially as for as public works are concerned.

## 2.6 Planning/Implementing Extent/Capacity of the Investor

Co-ordination and supervising the social and economic activities in the respective zone

#### 2.7 Institutions/Enterprises beside the Investor

• Ministry of Water, Forest and Environmental Protection – Bd- Libertății, nr. 12, București

# 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

This structural project comprises all the technical solutions to stabilize the sliding land in the zone. About 40 hectares are to be secured against sliding phenomenon.

#### 3.2 Primary Needs for the Project

The target of the project is to protect human health and the good of population living in the respective zone. Besides the recreation, aesthetics, bio-diversity functions of the sliding land are to be recovered

be recovered

# **3.3 Status of Project Preparation**

The project is at the feasibility level and is included in the short term list of projects in the NEAP

#### 3.4 Technology proposed

The technology proposed consists in plantation guarding trenches and other structures which are to prevent the slide of the land

3.5 Ownership of project Site
The site is in the ownership of the title holder
3.6 Specific Project Items
An external assistance for the project is supposed to be required
4. Project Effects and Interactions
4.1 Public's Expression of Interest
Public's attitude for the project is positive
Tuone building project is positive
4.2 Environmental Impact Assessment
□ yes 区 no
Not necessary
■ planned □ in progress □ finished/completed □ accepted □ rejected
4.3 Sensitivity of Locality/Receptor
The locality is sensitive to the affects of sliding land process due to the fact that
population in the zone might be injured with their health and goods.
4.4 Primary Effects of Project
A surface area of 40 hectares will be defended, primarily

5. Economic Project	Jus	tification	
5.1 Economic Project Bo	enef	its	
The economic project benefits	s hav	re not been calculated.	
<b>Employment/income effects</b>			
during construction period	60-	70 employees	
during operation period	insi	significant (6 – 7 persons)	
	<u>I</u>		
5.2 Economic Internal R	Rate	of Return (EIRR)	
Has an EIRR been calculate		□ yes ⊠ no	
total investment costs of proje	ect	3.200.000 USD	
planned annual depreciation		NA	
planned annual operation co	sts	5.000 USD	
planned annual revenues		500.000 USD	
6. Financial Viability			
6.1 Estimated Investmen		ost	
Investment cost		3.200.000 USD	
	Al	ocation of capital cost	
Land		100.000 USD	
Construction and machiner	y	3.035.000.USD	
Planning and supervision		65.000 USD	
Total cost		3.200.000 USD	
On an annual basis			
Year of cost estimate		1998	
Nature of cost estimate (pre		nary, adequate, etc.)	
Preliminary calculation		~	
6.2 Estimated Operation			
<b>Expected annual (operation</b>	al) r	ecurrent cost (in real terms)	
35.00	00 U	SD	
Repair and replacement cos	<u>t</u>	Not significant	
Total operational cost		35.000 USD	
Year of cost estimate		1998	
Nature of cost estimate (pre	limiı	nary, adequate, sources of information)	
The cost estimation is prelimi	nary	and the total cost is put into evidence in the NEAP	

<b>6.3 Estimate of Revenues</b>			
<b>Expected annual revenues (in rea</b>	l terms)		
500.00	0 USD		
Year of estimate 1998			
Nature of estimate (preliminary,	adequate, etc.)		
The estimation is	preliminary		
6.4 Financial Internal Rate o	f return (FIRR)		
Has a FIRR been calculated?	☐ yes	X no	
6.5 Anticipated/Proposed Fu	nding Scheme		
Source of funding	Secured	Requested	Non- secured
Source of funding		Requested rrency [USD]	
Source of funding  1. Equity of project owner		_	
1. Equity of project owner 2. National Environmental		_	
1. Equity of project owner 2. National Environmental Fund		_	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund		_	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget		rrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund		rrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget		rrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget		rrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan		rrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant		rrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant 10. Commercial bank loan		rrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant		rrency [USD]	

# Project No. AI5 - 3

**Ecological Reconstruction of Polluted Zone around SC ROMFOSFOCHIM SA Valea Tazlăau Riva** 

Date of first setting up:	1995	Date of latest update :	02.1998
Project Title :	Ecological recons	struction of polluted zone ard IM SA Valea Călugărească	ound SC

Responsible/Leg	gal Body	
Authority/Company	Ministry of Agricul	ture and Food
Name	Ing. Rodica Ma	tei
Address	Bd. Carol, nr. 24, s	ector 1, București
Telephone	40.1.315.10.34/40.	1.410.02.55
Fax	40.1.312.44.10	
e-mail		
Project Target	Abatement of phos and bio-diversity co	phorous diffusion in water, agricultural loud onservation
<b>Investment Costs</b>	2.800	.000 USD
<b>Status of Project</b>	ongoing [	▼ planned □ emerging concept
Language of Proje	ect Documents	⊠ Romanian    □ English    □  German  Summary in English:  □ yes    ☒ no

# 1 Project title

Ecological reconstruction of polluted zone around SC ROMFOSFOCHIM SA Valea Călugărească

## 2 Investor Details

# 2.1 Authority/Company

Name	Council of Prahova Country
Address	Bd. Republicii, nr. 2, Ploiești
Telephone	044/12.15.40; 044/12.15.41
Fax	

# 2.2 Contact persons

Ing. Cazacu Alexandru

#### 2.3 Advisor/Consultant

ICPA – București

ISPIF - București

# 2.4 Legal/Financial Status

Local Authority

# 2.5 Authority/Company profile

Co-ordination of activities in the county

#### 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration of public land and works

#### 2.7 Institutions/Enterprises beside the Investor

Ministry of Water, Forest and Environmental Protection Ministry of Public Works and Territorial Planning ROMFOSFOCHIM SA – Valea Călugărească

#### 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

This structural project will consist of works for soil treatment to recover about 50 hectares polluted by phosphorous compounds and heavy metals (Pb, Co, Cd, Cu, Zn, Ni)

## 3.2 Primary Needs for the Project

The target of the project is to recover about 50 hectares of polluted land and to diminish water pollution by phosphorous and these achievement are related to human health benefits, aquatic environmental, bio-diversity and economic development functions.

#### 3.3 Status of Project Preparation

Feasibility study prepared by KREBS

## 3.4 Technology proposed

The technology proposed is based, firstly, on the development of the incineration plant by adopting the technology of fluidized bed and modernizing the existing wastewater treatment plants and secondly of soil treatment and replacement the recovered material.

3.5 Ownership of project Site
The site is in the ownership of the investor and some private persons.
3.6 Specific Project Items
An external assistance is needed to finalize technical solution for soil recovery.
4. Project Effects and Interactions
4.1 Public's Expression of Interest
Public expression of interest is positive.
4.2 Environmental Impact Assessment
□ yes ☒ no
□ planned □ in progress □ finished/completed □ accepted □ rejected
4.3 Sensitivity of Locality/Receptor
River Teleajen is definitely changed from the 3 <sup>rd</sup> category of quality to the degraded river on a distance of 30 Km where discharges its water into the river Prahova
4.4 Primary Effects of Project
Primary effect of the project is 50 hectares of land put in its real value, mainly with the agricultural function.

5. Economic Project .	<b>Justification</b>		
5.1 Economic Project Be	nefits		
Economic project benefits hor the feasibility study phase	s not been calculated due to the fact that the project is in		
<b>Employment/income effects</b>			
during construction period	80 – 90 employees		
during operation period	10 – 15 employees		
Other economic benefits			
5 2 Faanamia Internal D	ate of Deturn (FIDD)		
5.2 Economic Internal R	ate of Return (EIRR)		
Has an EIRR been calculate	d		
total investment costs of proje	ect 2.800.000 USD		
planned annual depreciation	NA		
planned annual operation co.	sts 50.000 USD		
planned annual revenues	450.000 USD		
6. Financial Viability			
<b>6.1 Estimated Investmen</b>	at Cost		
Investment cost	2.800.00 USD		
	Allocation of capital cost		
Land	150.000 USD		
Construction and machinery			
Planning and supervision	180.000 USD		
Total cost	2.800.000 USD		
On an annual basis			
Year of cost estimate	1998		
Nature of cost estimate (prel			
Preliminary calculati			
<b>6.2 Estimated Operation</b>			
<b>Expected annual (operations</b>	al) recurrent cost (in real terms)		
50.000 USD			
Repair and replacement cos	5.000 USD		
Total operational cost	50.000 USD		
Year of cost estimate	1998		
Nature of cost estimate (prel	iminary, adequate, sources of information)		
The cost estimation is prelimit cost is put into evidence	nary and the source of information is NEAP where the total		

<b>6.3 Estimate of Revenues</b>			
Expected annual revenues (in rea	l terms)		
450 000 HgD			
450.000 USD			
Year of estimate			
Nature of estimate (preliminary,	adaguata atc)		
Nature of estimate (premimary,	auequate, etc.)		
The revenue estimate is preliminary	7		
6.4 Financial Internal Rate o	f return (FIRR)		
Has a FIRR been calculated?	□ yes	$\mathbf{X}_{no}$	
6.5 Anticipated/Proposed Fu	nding Scheme		
6.5 Anticipated/Proposed Fu Source of funding	nding Scheme Secured	Requested	Non-
	Secured	•	Non- secured
Source of funding	Secured	Requested urrency [USD]	
Source of funding  1. Equity of project owner	Secured	•	
Source of funding  1. Equity of project owner 2. National Environmental	Secured	•	
1. Equity of project owner 2. National Environmental Fund	Secured	•	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund	Secured	urrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget	Secured	•	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget	Secured	urrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget	Secured	urrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional	Secured	urrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget	Secured	urrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan	Secured	urrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant	Secured	urrency [USD]	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant 10. Commercial bank loan	Secured	800.000	
1. Equity of project owner 2. National Environmental Fund 3. Water Management Fund 4. Public loan – central budget 5. Public loan – regional budget 6. Public grant – central budget 7. Public grant – regional budget 8. International loan 9. International grant	Secured	urrency [USD]	

 $<sup>\</sup>boldsymbol{X}$  This fund is to be requested from the polluter that is ROMFOSFOCHIM – Valea Călugărească

Project No.

WWTP at CONSUIN BEREGSAU Timis

Date of first setting up:	1999	Date of latest update :
	WHITE GOVERN	DI DEDEGGAMENT
<b>Project Title:</b>	WWTP at CONSU	IN BEREGSAU Timis
· ·		
Responsible/Leg	ral Rody	
		DING TIMISOARA
Authority/Company		DING TIMISOARA
Name	Eng. Alexandru Lor	rincz
Address	Localitatea Beregsa	u Mare, 190 630 judetul Timis
Telephone	192 018	
	192 098	
Fax	192 018	
	192 092	
e-mail		
e-man		
Project Target	Reduction of organic load and pollution with grease on Bega	
Troject Target	river	
<b>Investment Costs</b>	600 000 USD	
C4-4		7
<b>Status of Project</b>	8 8	x planned emerging concept
Language of Proje	ect Documents	$f x$ Romanian $f \Box$ English $f \Box$
		German
		Summary in English: U yes 🗴 no

# 1 Project title WWTP at CONSUIN BEREGSAU Timis

## 2 Investor Details

#### 2.1 Authority/Company

Name	SC CONSUIN BEREGSAU
Address	Localitatea Beregsau Mare, judetul Timis
Telephone	192 018, 192 098
Fax	192 018, 192 098

#### 2.2 Contact persons

Dr. Eng. Ioan Petroman

#### 2.3 Advisor/Consultant

ICIM Bucharest, Spl. Independentei 294, sector 6, Tel.40.1.637.30.20, Fax.40.1.312.13.93

# 2.4 Legal/Financial Status

Private company with the majority of shares belonging to state.

#### 2.5 Authority/Company profile

Pig farms

Number of employees: 737

Annual revenue: 448 693 926 830 lei = 44 869 392 USD Annual expenses: 381 085 892 759 lei = 38 108 500 USD

Profit : 67 608 034 079 lei = 6 760 000 USD

The data are valid for 1998.

# 2.6 Planning/Implementing Extent/Capacity of the Investor

The investor has capacity of administration, supervision of erection and operation of the new structures.

2.7 Institutions/Enterprises beside the Investor
Not applicable.
3. PROJECT DESCRIPTION
3.1 Project Outline
The project is a structural one. The project outline is the construction of WWTP, which
is to reduce essentially the organic load of the transboundary river Bega.
3.2 Primary Needs for the Project
The primary needs for the project are the availability of funds.
3.3 Status of Project Preparation
The project has not been started yet.
For Foreign and the control of the c
3.4 Technology proposed
The technology proposed is based on the activated sludge process with the total nitrification.
munication.
2.5 Own auchin of musicat Site
3.5 Ownership of project Site  The site is in the ownership of the titleholder.
The site is in the ownership of the uncholder.

3.6 Specific Project Item	NS .	
A complete nitrification is to l		
The project is to pay attention	on grease removal from wastewater resulted.	
4. Project Effects and	Interactions	
4.1 Public's Expression	of Interest	
Public's attitude is positive.		
4.2 Environmental Impa	nct Assessment	
<b>X</b> yes $\square$ no		
<u></u>		
$\mathbf{x}$ planned $\square$ in progre	ess	
N Ap	/D 4	
4.3 Sensitivity of Localit	•	
	ent of the wastewater resulted from the company. The	
the river should be conserved	garded in the transboundary context. Biodiversity state of	
the fiver should be conserved	and improved.	
4.4 Primary Effects of P	roject	
Ţ Ţ	are to be felt at the local and regional level. The quality of	
	proved, increasing the life conditions in the downstream	
ecosystems.	proved, mercusing the me conditions in the downstream	
•	discharges of about 1000 tones suspended solids, 1900	
tones of BOD5 and 540 tones of grease into the river Bega.		
5. Economic Project.	Justification	
5.1 Economic Project Be	enefits	
The project economic benefits have not been calculated because the project is ongoing		
now.		
<b>Employment/income effects</b>		
during construction period	30-35 employees	
during operation period	15-20 employees	
Other economic benefits	10 20 employees	
Not applicable.		
not applicable.		

5.2 Economic Internal Rate of Return (EIRR)		
Has an EIRR been calculated		
has an EIRR been calculated	☐ yes	
	<b>X</b> no	
total investment costs of project	600 000 USD	
planned annual depreciation	27 000 USD	
planned annual operation costs	25 000 USD	
planned annual revenues	100 000 USD	
6. Financial Viability		
<b>6.1 Estimated Investment C</b>	Cost	
Investment cost		
Al	location of capital cost	
Land	0 USD	
Construction and machinery	580 000 USD	
Planning and supervision	20 000 USD	
Total cost	600 000 USD	
On an annual basis		
Year of cost estimate	1998	
Nature of cost estimate (prelimin	nary, adequate, etc.)	
Preliminary calculation		
<b>6.2 Estimated Operational</b>	Cost	
Expected annual (operational) r		
25 000 USD		
Repair and replacement cost	5 000 USD	
Total operational cost	30 000 USD	
Year of cost estimate	1998	
	nary, adequate, sources of information)	
The nature of cost estimate is preli		
The source of information is RAAR.		
6.3 Estimate of Revenues		
Expected annual revenues (in real terms)		
100 000 USD	,	
Year of estimate	1998	
Nature of estimate (preliminary, adequate, etc.)		
Nature of cost is preliminary.		
I .		

6.4 Financial Internal Rate of return (FIRR)				
Has a FIRR been calculated?	☐ yes [	X no		
6.5 Anticipated/Proposed Fu	6.5 Anticipated/Proposed Funding Scheme			
Source of funding	Secured	Requested	Non-	
			secured	
	Cı	urrency [USD]		
1. Equity of project owner		600 000		
2. National Environmental				
Fund				
3. Water Management Fund				
4. Public loan – central budget				
5. Public loan – regional budget				
6. Public grant – central budget				
7. Public grant – regional				
budget				
8. International loan				
9. International grant				
10. Commercial bank loan				
11. Other sources				
Total funds / requirements		600 000		

Project No.

WWTP at SC SUINPROD Independenta - jud.Galati

Date of first setting up:	1995	Date of latest update: 1998
	Т	
<b>Project Title:</b>	WWTP at SC SUIN	IPROD Independenta - jud.Galati
Responsible/Leg	gal Body	
Authority/Company	SC SUINPROD IN	DEPENDENTA
Tauristry, Company		
Name	Dr. Valentin Balan	
Address	Comuna Independe	nta, judetul Galati
11001000		Judetoz Curun
Telephone	036-430 784	
relephone	030 130 701	
Fax		
1 4/1		
e-mail		
<b>Project Target</b>	Reduction of organ	ic load on the river Siret.
Troject Target		
<b>Investment Costs</b>	800 000 USD	
mvestment Costs		
<b>Status of Project</b>	ongoing	planned  amerging concept
Language of Proje	ect Documents	
		x Romanian ☐ English ☐
		German
		Summary in English: ves 🗓 no

# 1 Project title WWTP at SC SUINPROD Independenta - jud.Galati

# 2 Investor Details

#### 2.1 Authority/Company

Name	SC SUINPROD - Independenta
Address	Comuna "Independenta", judetul Galati
Telephon e	036-430 784
Fax	

## 2.2 Contact persons

Eng.Florin Ghiata

#### 2.3 Advisor/Consultant

ICPEAR Bucharest

## 2.4 Legal/Financial Status

Private company with the state shares (majority).

# 2.5 Authority/Company profile

Pig farm.

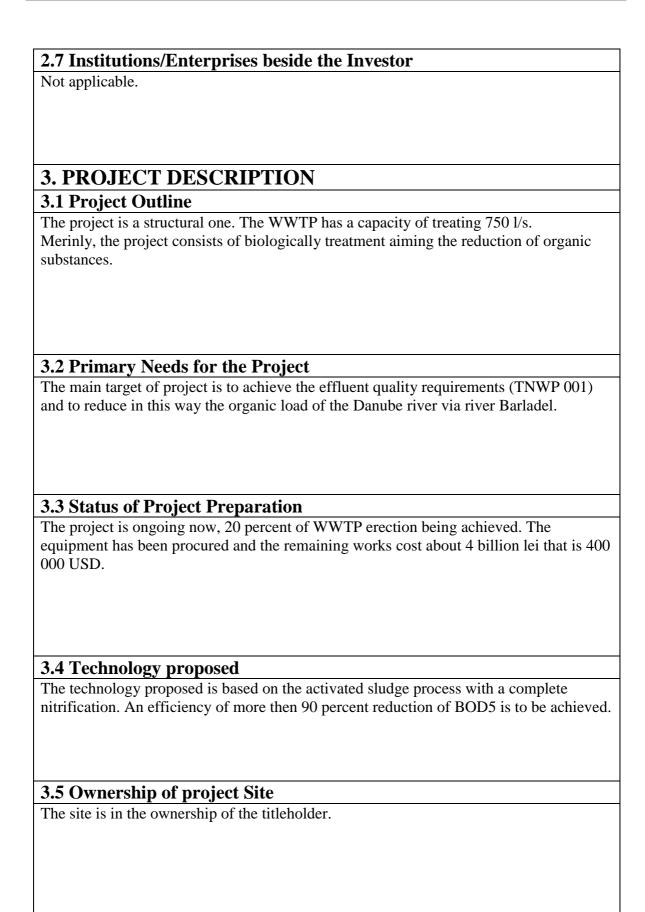
Number of employees: 150

Annual revenue: 20 billion lei = 2 million USD Annual expenses: 20 billion lei = 2 million USD

Profit:0

# **2.6 Planning/Implementing Extent/Capacity of the Investor**

The titleholder has capacity of administration, supervision of erection and operation of the new structure.



3.6 Specific Project Item	ns .	
WWTP is located in rural area and there will be difficulties to get skilled operators. A laboratory for wastewater analysis is very important item for achieving the expected		
results.	19818 18 very important from for demoving the expected	
4. Project Effects and	l Interactions	
4.1 Public's Expression		
	roject implementation is positive.	
4.2 Environmental Impa	act Assessment	
<b>x</b> yes	□ no	
☐ ☐ planned ☐ in progr	ress $\square$ finished/completed $\boxed{\mathbf{x}}$ accepted $\square$ rejected	
N Ap		
4.3 Sensitivity of Localit	y/Receptor	
River Barladel - the receiver v	water has a reduced dilution capacity and that is why the	
biological state is poor having significant impact on the Danube river basin.		
4.4 Primary Effects of P		
The primary effects of the project will be felt at the local and regional level. The quality		
l <del>-</del>	nproved increasing the life conditions in the downstream	
	a). There will be a yearly reduction of 31 000 tones of	
	s of BOD5 and 7500 tones of ammonia - NH <sub>4</sub> <sup>+</sup> which will	
not be discharged into the natu	ural body of the river.	
5. Economic Project Justification		
5.1 Economic Project Benefits		
The project economic benefits have not been calculated because the project is ongoing		
now.		
Employment/income effects		
during construction period	30-40 employees	
during operation period	20-25 employees	
Other economic benefits		
Not quantified.		
_		

5.2 Economic Internal Rate of Return (EIRR)		
Has an EIRR been calculated		
lias an EIKK been calculated	☐ yes	
	<b>X</b> no	
total investment costs of	800 000 USD	
project		
planned annual depreciation	NA	
planned annual operation	40 000 USD	
costs		
planned annual revenues	100 000 USD	
6. Financial Viability		
6.1 Estimated Investment C	Cost	
Investment cost		
	location of capital cost	
Land	0 USD	
Construction and machinery	780 000 USD	
Planning and supervision	20 000 USD	
Total cost	800 000 USD	
On an annual basis	000 000 CB2	
Year of cost estimate	1998	
Nature of cost estimate (prelimin		
Preliminary calculation	inity, unequate, every	
6.2 Estimated Operational	Cost	
Expected annual (operational) recurrent cost (in real terms)		
40 000 USD		
10 000 052		
Repair and replacement cost	10 000 USD	
Total operational cost	40 000 USD	
Year of cost estimate	1998	
Nature of cost estimate (prelimin	nary, adequate, sources of information)	
The nature of cost is preliminary.		
The main source of information is	RAAR.	
<b>6.3 Estimate of Revenues</b>		
Expected annual revenues (in real terms)		
100 000 USD		
Year of estimate	1998	
Nature of estimate (preliminary, adequate, etc.)		
Nature of estimate is preliminary and is based on the update indexes for investment in		
respective type of work		

6.4 Financial Internal Rate of return (FIRR)			
Has a FIRR been calculated?	☐ yes	<b>X</b> no	
6.5 Anticipated/Proposed Funding Scheme			
Source of funding	Secured	Requested	Non-
			secured
	Cu	ırrency [USD]	
1. Equity of project owner	800 000		
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements	800 000		

# **Industrial Sector**

Project No. \*
Self Monitoring of Big Industries

Date of first setting up:	1995		Date of latest update	e: 03.199	98
Project Title :	Self monitoring of big industries				
Responsible/Legal Body					
Authority/Company	Ministry of Inc	dustry	and Commerce		
Name	Ing. Cristiana Ion – director				
Address	Calea Victoriei 153, Cod 734 Sector 1, Bucharest				
Telephone	40.1.659.41.91.				
Fax	40.1.659.41.91.				
e-mail					
Project Target	To provide a base for water pollution prevention and for alarming system				
<b>Investment Costs</b>	1 118 000 USD				
<b>Status of Project</b>	ongoing	X	planned	nerging concept	
<b>Language of Project Documents</b>		nts	X Romanian German Summary in Engli	☐ English ☐ sh: ☐ yes ☒ n	

<sup>\*</sup> This project has not been ranked in the NEAP with its priority.

# 1 Project title

Self monitoring of big industries

## 2 Investor Details

## 2.1 Authority/Company

Name	Ministry of Industry and Commerce
Address	Calea Victoriei, Nr. 152, Cod 734, Sector 1, București
Telephone	40.1.659.41.91
Fax	40.1.659.41.91

#### 2.2 Contact persons

Ing. Cristiana Ion - director

#### 2.3 Advisor/Consultant

ICIM - București, Spl. Independenței, Nr. 294, sector 6, București, ROMÂNIA

# 2.4 Legal/Financial Status

Central authority.

#### 2.5 Authority/Company profile

NA

# 2.6 Planning/Implementing Extent/Capacity of the Investor

Coordination, controlling the compliance with regulations, drafting specific legislation.

# 2.7 Institutions/Enterprises beside the Investor

Ministry of Water, Forest and Environmental Protection. Other ministries involved in the problem, according to LEP 138/1995

3. PROJECT DESCRIPTION
3.1 Project Outline
This non-structural project will provide guidelines for designing the self monitoring networks on the site of big industrial companies.
3.2 Primary Needs for the Project
The main target of the project is to provide big industry with guidelines for designing their self monitoring networks in order to get the reliable and compatible results for realizing the real state of environment on the respective site.
3.3 Status of Project Preparation
The project proposed in the NEAP.
3.4 Technology proposed
Not applicable (NA)
3.5 Ownership of project Site
The project site is in the ownership of the respective titleholder.
3.6 Specific Project Items
The project concerns also other environmental factors beside water. A few representative demonstration networks will be put in operation.
4. Project Effects and Interactions
4.1 Public's Expression of Interest
The public attitude is positive and this will be real incentive to assure the transparency, as it is required by the law.
4.2 Environmental Impact Assessment
▼ yes □ no
■ planned
4.3 Sensitivity of Locality/Receptor
NA

4.4 Primary Effects of Project				
All big industries will have the re	eliable to be conveyed in order to know the state of			
environment on their sites.				
5. Economic Project Ju	stification			
5.1 Economic Project Bene	fits			
NA				
Employment/income effects				
during construction period N	A			
during operation period N	A			
Other economic benefits	NA			
5.2 Economic Internal Rat	e of Return (EIRR)			
	□ yes			
Has an EIRR been calculated				
	X no			
total investment costs of project	1 118 000 USD			
planned annual depreciation	NA			
planned annual operation costs	NA			
planned annual revenues	NA			
6. Financial Viability				
6.1 Estimated Investment	Cost			
Investment cost 1 118 000 USD				
Allocation of capital cost				
Land	0 USD			
Construction and machinery	1 000 000 USD			
Planning and supervision	118 000 USD			
Total cost	1 118 000 USD			
On an annual basis				
Year of cost estimate	1998			
Nature of cost estimate (prelim	inary, adequate, etc.)			
Preliminary calculation				

<b>6.2 Estimated Operational C</b>	Cost		
<b>Expected annual (operational) re</b>	current cost (in re	al terms)	
NA			
Repair and replacement cost	20 000 US	D	
Total operational cost	118 000 US	D	
Year of cost estimate	1998		
Nature of cost estimate (prelimin	ary, adequate, sou	rces of information)	
NA			
<b>6.3</b> Estimate of Revenues			
<b>Expected annual revenues (in rea</b>	al terms)		
NA			
Year of estimate			
Nature of estimate (preliminary,	adequate, etc.)		
NA	• ,		
6.4 Financial Internal Rate of	of return (FIRR)	)	
Has a FIRR been calculated?	☐ yes	X no	
6.5 Anticipated/Proposed Fu	ınding Scheme		
Source of funding	Secured	Requested	Non- secured
		Currency [USD]	
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget		1 118 000	
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		1 118 000	

## Project No. BII1 - 2

Modernization of Installations from SC LETEA SA.- Bacău

Date of first setting up:	1995	Date of latest update:	03.1998
Project Title:	Modernization of inst	tallations from SC LETH	EA SA Bacău

Responsible/Leg	gal Body			
Authority/Company	S.C. LETEA S.A -	BACĂU		
Name	Ing. Chiruță Petre	- manager		
Address	Str. Letea, nr. 17, l	Bacău		
Telephone	034/17.29.00			
Fax	034/17.26.68			
e-mail				
Project Target	The main target of the project is to reduce the organic load (including nutrients) on the river.			
<b>Investment Costs</b>	1 500 000 USD			
<b>Status of Project</b>	ongoing	☐ planned ☐ emerging concept		
Language of Proje	ect Documents	⊠ Romanian    □ English    □  German  Summary in English:    □ yes    ▼ no		

## 1 Project title

Modernization of installations from SC LETEA – Bacău SA.

## 2 Investor Details

## 2.1 Authority/Company

Name	SC LETEA – Bacău
Address	Str. Letea, Nr. 17, Bacău
Telephone	034/17.29.00
Fax	034/17.26.68

#### 2.2 Contact persons

Ing. Georgeta Farcaș

#### 2.3 Advisor/Consultant

SC CEPROHART SA, Brăila ICIM București, Fax 40.1. 312.13.93

#### 2.4 Legal/Financial Status

In the privatization process.

## 2.5 Authority/Company profile

The company is specialized in pulp and paper production.

Number of employees (1997): 1580.

Annual revenue (1997): 200.000.000.000 lei (22 988 500 USD). Annual expenses (1997): 199.500.000.000 lei (22 931 034 USD).

Annual profit (1997): 500000.000 lei (57 471 USD).

## 2.6 Planning/Implementing Extent/Capacity of the Investor

The investor has capacity of administration, supervision of erection and operation of the new structures.

## 2.7 Institutions/Enterprises beside the Investor

SC CELOHART SA – Brăila ICIM – București.

#### 3. PROJECT DESCRIPTION

## 3.1 Project Outline

Structural project.

Mainly, the project consists in automatization of pH correction, and rehabilitation or replacing the mechanical equipment at the sedimentation tanks, aeration tanks and sludge treatment line. The site of the plant remains the same as it is, now.

#### 3.2 Primary Needs for the Project

The main target of project is achieve the effluent quality requirements (TNWP 001) and to reduce in this way the organic load of the Siret river. By implementing the project there will be on improvement in aquatic environment and other functions of the river: recreation, etc. in the transboundary context.

## 3.3 Status of Project Preparation

The project is at the prefeasibility level.

## 3.4 Technology proposed

The existing technology for wastewater treatment is to be maintained: primary sedimentation, pH correction using lime, aeration tanks and secondary sedimentation.

3.5 Ownership of project Site
The site is in the ownership of the investor.
3.6 Specific Project Items
The project will focus the limitation of losses, reduction of water consumption, recycling of valuable substances and increasing of treatment efficiency.
4. Project Effects and Interactions
4.1 Public's Expression of Interest
The public interest is positive.
4.2 Environmental Impact Assessment
yes □ no
■ planned    □ in progress    □ finished/completed    □ accepted    □ rejected
4.3 Sensitivity of Locality/Receptor
The receiving water is river Siret discharging its water into the Danube. The quality of the receptor should correspond to the first class due to the fact that downstream are users who require to treat water for drinking purposes and the sensitive area of Delta. The will be a reduction of: 10190 tones per year of BOD, 455 tones per year – N, and 455 tones per year – P.
4.4 Primary Effects of Project
The primary effects of the project will be felt at the local and regional level. The quality of the river – receptor will be improved increasing the life conditions in the downstream ecosystems (Danube and Delta).

5. Economic Project Justification				
5.1 Economic Project Be	nefit	ts		
The project economic benefits now.	have	not been calculated because the project is ongoing,		
<b>Employment/income effects</b>				
during construction period	20 –	30 employees		
during operation period	insig	nificant		
Other economic benefits				
5.2 Economic Internal R	ate o	of Return (EIRR)		
Has an EIRR been calculate	d	□ yes ☒ no		
total investment costs of proje	ect	1.500.000 USD		
$planned\ annual\ depreciation$		50.000 USD		
planned annual operation co.	sts	68.000 USD		
planned annual revenues		272.200 USD		
6. Financial Viability				
<b>6.1 Estimated Investmen</b>		ost		
Investment cost		1.500.000 USD		
	Allo	ocation of capital cost		
Land		0 USD		
Construction and machinery	7	1.480.000 USD		
Planning and supervision		20.000 USD		
Total cost		1.500.000 USD		
On an annual basis		1000		
Year of cost estimate		1998		
Nature of cost estimate (prel		ary, adequate, etc.)		
Preliminary calculati		<b>4</b>		
6.2 Estimated Operation				
It is not calculated	ai) rec	current cost (in real terms)		
Repair and replacement cos	t	10.000 USD		
Total operational cost		68.000 USD		
Year of cost estimate		1998		
Nature of cost estimate (prel	imina	ary, adequate, sources of information)		
The nature of cost estimate is	prelin	ninary. The source of information is NEAP.		

<b>6.3 Estimate of Revenues</b>			
<b>Expected annual revenues (in rea</b>	l terms)		
272.200 USD			
Year of estimate	1998		
Nature of estimate (preliminary,	adequate, etc.)		
Nature of estimate is preliminary.			
6.4 Financial Internal Rate of return (FIRR)			
Has a FIRR been calculated?	☐ yes ☒ no		

6.5 Anticipated/Proposed Fun	ding Scheme		
Source of funding	Secured	Requested	Non- secured
	Currency [USD]		
1. Equity of project owner		1.500.000	
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		1.500.000	

# Project No. BII1 - 3

Wastewater Treatment Plant at SC CELOHART Bacău

Date of first setting up:	1995	Date of latest update:	01.1998
Project Title :	Wastewater treatmen Brăila	t plant at SC CELOHAI	RT DONARIS -

Responsible/Leg	Responsible/Legal Body			
Authority/Company	S.C. CELOHART I	DONARIS - BRĂILA		
Name	Ing. Gurău Viorel Voinea - manager			
Address	Şoseaua Vizirului ,	Km 10		
Telephone	039/67.51.10; 039/69.41.10			
Fax				
e-mail				
Project Target	Reducing the organic load of the Danube river and achieving the quality requirements for effluents according to TNWP 001.			
<b>Investment Costs</b>	2.700.000 USD			
<b>Status of Project</b>	X ongoing	planned emerging concept		
<b>Language of Project Documents</b>		⊠ Romanian    □ English    □  German  Summary in English:  □ yes    ☒ no		

## 1 Project title

Wastewater treatment plant at SC CELOHART DONARIS - Brăila

## 2 Investor Details

## 2.1 Authority/Company

Name	SC CELOHART DONARIS - Brăila
Address	Şoseaua Vizirului km 10
Telephone	039/67.51.10 039/69.41.00
Fax	039/61.13.63

## 2.2 Contact persons

Ing. Gurău Viorel Voinea - manager

#### 2.3 Advisor/Consultant

CEPROHART - Brăila

#### 2.4 Legal/Financial Status

Private company.

## 2.5 Authority/Company profile

The company is specialized in pulp and paper production.

## 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, supervision of the works during erection, operation and maintenance of the new structures.

## 2.7 Institutions/Enterprises beside the Investor

CEPROHART - Brăila

#### 3. PROJECT DESCRIPTION

## 3.1 Project Outline

A wastewater treatment plant will be built. This structural project will comprise a chemical treatment and a biological treatment with a capacity of 1284 l/s (22 827 cu.m per day). The site of the plant will be included in the site of the pulp and paper factory.

#### 3.2 Primary Needs for the Project

The target of project is to contribute to diminish the organic load of the Danube river; besides the sulfides will be completely eliminated. The project implementation is to improve the aquatic environment, bio-diversity downstream and a better use of the resource by the Romanian and Ukrainian users.

#### 3.3 Status of Project Preparation

The project is at the feasibility level o promotion.

## 3.4 Technology proposed

Chemical treatment and biological treatment of wastewater are to be provided. The biological treatment is to be based an activated sludge process with a capacity of 1284 l/s.

## 3.5 Ownership of project Site

The project is in the ownership of the titleholder.

## 3.6 Specific Project Items

The project will comprise the separation of CELOHART sewage collection system from DUNACOR wastewater treatment plant.

## 4. Project Effects and Interactions

## 4.1 Public's Expression of Interest

The public attitude is positive.

4.2 Environmental Impact Assessment			
<b>⋈</b> ye	s 🗆 no		
planned X in progr	ress  finished/completed  accepted		
rejected			
4.3 Sensitivity of Localit	ty/Receptor		
Danube river, which is receptor of CELOHART DONARIS effluent, is used downstream by the cities of Galați and Tulcea for all kinds of purposes including drinking ones. Besides the Danube river Delta is a sensitive zone.			
4.4 Primary Effects of P	Project		
	reduction of 350 tones of BOD per year, which will not be iver. This effect will be on local, regional and		
5. Economic Project	Justification		
5.1 Economic Project Bo	enefits		
The project is ongoing, now and the economic project benefits could not be calculated.			
<b>Employment/income effects</b>			
during construction period	- · · ·		
during operation period	eriod 30 – 35 employees		
Other economic benefits			
5.2 Economic Internal F	Rate of Return (EIRR)		
Has an EIRR been calculate	ed yes x no		
total investment costs of proje	<i>lect</i> 2.700.000 USD		
planned annual depreciation	20.000 USD		
planned annual operation co	osts 300.000 USD		
planned annual revenues	490.000 USD		

6. Financial Viability				
6.1 Estimated Investment Cost				
Investment cost 2.700.000 USD				
All	ocation of capital cost			
Land	0 USD			
Construction and machinery	2.670.000 USD			
Planning and supervision	30.000 USD			
Total cost	270.000 USD			
On an annual basis				
Year of cost estimate	1998			
Nature of cost estimate (prelimin	nary, adequate, etc.)			
Preliminary calculation				
6.2 Estimated Operational (	Cost			
Expected annual (operational) re	ecurrent cost (in real terms)			
It is not calculated.				
Repair and replacement cost	10.000 USD			
Total operational cost	68.000 USD			
Year of cost estimate 1998				
Nature of cost estimate   1998 Nature of cost estimate (preliminary, adequate, sources of information)				
The nature of cost estimate is preli	minary and the source of information is NEAP.			
6.3 Estimate of Revenues				
Expected annual revenues (in re-	al terms)			
490.000 USD				
Year of estimate	1998			
Nature of estimate (preliminary,	adequate, etc.)			
Nature of estimate is preliminary.				
6.4 Financial Internal Rate	of return (FIRR)			
Has a FIRR been calculated?	☐ yes 🔀 no			

6.5 Anticipated/Proposed Funding Scheme			
Source of funding	Secured	Requested	Non- secured
	Currency [USD]		
1. Equity of project owner		2.700.000	
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements			

## Project No. BII1 - 4

Wastewater Treatment Plant of SC COLOROM CODLEA SA

Date of first setting up:	1995	Date of latest update:	04.1998
<b>Project Title:</b>	Wastawater treatmen	t plant of SC COLORO	M CODI FA SA
Troject Title.	wastewater treatmen	t plant of SC COLORO	WI CODLEA SA.

Responsible/Leg	gal Body	
Authority/Company	S.C. COLOROM	I CODLEA S.A.
Name	Ing. Bouaru Elen	a - manager
Address	Str. Lungă nr. 27	, Codlea, Jud. Brașov
Telephone	068/25.13.01	
Fax	068/25.17.58; 15	.07.37
e-mail		
<b>Project Target</b>	Reducing the org removal from the	ganic load on river Olt and color, sulfide wastewater.
<b>Investment Costs</b>	25 300 000 USD	
<b>Status of Project</b>	ongoing	■ planned    □ emerging concept
Language of Proj	ect Document	Summary in English: \( \begin{array}{ c c c c c c c c c c c c c c c c c c c

## 1 Project title

Wastewater treatment plant of SC COLOROM CODLEA SA.

## 2 Investor Details

## 2.1 Authority/Company

Name	SC COLOROM CODLEA SA.
Address	Str. Lungă, nr. 27, județul Brașov.
Telephone	068/25.13.01 int. 319
Fax	

## 2.2 Contact persons

Ing. Jercan Macdolna

#### 2.3 Advisor/Consultant

IPROMED - București

## 2.4 Legal/Financial Status

Privatized company.

## 2.5 Authority/Company profile

The company is specialized to produce dyes.

Number of employees (1997): 806

Annual revenue (1997): 56.289.000.000 lei (6.470.000 USD) Annual profit (1997): 11.157.000.000 lei (132.988 USD).

## 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, supervision of the works during erection, operation and maintenance of the new structures.

## 2.7 Institutions/Enterprises beside the Investor

**IPROMED Bucharest** 

3. PROJECT DESCRIPTION
3.1 Project Outline
The project will comprise a chemical treatment followed by a biological treatment and finally an adsorption process is to be applied. The capacity of the plant is 3870 cu m per day. The project is a structural one and the site of the project is on the existing one.
3.2 Primary Needs for the Project
The main target of the project is to remove phenols, sulfides and color from the wastewater and to reduce the organic load on the river Olt via river Vulcănița.
3.3 Status of Project Preparation
The project status is at the prefeasibility level.
3.4 Technology proposed
The technology approached is under checking by means of a pilot plant: chemical treatment by lime, then activated sludge process and finally adsorption might be applied.
3.5 Ownership of project Site
The site is in the ownership of the titleholder.
3.6 Specific Project Items
Advanced treatment of wastewater in order to remove phenols and color and solid and liquid waste reservoirs will be provided.
4. Project Effects and Interactions
4.1 Public's Expression of Interest
The public attitude is positive.
4.2 Environmental Impact Assessment
□ yes ⊠ no

4.3 Sensitivity of Locality/Receptor			
,	degraded river its water flow to the river Olt		
disturbing the fish life and other el	ements of aquatic life.		
4.4 Primary Effects of Proje	ect		
• •	ne local and regional levels. By implementing the nes of phenols and 5 tones per year of sulfides will not		
5. Economic Project Jus	tification		
5.1 Economic Project Benef			
en Leonomie i roject Bener			
The project is to be approached, the	at is why economic benefits are not calculated.		
Employment/income effects			
during construction period NA			
during operation period NA			
Other economic benefits			
<b>5.2 Economic Internal Rate</b>	of Return (EIRR)		
	☐ yes		
Has an EIRR been calculated	⊠ no		
total investment costs of project	25.300.000 USD		
planned annual depreciation	20.000.000		
planned annual operation costs	NA		
planned annual revenues	1.500.000 USD		
6. Financial Viability			
6.1 Estimated Investment Cost			
Investment cost			
Allocation of capital cost			
Land	0 USD		
Construction and machinery	25.200.000 USD		
Planning and supervision	100.000 USD		
Total cost	25.300.000 USD		
On an annual basis			
Year of cost estimate 1998			
Nature of cost estimate (preliminary, adequate, etc.)  Preliminary calculation			
i temmary calculation			

<b>6.2 Estimated Operational C</b>	Cost		
<b>Expected annual (operational) re</b>	current cost (in real	terms)	
NA			
Repair and replacement cost	NA		
Total operational cost	NA		
Year of cost estimate			
Nature of cost estimate (prelimin	ary, adequate, sourc	es of information)	
Nature of cost estimate is prelimina	ary and the source of i	nformation is NEAP.	
<b>6.3 Estimate of Revenues</b>			
<b>Expected annual revenues (in rea</b>	al terms)		
NA			
Year of estimate			
Nature of estimate (preliminary,	adequate, etc.)		
NA	_		
6.4 Financial Internal Rate of	of return (FIRR)		
Has a FIRR been calculated?	☐ yes	X no	
6.5 Anticipated/Proposed Fu	inding Scheme		
Source of funding	Secured	Requested	Non- secured
	Cı	urrency [USD]	
1. Equity of project owner		25.300.000	
2. National Environmental Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		25,300,000	

## Project No. BII1 - 5

Wastewater Treatment Plant Expansion at SC ANTIBIOTICE SA - Iași

Date of first setting up:	1995	Date of latest update :	02.1998
Project Title :	Wastewater treatr SA - Iaşi.	nent plant expansion at SC A	NTIBIOTICE

Responsible/Leg	gal Body		
Authority/Company	S.C. ANTIBIOTIC	E S.AIași	
Name	Ioan Nani - director	r	
Address	Str. Valea Lupului	nr. 1 Iaşi	
Telephone	032/21.10.10		
Fax	032/21.10.20		
e-mail			
<b>Project Target</b>	Removing phenols, amonia and organic pollutant to decrease the impact on the transboundary river Prut.		
<b>Investment Costs</b>	1 800 000 USD		
<b>Status of Project</b>	ongoing [	planned emerging concept	
Language of Proj	ect Documents	⊠ Romanian    □ English    □  German  Summary in English:  □ yes    ☒ no	

## 1 Project title

Wastewater treatment plant expansion at SC ANTIBIOTICE SA - Iași.

## 2 Investor Details

## 2.1 Authority/Company

Name	SC ANTIBIOTICE SA - Iași.
Address	Str. Valea Lupului, nr. 1, Iași
Telephone	32/14.27.70
Fax	32/21.10.20

## 2.2 Contact persons

Ec. Ioan Nani – economic director

#### 2.3 Advisor/Consultant

IPROMED - Bucharest

## 2.4 Legal/Financial Status

Privatized company.

#### 2.5 Authority/Company profile

The company is specialized in the production of pharmaceutical products.

Number of employees (1998): 8273 employees

Annual revenue (1997): 299 667.7 x 10<sup>6</sup> lei (34400.000 USD) Annual expenses (1997): 176 236.2 x 10<sup>6</sup> lei (22.257.000 USD) Gross profit (1997): 120 431.5 x 10<sup>6</sup> lei (15.200.000 USD)

## 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, supervision the erection, operating and maintenance of the new structures.

## 2.7 Institutions/Enterprises beside the Investor

**IPROMED Bucharest** 

3. PROJECT DESCRIPTION
3.1 Project Outline
The project is a structural one. The main components of the project are mechanical treatment followed by chemical and biological processes for a capacity of 25 l/s. The site of the plant is at the same site of the factory.
3.2 Primary Needs for the Project
The main target of the project is to remove phenols, amonia and to reduce the organic load from the wastewater in order to reach the standard requirements mentioned in TNWP 001. By implementing the respective project health benefits aquatic environment, recreation conditions in the transboundary river Prut will be improved.
3.3 Status of Project Preparation
The plant is under construction.
3.4 Technology proposed
A mechanical, chemical and biological treatment is to apply to treat 25 l/s of wastewater. Amonia will be completely oxidized by nitrification.
3.5 Ownership of project Site
The site is in the ownership of the titleholder.
3.6 Specific Project Items
The industrial wastewater is to be separated from conventional clean wastewater.
4. Project Effects and Interactions
4.1 Public's Expression of Interest
The public attitude is positive.
<b>4.2 Environmental Impact Assessment</b>
☐ planned ☐ in progress ☒ finished/completed ☐ accepted ☐ rejected

## 4.3 Sensitivity of Locality/Receptor The receiving water – river Bahlui being a low flow river is affected by the respective discharge. Further, the boundary river Prut (Republic Moldavia) receives the influence of the river Bahlui. **4.4 Primary Effects of Project** River Bahlui will become "cleaner" without receiving about 394 000 kg of phenols per year. 5. Economic Project Justification **5.1 Economic Project Benefits** It is not calculated. **Employment/income effects** 20 - 30 employees during construction period during operation period 5 – 10 employees Other economic benefits 5.2 Economic Internal Rate of Return (EIRR) □ ves Has an EIRR been calculated X no 1800 000 USD total investment costs of project planned annual depreciation planned annual operation costs 55 000 USD planned annual revenues 180 000 USD 6. Financial Viability **6.1 Estimated Investment Cost Investment cost** 1800000 USD Allocation of capital cost 0 USD Land **Construction and machinery** 1 775 000 USD Planning and supervision 25 000 USD **Total cost** 1 800 000 USD On an annual basis Year of cost estimate 1998 Nature of cost estimate (preliminary, adequate, etc.)

**Preliminary calculation** 

<b>6.2 Estimated Operational </b>	Cost		
<b>Expected annual (operational) re</b>	ecurrent cost (in rea	l terms)	
NA			
Danish and made areas	10 000 HCD		
Repair and replacement cost	10 000 USD		
Total operational cost	55 000 USD		
Year of cost estimate	1998		
Nature of cost estimate (prelimin	• • •	,	
Nature of cost estimate is prelimina	ary. Source of inform	ation is NEAP.	
<b>6.3 Estimate of Revenues</b>			
<b>Expected annual revenues (in rea</b>	al terms)		
NA			
Year of estimate			
Nature of estimate (preliminary,	adequate, etc.)		
NA			
<b>6.4 Financial Internal Rate</b>	of return (FIRR)		
Has a FIRR been calculated?	□ yes	□ no	
		<b>—</b> •	
6.5 Anticipated/Proposed Fu	ınding Scheme		
Source of funding	Secured	Requested	Non-
Source of funding	Secured	Requesteu	secured
	C	Currency [USD]	
1. Equity of project owner		1 800 000	
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		1 800 000	
/	i e		1

Project No. BII1 - 6

Works for Pollution Reduction at UPS GOVORA S.A.

Date of first setting up:	13/11/1995	Date of latest update : April 1998	
	T		
Project Title:	Works for pollution r	eduction at UPS GOVORA S.A.	

Responsible/Le	gal Body		
Authority/Company	UPS GOVORA S.A	A	
Name	Ing. Grigore Balintescu – director general		
Address	Str. Uzinei, nr. 2, C	Str. Uzinei, nr. 2, Govora	
Telephone	73.77.90		
Fax	73.06.48; 73.05.04		
e-mail			
<b>Project Target</b>	Hydropower plants and other water user protection by total dissolved solids reduction and ammonia		
<b>Investment Costs</b>	13.600.000 USD		
<b>Status of Project</b>	X ongoing	☐ planned ☐ emerging concept	
Language of Proj		⊠ Romanian    □ English    □  German  Summary in English:    □ yes     ▼ no	

Works for pollution reduction at UPS GOVORA S.A.

#### 2 Investor Details

#### 2.1 Authority/Company

Name	S.C. Uzinele sodice
Address	Str. Uzinei nr. 2, Govora, Județul Vâlcea
Telephone	73.77.90
Fax	73.06.48; 73.05.04

#### 2.2 Contact persons

Ing. Grigore Balintescu – general director

Ing. Iordache Elena

#### 2.3 Advisor/Consultant

IRPMED - BUCURESTI

#### 2.4 Legal/Financial Status

Private company

#### 2.5 Authority/Company profile

- Production of caustic soda
- Number of employees (1997): 2200
- Annual revenue (1997): 552.000.000.000 lei (62.000.000 USD)
- Annual expenses (1997): 519.580.000.000 lei (60.500.000 USD)
- Profit: 2.420.000.000 lei (280.000 USD)

## 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, supervision the works during erection, operation and maintenance of new structures.

#### 2.7 Institutions/Enterprises beside the Investor

IRPMED - BUCUREŞTI

#### 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

The structural project, consisting in construction of new reservoirs to dispose off the sludge resulted from the production process and replacement of some equipment's to reduce the ammonia.

#### 3.2 Primary Needs for the Project

The main target of the project is to protect the downstream users of river Olt water against solution with TDS (especially chlorides) and ammonia.

#### 3.3. Status of Project Preparation

The project is on the phase of feasibility study.

# 3.4 Technology proposed

The technology proposed consists of plain sedimentation to separate the solid phase. Besides the coolers working by spraying water will be replaced with "ALFA LAVAL" coolers

#### 3.5 Ownership of project Site

The site does not belong to the titleholder. The necessary land for the reservoirs is supposed to be bought by the end of the year 1998

3.6 Specific Project Items		
The project is to provide facilities for water flow measurements and for the self monitoring network		
4. Project Effects and Interactions		
4.1 Public's Expression of Interest		
Public's attitude is positive.		
<b>4.2 Environmental Impact Assessment</b> □ yes		
■ planned    □ in progress    □ finished/completed    □ accepted    □ rejected		
4.3 Sensitivity of Locality/Receptor		
River Olt is affected by the discharge of wastewater and the aquatic life is poor due to high concentration of chlorides and ammonia in some periods of time		
4.4 Primary Effects of Project		
Reduction to reach 15 mg/l of amonia – NH <sup>+4</sup> losses in the conventional clean water resulted from the factory and control of chloride concentration in the river Olt. The effects will be at the local and regional levels		
5. Economic Project Justification		
5.1 Economic Project Benefits		
The project is ongoing now, that is why the project benefits are not calculated		
Employment/income effects		
<b>during construction period</b> 40 – 50 employees		
during operation period insignificant		
Other economic benefits		

5.2 Economic Internal Rate of Return (EIRR)				
	□ yes			
Has an EIRR been calculated	⊠ no			
total investment costs of project	13.600.000 USD			
planned annual depreciation	NA			
planned annual operation costs	80.000 USD			
planned annual revenues	260.000 USD			
6. Financial Viability				
<b>6.1 Estimated Investment C</b>	ost			
Investment cost	13.600.000. USD			
All	location of capital cost			
Land	$100.000 \text{ USD} \ (\approx 15 - 20 \text{ ha})$			
Construction and machinery	13.370.000 USD			
Planning and supervision	130.000 USD			
Total cost	13.600.000 USD			
On an annual basis				
Year of cost estimate	1998			
Nature of cost estimate (prelimin	nary, adequate, etc.)			
Preliminary calculation				
<b>6.2 Estimated Operational </b>	Cost			
Expected annual (operational) recurrent cost (in real terms)				
NA				
Repair and replacement cost	10.000 USD			
Fotal operational cost 80.000 USD				
Year of cost estimate 1998				
Nature of cost estimate (preliminary, adequate, sources of information)				
Total cost estimate is preliminary	and has bean considered from the NEAP			
6.3 Estimate of Dovonues				
6.3 Estimate of Revenues  Expected annual revenues (in real terms)				
Expected annual revenues (in re	ar terms)			
260.000 USD				
∠00.000 USD				
Year of estimate				
Nature of estimate (preliminary, adequate, etc.)				
<u> </u>				
Nature of estimate is preliminary				

6.4 Financial Internal Rate o	f return (FIRR)		
Has a FIRR been calculated?	☐ yes	X no	
6.5 Anticipated/Proposed Fu	nding Scheme		
Source of funding	Secured	Requested	Non- secured
		Currency [USD]	
1. Equity of project owner		13.600.000	
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		13.600.000	

# Project No. BII1 - 8

Modernizing the Secondary Treatment of WWTP - S.C. SIDERCA - CĂLARAȘI

Date of first setting up:	1995	Date of latest update :	01.1998
Project Title :	Modernizing the s SIDERCA - CĂL	econdary treatment of WW ARAŞI	TP – S.C.

Responsible/Leg	gal Body		
Authority/Company	S.C. SIDERCA S.A CĂLĂRAȘI		
Name	Ing. Radu Ion - director		
Address	Str. Prelungirea Bu	curești, nr. 162	
Telephone	042/33.18.90		
Fax	042/33.18.60		
e-mail			
Project Target	Reduction of Danube River pollution by phenols, cyanides and achievement of standard quality of the effluent.		
<b>Investment Costs</b>	13.900.000 USD		
<b>Status of Project</b>	ongoing		
<b>Language of Project Documents</b>		⊠ Romanian    □ English    □  German  Summary in English:  □ yes    ☒ no	

Modernizing the secondary treatment of WWTP - S.C. SIDERCA - CALARAŞI

#### 2 Investor Details

## 2.1 Authority/Company

Name	S.C. SIDERCA - CALARAŞI
Address	St. Prelungirea București, nr. 162
Telephone	042.33.18.90
Fax	042.33.18.60

#### 2.2 Contact persons

Ing. Radu Ion

#### 2.3 Advisor/Consultant

ICIM – BUCURESTI, Spl. Independenței, Nr. 294, sector 6, tel. 637.30.20, Fax: 401.312.13.93

#### 2.4 Legal/Financial Status

Private company

#### 2.5 Authority/Company profile

- The company is involved in steel industry
- Number of employees (1997): 2900
- Annual revenue (1997): 518.260.845.000 lei (≈60.000.000 USD)
- Annual expenses (1997): 524.970.505.000 lei (≈60.341.379 USD)
- Profit (1997): -

#### 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, supervision during erection, operation and maintenance of new structures.

#### 2.7 Institutions/Enterprises beside the Investor

ICIM București, Spl. Independenței 294, sector 6, Tel 401.637.30.20, Fax: 401.312.13.93

#### 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

The project is a structural one. The project provides the modernizing of the secondary treatment part of the plant with a capacity of 11.345 cu .m per day. The site of the plant will be included in the existing site of the company

#### 3.2 Primary Needs for the Project

The targets of the respective project are to reduce phenols, cyanides, iron discharges into the Danube river. This will contribute to improve aquatic environment, human health, bio-diversity in the national and transboundary context

#### 3.3 Status of project Preparation

The actual status of the project is at the prefeasibility level.

#### 3.4 Technology proposed

The technology which is to be proposed comprises biological treatment by activated sludge process, oxidation of CN<sup>-</sup> and adsorption of phenols

#### 3.5 Ownership of project Site

The site of the plant is in the ownership of the titleholder.

3.6 Specific Project Items		
The project will focus the effluent of the coke preparation factory		
4. Project Effects and	Interactions	
4.1 Public's Expression of		
Public's attitude is positiv		
4.2 Environmental Impa	ct Assessment	
× yes	no	
planned in progre	ess	
4.3 Sensitivity of Locality	y/Receptor	
Treated wastewater is discharged directly into the Danube river (Borcea Branch). Although the Danube river can offer a good dilution of pollutants the respective pollutants might deteriorate the aquatic life		
4.4 Primary Effects of Pr	roject	
The primary effects of the project are implementation will by an annual reduction of 0,2 tones of cyanides and 1,9 tones of phenols, which are now discharged. These effects are to be regarded on the local, regional and transboundary level.		
5. Economic Project J	<b>Justification</b>	
5.1 Economic Project Be	nefits	
The economic project benefits are not calculated		
<b>Employment/income effects</b>		
during construction period	30 – 40 employees	
during operation period	10 – 15 employees	
Other economic benefits		

5.2 Economic Internal Rate of Return (EIRR)			
Has an EIRR been calculated	yes		
	⊠ no		
total investment costs of project	2.500.000 USD		
planned annual depreciation	NA		
planned annual operation costs	125.000 USD		
planned annual revenues	454.000 USD		
6. Financial Viability			
6.1 Estimated Investment C	lost		
Investment cost	2.500.000. USD		
Al	location of capital cost		
Land	0 USD		
Construction and machinery	2.460.000 USD		
Planning and supervision	40.000 USD		
Total cost	2.500.000 USD		
On an annual basis			
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, etc.)		
Preliminary calculation	· · ·		
6.2 Estimated Operational	Cost		
Expected annual (operational) recurrent cost (in real terms)			
NA			
Repair and replacement cost	10.000 USD		
Total operational cost	125.000 USD		
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, sources of information)		
	· · · · · · · · · · · · · · · · · · ·		
Nature of cost estimate is prelimin	ary. The source of information is NEAD		
<b>6.3 Estimate of Revenues</b>			
<b>Expected annual revenues (in re</b>	al terms)		
454.000 USD			
77			
Year of estimate			
Nature of estimate (preliminary	, adequate, etc.)		
Notions of actionate is a selicities			
Nature of estimate is preliminary			

6.4 Financial Internal Rate of return (FIRR)				
Has a FIRR been calculated?	☐ yes	X no		
6.5 Anticipated/Proposed Fu	6.5 Anticipated/Proposed Funding Scheme			
Source of funding	Secured	Requested	Non-	
			secured	
	C	urrency [USD]		
1. Equity of project owner		2.500.000		
2. National Environmental				
Fund				
3. Water Management Fund				
4. Public loan – central budget				
5. Public loan – regional budget				
6. Public grant – central budget				
7. Public grant – regional				
budget				
8. International loan				
9. International grant				
10. Commercial bank loan				
11. Other sources				
Total funds / requirements		2.500.000		

# Project No. BII1 - 9

Modernizing WWTP for Oil Products and Sludge BacăuaBB

Date of first setting up:	Trim IV 1996	Date of latest update:	Trim I 1998
Project Title :	Modernizing WWTP PETROBRAZI – PLO	for oil products and slu DIEŞTI	dge recovery at

Responsible/Leg	gal Body	
Authority/Company	Societatea Naționa	lă a Petrolului PETROM S.A - BUCUREȘTI
Name	Ing. Ioan Popa	
Address	Str. Calea Victoria,	nr. 109 sector 1, București
Telephone	650.26.29	
Fax		
e-mail		
<b>Project Target</b>	Reduction of petrol river Prahova	leum products pollution of river Ialomiţa via
<b>Investment Costs</b>	13.900.000 USD	
<b>Status of Project</b>	X ongoing	☐ planned ☐ emerging concept
Language of Proj	ect Documents	⊠ Romanian  □ English  □     German     Summary in English: □ yes  ☒ no

Modernizing WWTP for oil products and sludge recovery at PETROBRAZI - PLOIESTI

#### 2 Investor Details

#### 2.1 Authority/Company

Name	PETROBRAZI
Address	Comuna Brazi, 2011, Județul Prahova
Telephone	044.12.16.20, 094.30.944
Fax	044.11.26.16

#### 2.2 Contact persons

Ing. Gheorghe Braniste – technical director

#### 2.3 Advisor/Consultant

ICIM – BUCURESTI PETRODESIGN - BUCUREȘTI

#### 2.4 Legal/Financial Status

Private company

#### 2.5 Authority/Company profile

- The company is specialized on petroleum refinery sector.
- Number of employees (1997): 5642
- Annual revenue (1997): 4.530.588. thousand lei(≈520.000.000 USD)
- Annual expenses (1997): 4.481.681.373.thousand lei (≈515.000.000 USD)
- Annual profit (1997): 49.211.215. thousand lei (5.656.000.USD)

#### 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, supervision of works during erection, operation and maintenance of the new structures

#### 2.7 Institutions/Enterprises beside the Investor

PETRODESIGN - BUCURESTI

ICIM - BUCURESTI

#### 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

Structural project. The project comprises the re-circulation of sludge in the WWTP (capacity: 365.5 l/s), phenols recovery and new equipment's for phenols removal. The site of he existing plant will not be changed.

#### 3.2 Primary Needs for the Project

The targets of the project is to remove petroleum compounds, phenols and sulfides out of the wastewater in order to reach the quality standard requirements (TNWPOO1) The project implementation will contribute to the health benefits, aquatic environmental recreation economic development of the riparians.

The project status: Basic design

#### 3.4 Technology proposed

The technology proposed is based on the existing one but modernized by providing new equipment's for phenol removal and recovery and by recycling the sludge

#### 3.5 Ownership of project Site

The site of the plant is in the ownership of the titleholder.

3.6 Specific Project Item	ns	
Repair and replacement of the	damaged sewers will be also provided	
4. Project Effects and	l Interactions	
4.1 Public's Expression	of Interest	
l <del>-</del>	about 25.000 inhabitants are affected with their health and, tants are disturbed by the impact of the respective activity	
4.2 Environmental Impa	act Assessment	
•	ress	
4.3 Sensitivity of Localit	y/Receptor	
<u> </u>	a degraded river in the zone of discharge and there is no pollution. Groundwater is affected on an area of 6000	
4.4 Primary Effects of P	roject	
The primary effects of project implementation are to be related to the local and regional level. On a length of 94 Km downstream the discharging point the river is degraded, and by implementing the respective project the river will become the III quality category		
5. Economic Project.	Justification	
5.1 Economic Project Be	enefits	
The project is ongoing now ar	nd the economic project benefits have not been calculated	
Employment/income effects		
during construction period	30 – 40 employees	
during operation period	Not significant	
Other economic benefits		

<b>5.2 Economic Internal Rate</b>	5.2 Economic Internal Rate of Return (EIRR)		
Has an EIRR been calculated	yes		
	⊠ no		
total investment costs of project	2.800.000 USD		
planned annual depreciation	NA		
planned annual operation costs	150.000 USD		
planned annual revenues	450.000 USD		
6. Financial Viability			
6.1 Estimated Investment C	lost		
Investment cost	2.800.000. USD		
All	location of capital cost		
Land	0 USD		
Construction and machinery	2.760.000 USD		
Planning and supervision	40.000 USD		
Total cost	2.800.000 USD		
On an annual basis			
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, etc.)		
Preliminary calculation			
6.2 Estimated Operational	Cost		
Expected annual (operational) recurrent cost (in real terms)			
` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `	,		
It is not calculated			
Repair and replacement cost	20.000 USD		
Total operational cost	150.000 USD		
Year of cost estimate	of cost estimate 1998		
Nature of cost estimate (prelimin	nary, adequate, sources of information)		
_			
The total cost has been considered	as it is presented in the NEAP and the estimate is		
preliminary			
<b>6.3 Estimate of Revenues</b>			
<b>Expected annual revenues (in re</b>	al terms)		
450.000 USD			
<b>V</b>			
Year of estimate 1998			
Nature of estimate (preliminary,	, adequate, etc.)		
There is a preliminary estimation			
There is a preliminary estimation			

6.4 Financial Internal Rate of return (FIRR)			
Has a FIRR been calculated?	☐ yes	X no	
6.5 Anticipated/Proposed Fu	nding Scheme		
Source of funding	Secured	Requested	Non-
_		_	secured
	Cu	ırrency [USD]	
1. Equity of project owner		450.000	
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional			
budget			
8. International loan		2.380.000	
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		2.380.000	

# Project No. BII1 - 10 WWTP at ARPECHIM S.A PITESTI

Date of first setting up:	1998	Date of latest update :	01.1998
Project Title :	WWTP at ARPECHIM S.A PITESTI		
Responsible/Leg	gal Body		
Authority/Company	S.N PETROM	S.A BUCURESTI	
Name	Ing. Ioan Popa – general manager		
Address	Str. Calea Victoriei, nr. 109, sector 1, București		
Telephone	650.26.29		
Fax			
e-mail			
<b>Project Target</b>	Reducing orga Dîmbovnic riv	nic load, cyanides and phenols in er	n river Argeş, via
<b>Investment Costs</b>	13.900.000 U	SD	

planned

German

**X** Romanian

☐ emerging concept

☐ English

Summary in English:  $\square$  yes  $\boxtimes$  no

**Status of Project** 

**Language of Project Documents** 

 $\square$ ongoing

WWTP at ARPECHIM PITESTI.

#### 2 Investor Details

#### 2.1 Authority/Company

Name	ARPECHIM S.A. PITEŞTI
Address	Bd. Petrochimiştilor nr. 127
Telephone	048.21.63.00,
Fax	048.63.20.49, 048.21.63.00

# 2.2 Contact persons

Ing. Dumitru Gheorghe

#### 2.3 Advisor/Consultant

#### 2.4 Legal/Financial Status

Private company

#### 2.5 Authority/Company profile

• The company is specialized on petroleum refinery production Number of employees: 7500

# 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, supervision of the erection operating and maintenance of the new structures.

#### 2.7 Institutions/Enterprises beside the Investor

PETRODESIGN - BUCURESTI

ICIM - BUCURESTI

#### 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

Structural project. The project comprises reaching the required efficiency using the existing plant, which is to be revised with its technology, and equipment's, in order to reach the standard quality requirements of the effluents. the site of the plant is the same with the existing plant (capacity: 34042 c.m. per day)

#### 3.2 Primary Needs for the Project

The target of the project is to reduce chemical oxygen demand, heavy metals and other micropollutants discharged in the Dâmbovic – Argeş river. The implementation of the project will improve the health benefits, aquatic environmental and economic development

#### 3.3 Status of Project Preparation

The project is at the prefeasibility level

#### 3.4 Technology proposed

The technology proposed consists of chemical treatment followed by a biological treatment of wastewater.

#### 3.5 Ownership of project Site

The site of the plant is in the ownership of the titleholder.

3.6 Specific Project Items		
The project will focus the revising of biological step (especial modernizing the aeration system		
4. Project Effects and Interactions		
4.1 Public's Expression of Interest		
Public attitude is positive.		
4.2 Environmental Impact Assessment		
$\square_{\mathrm{yes}}$ $\boxtimes_{\mathrm{no}}$		
■ planned    □ in progress    □ finished/completed    □ accepted    □ rejected		
4.3 Sensitivity of Locality/Receptor		
The receptor river Dîmbovic is a degraded river and create a significant impact an the river Argeş which is used as a source of water supply of some important users including the city of Bucharest		
4.4 Primary Effects of Project		
The primary effects of the respective project are related to the local and regional level. The quality of river Argeş will be improved by reducing the discharge of BOD with about 50 tones per year, cyanides – 0,8 tones per year and phenols – 0,7 tones per year.		
5. Economic Project Justification		
5.1 Economic Project Benefits		
The economic project benefits are not calculated		
Employment/income effects		
<b>during construction period</b> 30 – 40 employees		
during operation period NA		
Other economic benefits		

5.2 Economic Internal Rate of Return (EIRR)			
Has an EIRR been calculated	yes		
	X no		
total investment costs of project	13.900.000 USD		
planned annual depreciation	NA		
planned annual operation costs	350.000 USD		
planned annual revenues	1.390.000 USD		
6. Financial Viability			
<b>6.1 Estimated Investment C</b>	ost 13.900.000.USD		
Investment cost			
All	ocation of capital cost		
Land	0 USD		
Construction and machinery	13.800.000 USD		
Planning and supervision	100.000 USD		
Total cost	13.900.000 USD		
On an annual basis			
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, etc.)		
Preliminary calculation			
<b>6.2 Estimated Operational </b>			
<b>Expected annual (operational) re</b>	ecurrent cost (in real terms)		
It is not calculated			
Repair and replacement cost	20.000 USD		
Total operational cost	350.000 USD		
Year of cost estimate	1998		
Nature of cost estimate (preliminary, adequate, sources of information)			
The nature of cost is preliminary and the total cost has been estimated taking into account the update indexes used for wastewater treatment			
<b>6.3 Estimate of Revenues</b>			
Expected annual revenues (in real terms)			
1.390.000 USD			
Year of estimate 1998			
Nature of estimate (preliminary, adequate, etc.)			
Nature of estimate is preliminary			

6.4 Financial Internal Rate of return (FIRR)			
Has a FIRR been calculated?	☐ yes	X no	
6.5 Anticipated/Proposed Fu	6.5 Anticipated/Proposed Funding Scheme		
Source of funding	Secured	Requested	Non-
			secured
	Cu	rrency [USD]	
1. Equity of project owner		13.900.000	
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		13.900.000	

# Project No. BII1 - 11

Ecologizing the Wet Process in the Platform Iașiș

Date of first setting up:	1995	Date of latest update:	02.1998
Project Title :	Ecologizing the wet MANPEL S.A	process in the platform	ΓÎRGU MUREŞ

Responsible/Legal Body		
Authority/Company	S.C. MANPEL S.A	– TÂRGU MUREŞ
Name	Ing. Dudilă Petru - director	
Address	Str. Gheorghe Doja, nr. 231, Târgu Mureş, jud. Mureş	
Telephone	25.20.84; 25.23.88	
Fax	25.20.85	
e-mail		
Project Target	Reduction of micropollutants discharge in the transboundary river Mureş	
<b>Investment Costs</b>	1.100.000 USD	
<b>Status of Project</b>	X ongoing	planned emerging concept
<b>Language of Project Documents</b>		⊠ Romanian    □ English    □  German  Summary in English:  □ yes    ☒ no

Ecologizing the wet process on the platform TÎRGU MURES – MANPEL S.A.

#### 2 Investor Details

#### 2.1 Authority/Company

Name	S.C. MANPEL S.A – TÎRGU MURES
Address	Str. Gh. Doja nr. 231, Tîrgu Mureş, Judeţul Mureş
Telephone	25.20.84 , 25.23.88
Fax	25.20.85

#### 2.2 Contact persons

Ing. Gomboş Sandor

#### 2.3 Advisor/Consultant

PURATOR - TÎRGU MURES

#### 2.4 Legal/Financial Status

Private company

#### 2.5 Authority/Company profile

- The company is specialized in tannery activities.
- Number of employees (1997): 2350 employees
- Annual revenue (1997): 117.000.000.000 lei (13.400.000 USD)
- Annual expenses (1997): 102.800.000.000 lei (11.816.000 USD)
- Gross profit: 14.400.000.000 lei (16.550.000 USD)- 1997
- Net profit: 8.000.000.000 lei (919.000 USD) 1997

# 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, supervision of the erection operating and maintenance of the new structures.

PURATOR TÎRGU MURES

#### 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

The project is on structural one and consists of revising the existing wastewater treatment plant comprising mechanical and chemical treatment. The site of the plant is included in the existing site of the factory

#### 3.2 Primary Needs for the Project

The targets of the project are to reduce chemical oxygen demand, heavy metals and other micropollutants discharged in the transboundary river Mureş. The implementation of the project will improve the health benefits, aquatic environmental and economic development

#### 3.3 Status of Project Preparation

The status of project: feasibility study.

#### 3.4 Technology proposed

The technology proposed consists of mechanical treatment (screening, plain sedimentation) followed by chemical precipitation

#### 3.5 Ownership of project Site

The site of the plant is in the ownership of the titleholder.

3.6 Specific Project Items	5		
The existing mechanical equipment modern equipment.	ment's, laboratory equipment's are to by replaced by the		
4. Project Effects and	Interactions		
4.1 Public's Expression of			
*			
Public attitude is positive.			
4.2 Environmental Impac	et Assessment		
	ess		
rejected			
4.3 Sensitivity of Locality/Receptor  Diver Myras is greasing the boundary to Hympory and its quality is assential to be			
River Mureş is crossing the boundary to Hungary and its quality is essential to be improved in order to reach the requirements of the domestic and forcing users.			
4.4 Primary Effects of Pr	oject		
Primary effects of project are the reduction of micropollutants and organic load on the transboundary river Mureş			
5. Economic Project Justification			
5.1 Economic Project Benefits			
5.1 Economic Froject Ber	lents		
The project is ongoing now, and the economic benefits cannot be quantified			
Employment/income effects			
during construction period	20 – 30 employees		
during operation period i	insignificant		
Other economic benefits			

5.2 Economic Internal Rate	of Return (EIRR)				
	yes				
Has an EIRR been calculated	⊠ no				
total investment costs of project	1.100.000 USD				
planned annual depreciation	NA				
planned annual operation costs	50.000 USD				
planned annual revenues	185.000 USD				
6. Financial Viability					
6.1 Estimated Investment C	ost				
Investment cost					
All	location of capital cost				
Land	0 USD				
Construction and machinery	1.075.000 USD				
Planning and supervision	25.000 USD				
Total cost	1.100.000 USD				
On an annual basis					
Year of cost estimate	1998				
Nature of cost estimate (prelimin	nary, adequate, etc.)				
Preliminary calculation					
6.2 Estimated Operational (	Cost				
Expected annual (operational) recurrent cost (in real terms)					
`					
NA					
Repair and replacement cost 10.000 USD					
Total operational cost 50.000 USD					
Year of cost estimate 1998					
Nature of cost estimate (preliminary, adequate, sources of information)					
promiser, y and quare, sources or maximum.					
The cost estimate is preliminary and is taken from the NEAP					
6.3 Estimate of Revenues					
Expected annual revenues (in real terms)					
185.000 USD					
Year of estimate 1998					
Nature of estimate (preliminary, adequate, etc.)					
The estimation of revenue is preliminary					
1					

6.4 Financial Internal Rate of return (FIRR)					
Has a FIRR been calculated?	☐ yes	X no			
6.5 Anticipated/Proposed Fu	nding Scheme				
Source of funding	Secured	Requested	Non-		
			secured		
	Cu	rrency [USD]			
1. Equity of project owner					
2. National Environmental					
Fund					
3. Water Management Fund					
4. Public loan – central budget					
5. Public loan – regional budget					
6. Public grant – central budget					
7. Public grant – regional					
budget					
8. International loan		1.100.000			
9. International grant					
10. Commercial bank loan					
11. Other sources					
Total funds / requirements		1.100.000			

## Project No. BII1 - 12

Removal of Chromium, Zinc and Phenols from the Wastewater – SINTEZA Oradea

	<del>,</del>				
Date of first setting up:	1995		Date of latest update:	02.1998	
Project Title:	Removal of chromium, zinc and phenols from the wastewater – SINTEZA Oradea				
Responsible/Legal Body					
Authority/Company	SINTEZA ORA	ADE	A		
Name	Ing. Drăgan Liviu –manager				
Address	Str. Borşului, nr. 35, Oradea				
Telephone	059/44.49.69				
Fax	059/46.22.24				
e-mail					
Project Target	Reduction of micro-pollutants discharge into the transboundary river Crişul Repede				
<b>Investment Costs</b>	330.000 USD				
<b>Status of Project</b>	Dongoing	[	X planned	erging concept	
Language of Proje	ect Documen	nts	Romanian German  Summary in English:	English	

#### 1 Project title

Removal of chromium, zinc and phenols from the wastewater SINTEZA Oradea

#### 2 Investor Details

#### 2.1 Authority/Company

Name	S.C. SINTEZA ORADEA
Address	Str. Borşului nr. 35, Oradea, Județul Bihor
Telephone	059/46.22.24
Fax	059/46.22.24

#### 2.2 Contact persons

Ing. Ardelean Silvia

#### 2.3 Advisor/Consultant

I.C.I.M. București, Spl. Independenței 294 Tel. 401.637.30.20., Fax: 401.312.13.93

#### 2.4 Legal/Financial Status

Private company

#### 2.5 Authority/Company profile

- The company is specialized in dyes production.
- Annual profit(1997): 9.800.000.000 lei(1.126.000 USD)

#### 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, supervision of the erection operating and maintenance of the new structures.

2.7 Histianions/Lincipinscs reside the investor	2.7	Institutions/Enter	prises	beside	the	Investor
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PROIECT BIHOR S.A I.C.I.M. BUCURESTI

#### 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

Structural project.

The project will consist of a primary and biological treatment of 25.6 l/s wastewater ant a pretreatment of 5.8 l/s wastewater containing phenols. The site of the plant is included in the existing site of the factory.

#### 3.2 Primary Needs for the Project

The targets of the project is to increase the efficiency of the existing plant in removal of heavy metals and phenols discharged in the transboundary river Cris. This will have a positive influence the health benefits, aquatic environmental recreation and other function of the river.

#### 3.3 Status of Project Preparation

The project status: prefeasibility study.

#### 3.4 Technology proposed

The technology proposed consists of primary treatment followed by secondary treatment applying the activated sledge process. Phenols are removed before primary treatment.

3.5 Ownership of project Site
5.5 Ownership of project site
The site of the plant is in the ownership of the titleholder.
3.6 Specific Project Items
A pretreatment step for heavy metals removal by precipitation is to be provided
4. Project Effects and Interactions
<b>y</b>
4.1 Public's Expression of Interest
The Public attitude is positive.
4.2 Environmental Impact Assessment
*
□ yes ⊠no
☑ planned ☐ in progress ☐ finished/completed ☐ accepted ☐ rejected
4.3 Sensitivity of Locality/Receptor
The receptor –river Crişul Repede is a transboundary river flaming to Hungarian territory. The users downstream the discharging point weight be affected by the micropollutants content of raw water
4.4 Primary Effects of Project
The effects of project implementation concern the users on local and regional level. By implementing the respective project the following annual reduction of micropollutants discharge will be achieved: Zinc – 84 tones; Lead – 301 tones; Cyanides – 0,73 Kg and Phenols – 11 tones.

5. Economic Project	<b>Justification</b>			
5.1 Economic Project Be	enefits			
The economic project benefits are not quantified. The project it the prefeasibility study				
<b>Employment/income effects</b>				
during construction period	NA			
during operation period	NA			
Other economic benefits				
5.2 Economic Internal R	ate of Return (EIRR)			
Has an EIRR been calculate	$\mathbf{d} \qquad \boxed{ \qquad \qquad } \mathbf{yes} \\ \boxed{ \qquad \qquad } \mathbf{no} $			
total investment costs of proje	ect 330.000 USD			
planned annual depreciation	NA			
planned annual operation cos	s 14.000 USD			
planned annual revenues	55.000 USD			
6. Financial Viability				
6.1 Estimated Investment Cost				
Investment cost				
Allocation of capital cost				
Land	0 USD			
Construction and machinery				
Planning and supervision	10.000 USD			
Total cost	330.000 USD			
On an annual basis				
Year of cost estimate				
Nature of cost estimate (preliminary, adequate, etc.)				
Preliminary calculation  6.2 Estimated Operational Cost				
6.2 Estimated Operational Cost  Expected annual (operational) recurrent cost (in real terms)				
NA  NA				
Repair and replacement cost	t 5.000 USD			
Total operational cost	14.000 USD			
Year of cost estimate	1998			
Nature of cost estimate (preliminary, adequate, sources of information)				
Preliminary estimation. Source	e of information: NEAP			

<b>6.3</b> Estimate of Revenues			
<b>Expected annual revenues (in rea</b>	l terms)		
55.000 USD			
V. 6 4 1000			
Year of estimate 1998			
Nature of estimate (preliminary, a	idequate, etc.)		
Preliminary estimation.			
6.4 Financial Internal Rate o	f return (FIRR)		
Has a FIRR been calculated?	☐ yes	X no	
6.5 Anticipated/Proposed Fu	nding Scheme		
Source of funding	Secured	Requested	Non- secured
	Cı	ırrency [USD]	
1. Equity of project owner			
2. National Environmental Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget		130.000	
7. Public grant – regional			
budget			
8. International loan		200.000	
9. International grant			
10. Commercial bank loan			
11. Other sources			
<b>Total funds / requirements</b>		330.000	

Project No. BII1 - 13

Modernizing WWTP CLUJANA S.A - Cluj-Napoca

Date of first setting up:	1995	Date of latest update :	03.1998	
Project Title:	Modernizing W	WTP CLUJANA S.A – Cluj-N	apoca	
Responsible/Leg	gal Body			
Authority/Company	S.C. CLUJANA	S.A.		
Name	Crişan Ana - director			
Address	Str. Piața 1 Mai, nr. 4-5, Cluj-Napoca			
Telephone	43.71.40			
Fax	43.70.44			
e-mail				
Project Target				
<b>Investment Costs</b>	3.000.000 USD			
Status of Project	X ongoing	nlanned emero	ging concept	

**Language of Project Documents** 

**X** Romanian

German

☐ English

Summary in English:  $\square$  yes  $\boxtimes$  no

## 1 Project title

Modernizing WWTP CLUJANA S.A - Cluj-Napoca

#### 2 Investor Details

#### 2.1 Authority/Company

Name	S.C. CLUJANA S.A.
Address	Piața 1 Mai nr. 4-5, Cluj Napoca
Telephone	43.71.40
Fax	43.70.44

#### 2.2 Contact persons

Ing. Cosma Ioan

#### 2.3 Advisor/Consultant

I.C.I.M. București, Spl. Independenței 294, Tel. 401.637.30.20., Fax: 401.312.13.93

#### 2.4 Legal/Financial Status

Private company

### 2.5 Authority/Company profile

- The company is specialized in production of shoes and turnery
- Number of employees (1997): 7472 employees
- Annual revenue (1977): 313.300.000.000 lei (≈ 36.000.000 USD)
- Annual expenses (1997): 310.471.000.000 lei (≈ 37.700.000 USD)
- Annual profit(1997): 6.979.000.000 lei(≈ 800.000 USD)

#### 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, supervision of the erection operating and maintenance of the new structures.

#### 2.7 Institutions/Enterprises beside the Investor

NA

#### 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

Structural project.

The project comprises a pretreatment plant of 58.9 l/s wastewater; 24 l/s of wastewater which is now discharged into the transboundary SOMES river. The site of the plant is located in the existing factory.

#### 3.2 Primary Needs for the Project

The main target of respective project is to reduce the actual discharges of Cr<sup>+3</sup> and oil and grease into the transboundary river Somes. This will improve the quality of water use for drinking purposes (health benefits) aquatic life, recreation functions of the river.

#### 3.3 Status of Project Preparation

The plan is in the phase of designing (feasibility level).

#### 3.4 Technology proposed

The effluent of the factory is discharged in the public sewerage network via WWTP of the titleholder. 58.9 l/s of industrial wastewater is treated by plain sedimentation and oil separation by gravity and chemical for chromium removal

#### 3.5 Ownership of project Site

The site of the plant is in the ownership of the titleholder.

3.6 Specific Project Items
The existing efficiency of the plant will be improved by providing new mechanical equipment and a new self-monitoring system.
4. Project Effects and Interactions
4.1 Public's Expression of Interest
The Public attitude is positive.
4.2 Environmental Impact Assessment
□ yes ⊠no
4.3 Sensitivity of Locality/Receptor
River Somes is considered in the first quality class in the zone but downstream Cluj city its quality is deteriorated limiting the water use for drinking purposes.
4.4 Primary Effects of Project
By implementing the project, a reduction of 4 tones of chromium and about 40 tones of oil and grease will be annually achieved.
5. Economic Project Justification
5.1 Economic Project Benefits
Because the project is ongoing now the project benefits are not quantified
Employment/income effects
during construction period NA
during operation period NA
Other economic benefits

5.2 Economic Internal Rate	of Return (EIRR)			
	□ yes			
Has an EIRR been calculated	∑ no			
total investment costs of project	3.000.000 USD			
planned annual depreciation	NA			
planned annual operation costs	NA			
planned annual revenues	NA			
6. Financial Viability				
6.1 Estimated Investment C	ost			
Investment cost	3.000.000 USD			
	location of capital cost			
Land	0 USD			
Construction and machinery	2.960.000 USD			
Planning and supervision	40.000 USD			
Total cost	3.000.000 USD			
On an annual basis				
Year of cost estimate	1998			
Nature of cost estimate (prelimin	nary, adequate, etc.)			
Preliminary calculation				
6.2 Estimated Operational (	Cost			
Expected annual (operational) re				
( · <b>p</b> · · · · · · · · · · · · · · · · · · ·	(			
NA				
	N/A			
Repair and replacement cost	NA			
Total operational cost	NA			
Year of cost estimate				
	nary, adequate, sources of information)			
NA				
6.3 Estimate of Revenues				
Expected annual revenues (in real terms)				
·				
NA				
Year of estimate				
Nature of estimate (preliminary,	adequate, etc.)			
radic of community,	aucquaic, cici			
NAp				
- ·				

6.4 Financial Internal Rate of return (FIRR)				
Has a FIRR been calculated?	☐ yes	X no		
6.5 Anticipated/Proposed Funding Scheme				
Source of funding	Secured	Requested	Non-	
			secured	
	C	urrency [USD]		
1. Equity of project owner				
2. National Environmental				
Fund				
3. Water Management Fund				
4. Public loan – central budget				
5. Public loan – regional budget				
6. Public grant – central budget				
7. Public grant – regional				
budget				
8. International loan				
9. International grant				
10. Commercial bank loan		3.000.000		
11. Other sources				
Total funds / requirements		3.000.000		

# Project No. BII1 - 14 WWTP System at VIDRA S.A.- ORĂȘTIE

Date of first setting up:	1995	Date of latest update :	03.1998
Project Title:	WWTP system at	VIDRA S.A ORĂȘTIE	
Responsible/Le	gal Body		
Responsible/Le		DRA S.A - ORĂȘTIE	
•			

Removal of  $\text{Cr}^{+3}$  , Cu  $^{+2}$  and grease from the wastewater discharged by FAVIOR-VIDRA S.A

**X** Romanian

☐ emerging concept

☐ English

Summary in English: ☐ yes 🔀 no

1.200.000.USD

X planned

German

054/24.15.60

054/24.79.92

ongoing ongoing

**Language of Project Documents** 

Telephone

Fax

e-mail

**Project Target** 

**Investment Costs** 

**Status of Project** 

#### 1 Project title

WWTP system at VIDRA S.A.- ORĂŞTIE

### 2 Investor Details

#### 2.1 Authority/Company

Name	S.C. FAVIOR –VIDRA S.A - ORĂȘTIE
Address	Str. Gh. Lazăr, nr. 2, Orăștie, județul Hunedoara
Telephone	054/24.15.60
Fax	054/24.79.92

#### 2.2 Contact persons

Ms. Lucreția Pogan – economic director

#### 2.3 Advisor/Consultant

JAAKO POYRY - Finland

#### 2.4 Legal/Financial Status

Private company

#### 2.5 Authority/Company profile

Furs manufacturing factory:

- Number of employees (1997): 1514 employees
- Annual revenue (1997): 101.332.689.000 lei (11.640.000.USD)
- Annual expenses (1997): 94.672.765.000.lei (10.880.000 USD)
- Gross profit (1997): 6.719.924.lei (772.400.USD)
- Net profit (1997): 3.840.364.lei ( 441.000 USD)

#### 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, supervision of the erection, operation and maintenance of the new structures.

#### 2.7 Institutions/Enterprises beside the Investor

ICPIAF – Cluj-Napoca – designer of the WWTP. The some institution is to work for the erection of the plant.

#### 3. PROJECT DESCRIPTION

#### 3.1 Project Outline

Design and erection of the WWTP (1800 cu.m. per day) having in view the achievement of standard quality effluent according to NTWP 002 requirements. A new sedimentation tank, oil separation tanks and chemicals precipitation of heavy metals will result. The project is a structural one, and the site of the plant will be located within the existing site of the factory.

#### 3.2 Primary Needs for the Project

The target of the project is to reduce Mureş river pollution by removing chromium copper and grease before reaching the municipal wastewater treatment plant. This will improve river Mureş water quality having positive effects with human heath, aquatic life, recreation, aesthetics and economic development in the national and transboundary context.

#### 3.3 Status of Project Preparation

The project is now in the phase of prefeasibility study

#### 3.4 Technology proposed

The technology of treatment consists of oil and grease separation applying flotation, screening, then chemical precipitation, plain sedimentation.

#### 3.5 Ownership of project Site

The site is in the ownership of the titleholder

#### 3.6 Specific Project Items

The existing two horizontal sedimentation tanks (one of them is not in operation) are to be reconsidered. The efficiency of treatment is to achieve an effluent quality corresponding to the requirements of NTWP 002

#### 4. Project Effects and Interactions

#### 4.1 Public's Expression of Interest

Public's attitude is positive.

4.2 Environmental Impact Assessment				
□ yes 区 no				
planned Xin prog	ress  finished/completed  accepted			
rejected	1			
400				
4.3 Sensitivity of Localit	y/Receptor			
	unicipal WWTP, which is not designed to take up heavy ceptor is Mureş river, which crosses the boundary with			
4.4 Primary Effects of P	roject			
	is to diminish the heavy metals, oil and grease load of the biological process might be hindered by these type of			
5. Economic Project	<b>Justification</b>			
5.1 Economic Project Be	enefits			
The project benefits are not qu	• •			
<b>Employment/income effects. during construction period</b>	NA			
during operation period	NA			
Other economic benefits	NA			
5.2 Economic Internal Rate of Return (EIRR)				
Has an EIRR been calculate	□ ves			
total investment costs of proje	ect 1.200.000 USD			
planned annual depreciation	NA			
planned annual operation cos	sts NA			
planned annual revenues	NA			

6. Financial Viability				
<b>6.1 Estimated Investment C</b>	ost			
Investment cost	1.200.000 USD			
All	ocation of capital cost			
Land	0			
<b>Construction and machinery</b>	NA			
Planning and supervision	30.000 USD			
Total cost	1.200.000 USD			
On an annual basis				
Year of cost estimate	1998			
Nature of cost estimate (prelimin	nary, adequate, etc.)			
Preliminary calculation				
<b>6.2 Estimated Operational </b>	Cost			
<b>Expected annual (operational) re</b>	ecurrent cost (in real terms)			
27.1				
NA	27.			
Repair and replacement cost	NA			
Total operational cost	NA			
Year of cost estimate				
Nature of cost estimate (prelimin	nary, adequate, sources of information)			
	2A75 1.d .2d 1.11			
The sources of information are NE	AP and the titleholder			
<b>6.3 Estimate of Revenues</b>				
<b>Expected annual revenues (in re</b>	al terms)			
27.1				
NA				
Year of estimate				
	adagnata ata)			
Nature of estimate (preliminary,	adequate, etc.)			
NA				
NA				
6 4 Financial Internal Date of votume (FIDD)				
6.4 Financial Internal Rate of return (FIRR)				
Has a FIRR been calculated?	yes 🔀 no			

6.5 Anticipated/Proposed Funding Scheme				
Source of funding	Secured	Requested	Non- secured	
	Currency [USD]			
1. Equity of project owner	410.000			
2. National Environmental				
Fund				
3. Water Management Fund				
4. Public loan – central budget				
5. Public loan – regional budget				
6. Public grant – central budget				
7. Public grant – regional				
budget				
8. International loan		790.000		
9. International grant				
10. Commercial bank loan				
11. Other sources				
Total funds / requirements		1.200.000		

## Project No. BII1 - 15

**Action Programme for Environment Protection in Petroleum Industry** 

Date of first setting up:	1995	Date of latest update:	02.1998
<b>Project Title:</b>	Action Programme findustry.	or environment protection	on in petroleum

Responsible/Leg	gal Body		
Authority/Company	Ministry of Industry and Commerce		
Name	Ing. Cristiana Ion – director		
Address	Calea Victoriei 153, Cod 734 Sector 1, Bucharest		
Telephone	40.1.659.41.91.		
Fax	40.1.659.41.91.		
e-mail			
<b>Project Target</b>	Reduction of water, air and soil pollution by oil and other petroleum product.		
<b>Investment Costs</b>	100 000 000 USD		
<b>Status of Project</b>	ongoing [	✓ planned ☐ emerging concept	
Language of Proj	ect Documents	⊠ Romanian  □ English  □  German  Summary in English: □ yes  ☒ no	

#### 1 Project title

Action Programme for environment protection in petroleum industry.

#### 2 Investor Details

#### 2.1 Authority/Company

Name	All enterprises responsible for air, water and soil pollution due to their activities in the field of petroleum industry.
Address	Calea Victoriei, Nr. 152, Cod 734, Sector 1, București
Telephone	40.1.659.41.91
Fax	40.1.659.41.91

#### 2.2 Contact persons

Ing. Cristiana Ion - director

#### 2.3 Advisor/Consultant

NA

#### 2.4 Legal/Financial Status

State and private companies.

#### 2.5 Authority/Company profile

The companies are involved in extraction and processing of crude oil and other petroleum products.

#### 2.6 Planning/Implementing Extent/Capacity of the Investor

In most of the cases the investor can administrate, supervise, operate and maintain the new structures and in a few cases other specialized companies are to be involved in such types of activity.

#### 2.7 Institutions/Enterprises beside the Investor

The action programme being in the setting up phase the institutions/enterprises beside the investor are not yet defined.

3. PROJECT DESCRIPTION
3.1 Project Outline
The project is a structural one. The project - the action programme will consist in a set of structural projects for environment protection (air, soil and water) in each specific unit, which creates problems to the environment. The sites of each project are not defined.
3.2 Primary Needs for the Project
The target of the project is to reduce pollution of air, soil and water, by specific means in the petroleum industry. The Danube river basin pollution will be seriously influenced with human health, aquatic environment, recreational function, aesthetics, biodiversity and economic development in the national and transboundary context.
3.3 Status of Project Preparation
The project – the action programme in the petroleum industry is under preparation.
3.4 Technology proposed
The main unit operations, which are to be applied for water treatment, are separation by gravity, flotation, adsorption, filtration, and incineration.
3.5 Ownership of project Site
All the sites are now under inventory process and in most of the cases are supposed to be in the ownership of the respective titleholder.
3.6 Specific Project Items
Each specific project will comprise the self monitoring network.
4. Project Effects and Interactions
4.1 Public's Expression of Interest
The public attitude is expected to be positive. Otherwise each unit before receiving the environment consent received the public opinion.
4.2 Environmental Impact Assessment
□ yes 区 no
■ planned

#### 4.3 Sensitivity of Locality/Receptor

All the inland rivers and Danube river are sensitive to oil pollution. A special attention is given to the transboundary rivers and to the sites where ground water is available to be used as a resource for drinking purposes.

#### **4.4 Primary Effects of Project**

The primary effects of the project implementation are the ceasing of ground and surface water pollution by oil at the local, regional levels and in the transboundary context.

#### 5. Economic Project Justification

#### **5.1 Economic Project Benefits**

Economic project benefits have not been calculated the action programme being in the setting up process.

Employment/income effects		
during construction period	NA	
during operation period	NA	
Other economic benefits		

#### 5.2 Economic Internal Rate of Return (EIRR)

Has an EIRR been calculated	☐ yes ☐ ☐ no
total investment costs of project	100 000 000 USD
planned annual depreciation	NA
planned annual operation costs	NA
planned annual revenues	NA

## 6. Financial Viability 6.1 Estimated Investment Cost

0.1 Estimated investment Cost			
Investment cost	100 000 000 USD		
Allocation of capital cost			
Land	NA		
Construction and machinery	NA		
Planning and supervision	NA		
Total cost	100 000 000 USD		
On an annual basis			
Year of cost estimate	1998		
Nature of cost estimate (preliminary, adequate, etc.)			
Preliminary calculation			

6.2 Estimated Operational (	Cost		
Expected annual (operational) re	ecurrent cost (in real t	erms)	
NA			
Repair and replacement cost	NA		
Total operational cost	NA NA		
Year of cost estimate	IVA		
Nature of cost estimate (prelimin	namy adaguata caurag	s of information)	
NA. The sources of information ar			
Commerce proposal has been included		mistry of moustry an	u
Commerce proposar has been mere	ided.		
6.3 Estimate of Revenues			
Expected annual revenues (in re	al terms)		
Impected united to vertice (in 10)			
NA			
Year of estimate			
Nature of estimate (preliminary,	adequate, etc.)		
( <b>F</b>			
NA			
2 12 2			
6.4 Financial Internal Rate	of return (FIRR)		
Has a FIRR been calculated?		X no	
	☐ yes	₩ 110	
(5 Andining 4 ad/Dross and En			
6.5 Anticipated/Proposed Fu		<b>.</b>	
Source of funding	Secured	Requested	Non-
			secure
	<u> </u>	ILIODI	d
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Cu	rrency [USD]   *	
1. Equity of project owner		<b>*</b>	
2. National Environmental			
Fund 3. Water Management Fund		*	
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget			
7. Public grant – regional			
budget		*	
8. International loan		*	
9. International grant	_	*	
10. Commercial bank loan		7,*	
11. Other sources		100,000,000	
Total funds / requirements	Ī	100 000 000	1

<sup>\*</sup> Possible sources of funding. The funds are not secured for the time being.

# Project No. AI1 - 2

Harmonization of National Legislation with Six EU Regulations Regarding Risks and Industrial Pollution Control

Date of first setting up:	1995	Date of latest update:	
			02.1998
	T		
Project Title:	Harmonization of nat regarding risks and in	ional legislation with sindustrial pollution contro	x EU regulations ol.

Responsible/Le	gal Body		
Authority/Company	_	try and Commerce and r Forest and Environmental protection.	
Name	Ing. Cristiana Ion	, Ing. Liliana Mâra	
Address	Calea Victoriei 1. Bd. Libertății 12,	53, Sector 1, Bucharest Bucharest	
Telephone	40.1.659.41.91. 40.1.410.02.55		
Fax	40.1.659.41.91 40.1.410.02.82		
e-mail			
<b>Project Target</b>	Improvement of the domestic legislation with respect of industrial pollution risks issues.		
<b>Investment Costs</b>	27.000 USD		
<b>Status of Project</b>	ongoing	✓ planned	
Language of Proj	ect Documents	Romanian ☐ English ☐ German Summary in English: ☐ yes ☒ no	

# 1 Project title

Harmonization of national legislation with EU regulations regarding risks and industrial pollution control.

## 2 Investor Details

# 2.1 Authority/Company

Name	Ministry of Industry and Commerce
Address	Calea Victoriei, Nr. 152, Cod 734, Sector 1, București
Telephone	40.1.659.41.91
Fax	40.1.659.41.91

## 2.2 Contact persons

Ing. Cristiana Ion - director

#### 2.3 Advisor/Consultant

ICIM – București, Spl. Independenței, Nr. 294, sector 6, București, România

# 2.4 Legal/Financial Status

Central authority.

#### 2.5 Authority/Company profile

Central authority responsible for industrial and commercial activities.

## 2.6 Planning/Implementing Extent/Capacity of the Investor

Co-ordination, monitoring the compliance with the legislation of industrial units.

## 2.7 Institutions/Enterprises beside the Investor

Ministry of Water, Forest and Environmental Protection. Other ministries involved in risks and industrial pollution (e.g. MPWTP)

3. PROJECT DESCRIPTION
3.1 Project Outline
The project is non structural and comprises a set of legal acts (methodologies, regulations etc.) which are to be set up, taking into consideration the EU legislation.
3.2 Primary Needs for the Project
The target of the project is to harmonize the domestic legislation regarding the risks of industrial pollution in the national and transboundary context. This will make possible to have a unitary way to approach the common problems of industrial risks of pollution in Europe.
3.3 Status of Project Preparation
The project is at the planning level
3.4 Technology proposed
Not applicable (NAp)
3.5 Ownership of project Site
NAp
3.6 Specific Project Items
The draft legal acts are to be discussed with NGOs and other parties before presenting to the decision-makers.
4. Project Effects and Interactions
4.1 Public's Expression of Interest
The public attitude is positive.
4.2 Environmental Impact Assessment
□ yes ເ× no
■ planned    □ in progress    □ finished/completed    □ accepted    □ rejected

4.3 Sensitivity of Locality/R	eceptor		
NAp			
4.4 D			
4.4 Primary Effects of Proje	ect		
The primary effects of project will be a compatible way to approach the problem of industrial risks in the national and transboundary context.			
5. Economic Project Jus	tification		
5.1 Economic Project Benef	its		
NA			
Everylander 4/2 many a affect a			
Employment/income effects during construction period NA	4		
during operation period NA			
Other economic benefits	•		
Street economic senerits			
5.2 Economic Internal Rate of Return (EIRR)			
yes Upper			
Has an EIRR been calculated $\bowtie$ no			
total investment costs of project	27.000 USD		
planned annual depreciation	NA		
planned annual operation costs	NA		
planned annual revenues	NA		
6. Financial Viability			
6.1 Estimated Investment C	Cost		
Investment cost			
Allocation of capital cost			
Land	NA		
Construction and machinery	NA		
Planning and supervision	NA		
Total cost	NA		
On an annual basis			
Year of cost estimate			
Nature of cost estimate (preliminary, adequate, etc.)			
Preliminary calculation			

6.2 Estimated Operational Cost			
<b>Expected annual (operational) re</b>	current cost (in real	terms)	
NA			
	<b>37</b> A		
Repair and replacement cost	NA 55 000 HGD		
Total operational cost	55.000 USD		
Year of cost estimate	1998		
Nature of cost estimate (prelimin	ary, adequate, sourc	es of information)	
27.4			
NA			
(2E) ( 6E			
6.3 Estimate of Revenues	•		
<b>Expected annual revenues (in rea</b>	al terms)		
NA			
Year of estimate			
Nature of estimate (preliminary,	adaguata ata)		
Nature of estimate (premimary,	adequate, etc.)		
NA			
INA			
6.4 Financial Internal Rate of	of roturn (FIDD)		
Has a FIRR been calculated?		<u> </u>	
Has a FIRK been calculated:	☐ yes	× no	
6.5 Anticipated/Proposed Fu	ınding Scheme		
Source of funding	Secured	Requested	Non-
		FEIGDI	secured
	Cu	rrency [USD]	I
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget		27.000	
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		27.000	

# Project No. AI5 - 12

Pollution with Petroleum Products Abatement in PLOIEȘTI Zone (pilot project)

Date of first setting up:	1995	Date of latest update :	01.1998
Project Title :	Pollution with petro Zone (pilot project).	oleum products abatement	in PLOIEȘTI

Responsible/Leg	gal Body	
Authority/Company	Ministry of Industr	y and Commerce
Name	Ing. Cristiana Ion -	director
Address	Calea Victoriei 153	8, Cod 734 Sector 1, Bucharest
Telephone	40.1.659.41.91.	
Fax	40.1.659.41.91.	
e-mail		
<b>Project Target</b>	Soil and ground water pollution abatement by oil products.	
<b>Investment Costs</b>	3.000	0.000 USD
<b>Status of Project</b>	ongoing	planned emerging concept
<b>Language of Project Documents</b>		⊠ Romanian    □ English    □  German  Summary in English:    □ yes    ▼ no

# 1 Project title

Pollution with petroleum products abatement in PLOIEŞTI Zone (pilot project).

## 2 Investor Details

## 2.1 Authority/Company

Name	Ministry of Industry and Commerce
Address	Calea Victoriei, Nr. 152, Cod 734, Sector 1, București
Telephone	40.1.659.41.91
Fax	40.1.659.41.91

### 2.2 Contact persons

Ing. Cristiana Ion - director

#### 2.3 Advisor/Consultant

ICIM București, Spl. Independenței, Nr. 294

## 2.4 Legal/Financial Status

Central authority.

#### 2.5 Authority/Company profile

NA

# 2.6 Planning/Implementing Extent/Capacity of the Investor

Co-ordination, supervising, inspection of compliance with the regulations and generally legal acts in force.

## 2.7 Institutions/Enterprises beside the Investor

Ministry of Water, Forest and Environmental Protection. Other ministries involved in the problem of ground water and soil pollution by petroleum products (e. g. MPWTP)

3. PROJECT DESCRIPTION
3.1 Project Outline
The project is a structural one and the outline of the project will be on technical measurement to be taken to abate water and soil pollution by oil products.
3.2 Primary Needs for the Project
The main target of the project is to check the methods proposed for water pollution abatement by oil products.
3.3 Status of Project Preparation
The project is in the phase of setting up.
3.4 Technology proposed
The technology proposed is based on separation by gravity, adsorption surface filtration, and incineration unit operations.
3.5 Ownership of project Site
NA
3.6 Specific Project Items
The project will comprise typical situations and is to be modified during the experimentation process, as it is needed form demonstration.
4. Project Effects and Interactions
4.1 Public's Expression of Interest
The public's attitude is positive.
4.2 Environmental Impact Assessment
■ planned    □ in progress    □ finished/completed    □ accepted    □ rejected
4.3 Sensitivity of Locality/Receptor
NA

4.4 Primary Effects of Project					
The primary effects of project	are refereed to a set of technical measures to be taken in				
specific cases for oil pollution abatement.					
5. Economic Project .	Justification				
5.1 Economic Project Be					
NA					
<b>Employment/income effects</b>					
during construction period	NA				
during operation period	NA				
Other economic benefits					
5.2 Economic Internal R	ate of Return (EIRR)				
	,  u yes				
Has an EIRR been calculate	d   X no				
total investment costs of proje					
planned annual depreciation					
planned annual operation cos					
planned annual revenues	NA				
6. Financial Viability					
<b>6.1 Estimated Investmen</b>					
Investment cost	3.000.000 USD				
	Allocation of capital cost				
Land	0 USD				
Construction and machinery	I I				
Planning and supervision	100.000 USD				
Total cost On an annual basis	3.000.000 USD				
Year of cost estimate 1998					
Nature of cost estimate (preliminary, adequate, etc.)					
Preliminary calculati					
6.2 Estimated Operational Cost					
Expected annual (operational) recurrent cost (in real terms)					
NA					
Repair and replacement cost	t It is not known in this phase				
Total operational cost					
Year of cost estimate					
Nature of cost estimate (preliminary, adequate, sources of information)					
Source of information NEAP.					

<b>6.3 Estimate of Revenues</b>			
Expected annual revenues (in rea	al terms)		
NA			
Year of estimate			
Nature of estimate (preliminary,	adequate, etc.)		
NA			
6.4 Financial Internal Rate of	of return (FIRR)		
Has a FIRR been calculated?	☐ yes	X no	
6.5 Anticipated/Proposed Fu	ınding Scheme		
Source of funding	Secured	Requested	Non-
	C		secured
4.77	Cl	irrency [USD]	
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget		3.000.000 *	
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		3.000.000	

 $<sup>\</sup>ensuremath{^*}$  The external sources to finance this project will be requested.

# Project No.

**Modernization of Wastewater Treatment at SC SOMES SA DEJ** 

Date of first setting up:	July 1998	Date of latest update :	
<b>Project Title:</b>	Modernization of was	stewater treatment at SC SOMES SA DE.	ſ

Responsible/Leg	gal Body
Authority/Company	SC SOMES SA Dej
Name	ing.Ioan Ungur
Address	Strada Bistritei, nr.63, Dej, judet Cluj
Telephone	064-433 417
Fax	064-432 182
e-mail	
Project Target	To reduce the organic load and color on the river Somes and water specific consumption
<b>Investment Costs</b>	600 000 USD
<b>Status of Project</b>	C ongoing x planned C emerging concept
Language of Proje	ect Documents    X   Romanian   C   English   C     German     Summary in English: C   yes   X   no

# 1 Project title Modernization of wastewater treatment at SC SOMES SA DEJ

## 2 Investor Details

# 2.1 Authority/Company

Name	SC SOMES SA Dej
Address	str.Bistritei, nr.63, Dej, jud.Cluj
Telephone	064-433 417
Fax	064-432 182

## 2.2 Contact persons

eng.Gheorghe Benea

#### 2.3 Advisor/Consultant

SC CEPROHART Braila

ICIM Bucuresti - Fax 40.1.312.13.93

# 2.4 Legal/Financial Status

In the privatization process

# 2.5 Authority/Company profile

The company is specialized in pulp and paper production.

Number of employce:1530 (1999)

Annual revenue:323 210 941 thousand lei (32 million USD) Annual expenses:433 633 990 thousand lei (43 million USD) Annual profit: 110 423 049 thousand lei (11 million USD)

# 2.6 Planning/Implementing Extent/Capacity of the Investor

The investor has capacity of administration, supervision of erection and operation of the new structures

## 2.7 Institutions/Enterprises beside the Investor

Municipal water and wastewater management company

#### 3. PROJECT DESCRIPTION

## 3.1 Project Outline

Structural project

Mainly, the project consists of modernization of the industrial processes, rehabilitation of mechanical step of wastewater treatment plant on the line "coloring-sulfate".

The project will contain the replacement of the aeration system in the biological step of the WWTP URISOR (2 aeration tanks), the setting up of selfmonitoring system measuring of effluent flow and quality characteristics

## 3.2 Primary Needs for the Project

- Industrial process modernization
- Dimensioning of WWTP under new conditions of production
- EIA

## 3.3 Status of Project Preparation

The project is at the prefeasibility level

#### 3.4 Technology proposed

The existing technology for wastewater treatment is to be modernized as it follows:

- mechanical, chemical and biological treatment on the "colored-sulfate" line wastewater. Bleaching installation is to be modernized and the pH regulation is to be achieved as well.
- expanding of biological step of the URISOR WWTP by replacing of the aeration system. In fact, the existing wastewater technology will remain the same (activated sludge process).

## 3.5 Ownership of project Site

The site is in the ownership of the investor.

3.6	$\mathbf{S}$	pecific	Proj	ect	<b>Items</b>

The project will focus the limitation of losses, reduction of water consumption, increasing of treatment efficiency

# 4. Project Effects and Interactions

## 4.1 Public's Expression of Interest

The public's interest is positive

## **4.2 Environmental Impact Assessment**

x yes C no

x planned C in progress C finished/completed C accepted C rejected

## 4.3 Sensitivity of Locality/Receptor

The receiving water is river Somes that is a transboundary river. The quality of the receiving water should correspond to the first quality class due to the fact that there are users downstream who abstract water for drinking purposes.

# **4.4 Primary Effects of Project**

The quality requirements of NTPA 001 (regarding the maximum allowable limits of discharging into the natural resources0 will be met.

A reduction off about 3200 tones of BOD5 per year will be achieved. Besides the suspended matter (about 90 tones per year) from the "uncolored line" will be reduced. The color of the effluent from the bleaching installation will decrease by about 35-40 percent.

# **5. Economic Project Justification**

## **5.1 Economic Project Benefits**

The project economic benefits have not been calculated because the project is ongoing now.

Employment/income effects		
during construction period   20-30 employees		
during operation period	insignificant	
Other economic benefits		

,	of Return (EIRR)			
Has an EIRR been calculated	C yes			
	x no			
total investment costs of project	600 000 USD			
planned annual depreciation	20 000 USD			
planned annual operation costs	20 000 USD			
planned annual revenues	100 000 USD			
6. Financial Viability				
<b>6.1 Estimated Investment C</b>	Cost			
Investment cost	600 000 USD			
Al	location of capital cost			
Land	0 USD			
Construction and machinery	550 000 USD			
Planning and supervision	50 000 USD			
Total cost	600 000 USD			
On an annual basis				
Year of cost estimate	1998			
Nature of cost estimate (prelimi	nary, adequate, etc.)			
Preliminary calculation				
<b>6.2 Estimated Operational</b>				
<b>Expected annual (operational) r</b>	ecurrent cost (in real terms)			
It is not calculated				
11 10 1101 0410414104				
20 20 1100 Gallerianou				
20 20 Mot Galegianou				
20 20 Mot Galdalated				
	5 000 USD			
Repair and replacement cost  Total operational cost	5 000 USD 20 000 USD			
Repair and replacement cost				
Repair and replacement cost Total operational cost Year of cost estimate	20 000 USD			
Repair and replacement cost Total operational cost Year of cost estimate	20 000 USD 1998 nary, adequate, sources of information)			
Repair and replacement cost Total operational cost Year of cost estimate Nature of cost estimate (prelimi	20 000 USD 1998 nary, adequate, sources of information) iminary.			
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Repair and replacement cost  Total operational cost  Year of cost estimate  Nature of cost estimate (prelimi  The nature of cost estimate is prel  The source of information is RAA	20 000 USD 1998 nary, adequate, sources of information) iminary.			
Repair and replacement cost  Total operational cost  Year of cost estimate  Nature of cost estimate (prelimi  The nature of cost estimate is prel	20 000 USD 1998 nary, adequate, sources of information) iminary.			
Repair and replacement cost  Total operational cost  Year of cost estimate  Nature of cost estimate (prelimi  The nature of cost estimate is prel  The source of information is RAA  6.3 Estimate of Revenues  Expected annual revenues (in re	20 000 USD 1998 nary, adequate, sources of information) iminary. R			
Repair and replacement cost  Total operational cost  Year of cost estimate  Nature of cost estimate (prelimi  The nature of cost estimate is prel  The source of information is RAA  6.3 Estimate of Revenues	20 000 USD 1998 nary, adequate, sources of information) iminary. R			
Repair and replacement cost  Total operational cost  Year of cost estimate  Nature of cost estimate (prelimi  The nature of cost estimate is prel  The source of information is RAA  6.3 Estimate of Revenues  Expected annual revenues (in re	20 000 USD 1998 nary, adequate, sources of information) iminary. R			
Repair and replacement cost  Total operational cost  Year of cost estimate  Nature of cost estimate (prelimi  The nature of cost estimate is prel  The source of information is RAA  6.3 Estimate of Revenues  Expected annual revenues (in re	20 000 USD 1998 nary, adequate, sources of information) iminary. R			
Repair and replacement cost  Total operational cost  Year of cost estimate  Nature of cost estimate (prelimi  The nature of cost estimate is prel  The source of information is RAA  6.3 Estimate of Revenues  Expected annual revenues (in rel  100 000 USD	20 000 USD 1998 nary, adequate, sources of information) iminary. R eal terms)			
Repair and replacement cost  Total operational cost  Year of cost estimate  Nature of cost estimate (prelimi  The nature of cost estimate is prel  The source of information is RAA  6.3 Estimate of Revenues  Expected annual revenues (in rel  100 000 USD	20 000 USD 1998 nary, adequate, sources of information) iminary. R eal terms)			
Repair and replacement cost  Total operational cost  Year of cost estimate  Nature of cost estimate (prelimi  The nature of cost estimate is prel  The source of information is RAA  6.3 Estimate of Revenues  Expected annual revenues (in rel  100 000 USD	20 000 USD 1998 nary, adequate, sources of information) iminary. R eal terms)			

6.4 Financial Internal Rate of return (FIRR)					
Has a FIRR been calculated? C yes x no					
6.5 Anticipated/Proposed Funding Scheme					
Source of funding	Secured	Requested	Non-		
			secured		
	Cu	rrency [USD]			
1. Equity of project owner		600 000			
2. National Environmental					
Fund					
3. Water Management Fund					
4. Public loan – central budget					
5. Public loan – regional budget					
6. Public grant – central budget					
7. Public grant – regional					
budget					
8. International loan					
9. International grant					
10. Commercial bank loan					
11. Other sources					
Total funds / requirements		600 000			

Project No.

Modernization and Completion of the WWTP at FIBREX Savinesti

Date of first setting up:	1995	Date of latest update :	1998
Project Title :	Modernization and co Savinesti	ompletion of the WWTP	at FIBREX

Responsible/Le	gal Body
Authority/Company	SC FIBREX SA Savinesti
Name	Eng.Petru Bogza - Manager
Address	str.Uzinei, nr.1, 5612, Savinesti, judetul Neamt
Telephone	281 000, 281 100
Fax	281 638, 281 223
e-mail	
<b>Project Target</b>	Reduction of organic pollution, ammonia and phenols.
<b>Investment Costs</b>	1 160 000 USD
<b>Status of Project</b>	x ongoing C planned C emerging concept
Language of Proj	ect Documents    X   Romanian   C   English   C     German     Summary in English: C   yes   X   no

# 1 Project title Modernization and completion of the WWTP at FIBREX Savinesti

## 2 Investor Details

## 2.1 Authority/Company

Name	SC FIBREX Savinesti
Address	str.Uzinei, nr.1, 5612, Savinesti, judetul Neamt
Telephone	281 000, 281 100
Fax	281 638, 281 223

#### 2.2 Contact persons

Eng.Dinu Timpoc-technical director

#### 2.3 Advisor/Consultant

Fleming K.Ploger, Varlosevej 20B, 3500 Vaolaso, Denmark, Tel:45 42 48 46 06. Fax:45 42 48 43 03

#### 2.4 Legal/Financial Status

Private company with the majority state shares.

# 2.5 Authority/Company profile

The company is specialized in the production of shintetic fibers.

Number of employees:5269

Annual revenue (1998-only 11 month): 654 584 million lei (65 000 000 USD)

Annual expenses: 689 463 million lei: 69 000 000 USD

Profit: - 4 000 000 USD (loss)

# **2.6 Planning/Implementing Extent/Capacity of the Investor**

The investor has capacity of administration, supervision of erection and operation of the new structures.

#### 2.7 Institutions/Enterprises beside the Investor

FLEMING K.PLOGER on behalf of the Ministry of Environment and Energy from Denmark (it appears that there are intentions to give financial support).

Tel: 45 42 48 46 06; Fax: 45 42 48 43 03

## 3. PROJECT DESCRIPTION

## 3.1 Project Outline

The project is a structural one. The project comprises the expansion of biological treatment, improving of aeration system with the efficient control of dissolved oxygen and finalizing the sludge dewatering system.

## 3.2 Primary Needs for the Project

Technical solution is under study and it is needed. Financial support is needed, too.

## 3.3 Status of Project Preparation

The project is just proposed but not finalized. It is expected that implementation, that is putting into operation would be possible after the year 2003.

# 3.4 Technology proposed

The technology proposed is based on the activated sludge process with a complete oxidation of ammonia.

# 3.5 Ownership of project Site

The site is in the ownership of the titleholder.

3.6	Sı	pecific	Pro	iect	<b>Items</b>
•••	$\sim$	Jecilie	<b>-</b> - 0.	Jece	

Beside organic substances and ammonia oxidation the color removal appears to be necessary.

# 4. Project Effects and Interactions

## 4.1 Public's Expression of Interest

There is a positive attitude of public with this project.

# **4.2 Environmental Impact Assessment**

x yes C no

 $\overline{\mathbf{x}}$  planned C in progress C finished/completed C accepted C rejected N Ap

## 4.3 Sensitivity of Locality/Receptor

The receiving water is the river Bistrita that is supposed to have good condition for fish life. Barbus sp. Grow up in Bistrita water environment and a few lakes are located downstream. The cities of Bacau and Buhusi are also located downstream using the river as natural resources.

# **4.4 Primary Effects of Project**

Primary effects of project are the reduction of pollutants discharges (1300 tones of ammonia per year, 20 000 tones of BOD5 per year and about 4 tones of phenols per year) with the main consequence of eutrophication prevention downstream.

# **5. Economic Project Justification**

# **5.1 Economic Project Benefits**

The project economic benefits have not been calculated because the project is ongoing now.

Employment/income effects		
during construction period   30-35 employees		
during operation period	insignificant	
Other economic benefits		

[			
5.2 Economic Internal Rate of Return (EIRR)			
Has an EIRR been calculated	C yes		
	x no		
total investment costs of project	1 160 000 USD		
planned annual depreciation	32 000 USD		
planned annual operation costs	30 000 USD		
planned annual revenues	100 000 USD		
6. Financial Viability			
6.1 Estimated Investment C	lost		
Investment cost			
All	location of capital cost		
Land	0 USD		
Construction and machinery	1 135 000 USD		
Planning and supervision	25 000 USD		
Total cost	1 160 000 USD		
On an annual basis			
Year of cost estimate	1998		
Nature of cost estimate (prelimin	nary, adequate, etc.)		
Preliminary calculation			
<b>6.2 Estimated Operational</b>	Cost		
Expected annual (operational) re	ecurrent cost (in real terms)		
It is not calculated.			
Repair and replacement cost	10 000 USD		
Total operational cost	20 000 USD		
Year of cost estimate	1998		
	nary, adequate, sources of information)		
	nd the source of information is the titleholder		
The cost estimate is premimary an	id the source of information is the titleholder		
<b>6.3 Estimate of Revenues</b>			
<b>Expected annual revenues (in re</b>	al terms)		
100 000 USD			
Year of estimate	1998		
Nature of estimate (preliminary,			
Nature of estimate is preliminary a	and is based on similar works in the industrial		
wastewater treatment			

wastewater treatment.

6.4 Financial Internal Rate of return (FIRR)					
Has a FIRR been calculated?	C yes	<b>x</b> no			
6.5 Anticipated/Proposed Fu	6.5 Anticipated/Proposed Funding Scheme				
Source of funding	Secured	Requested	Non-		
			secured		
	Cı	irrency [USD]			
1. Equity of project owner		710 000			
2. National Environmental					
Fund					
3. Water Management Fund					
4. Public loan – central budget					
5. Public loan – regional budget					
6. Public grant – central budget					
7. Public grant – regional					
budget					
8. International loan					
9. International grant		450 000			
10. Commercial bank loan					
11. Other sources					
Total funds / requirements		1 160 000			

Project No.

Modernization of WWTP at SC INDAGRA SA Arad

Date of first setting up:	1995	Date of latest update: 1998
<b>Project Title:</b>	Modernization of WV	WTP at SC INDAGRA SA Arad

Responsible/Leg	gal Body
Authority/Company	SC INDAGRA SA Arad
Name	Eng.Paul Turcu - General Manager
Address	Calea Aurel Vlaicu, 274-276, Arad, judetul Arad
Telephone	094-566 744
Fax	057-289 601
e-mail	
<b>Project Target</b>	Reduction of organic loaded and suspended matter on Mures channel
<b>Investment Costs</b>	1 000 000 USD
<b>Status of Project</b>	C ongoing x planned C emerging concept
Language of Proj	ect Documents  X Romanian C English C German  Summary in English: C yes X no

# 1 Project title Modernization of WWTP at SC INDAGRA SA Arad

# 2 Investor Details

## 2.1 Authority/Company

	<u> </u>
Name	SC INDAGRA SA Arad
A 11	
Address	Calea Aurel Vlaicu, 274-276, Arad
Telephone	057-243 348
1	
Fax	057-289 601
1	

#### 2.2 Contact persons

Eng.Ion Istrate - Technical Director

### 2.3 Advisor/Consultant

CHEMATUR ENGINEERING, Box 430, S69127 Karlskoga, Sweden, Tel:465 866 4100.

Fax: 465 866 4250

## 2.4 Legal/Financial Status

Private company with some state shares.

#### 2.5 Authority/Company profile

The company is involved in food industry.

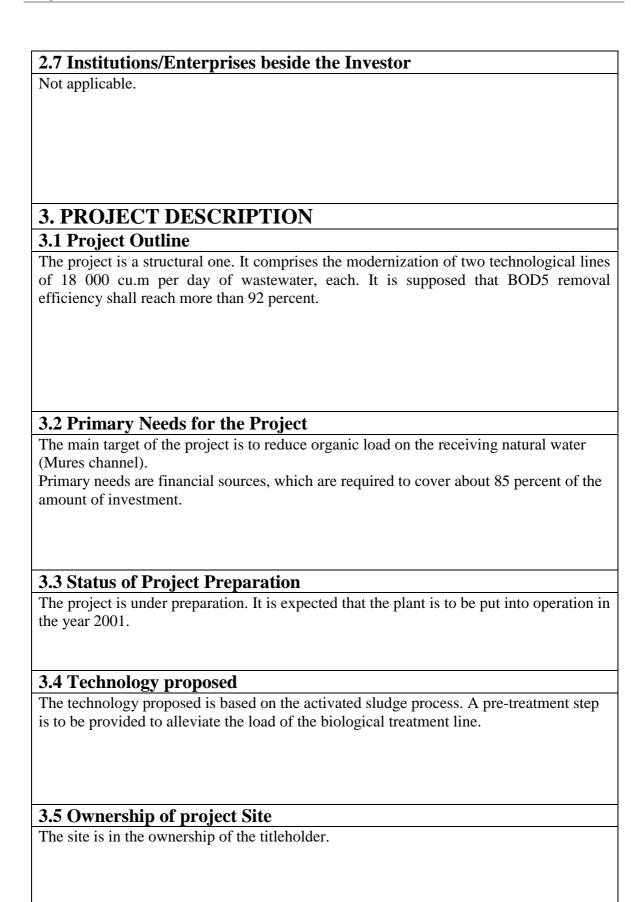
Number of employees: 526

Annual revenue: 83 690 million lei - 8 369 000 USD Annual expenses: 86 819 million lei = 8 681 900 USD Profit/losses: - 3 129 million lei = 312 900 USD

The data mentioned above are valid for 1998.

## 2.6 Planning/Implementing Extent/Capacity of the Investor

The investor has capacity of administration, supervision of erection and operation of the new structures.



3.6 Specific Project Items
The project will provide complete nitrification assuring the oxygen requirements for
treatment of 18 000 cu.m of wastewater per day. Laboratory equipment is necessary.
4. Project Effects and Interactions
4.1 Public's Expression of Interest
The public's interest is positive.
4.2 Environmental Impact Assessment
x yes C no
$C$ planned $\square$ in progress $C$ finished/completed $C$ accepted $C$
rejected N Ap
4.3 Sensitivity of Locality/Receptor
The receiving water is Mures channel-Mort which offer poor conditions for fish life in
the zone where the wastewater is discharged.
4.4 Primary Effects of Project
The primary effects of project are expected to consist of 6 million tones of suspended
solids per year and 6.5 million tones of BOD5 per year reduction that is not to be
discharged into the recipient water.
5. Economic Project Justification
5.1 Economic Project Benefits
The project economic benefits have not been calculated.

Employment/income effects	
during construction period	25-30 employees
during operation period	10-15 employees
0.4	

# Other economic benefits

Not applicable.

5.2 Economic Internal Rate	T ~
Has an EIRR been calculated	<u>C</u> yes
	<b>X</b> no
total investment costs of project	1 000 000 USD
planned annual depreciation	40 000 USD
planned annual operation costs	50 000 USD
planned annual revenues	1 000 000 USD
6. Financial Viability	
6.1 Estimated Investment C	Cost
Investment cost	1 000 000 USD
Al	location of capital cost
Land	0 USD
<b>Construction and machinery</b>	975 000 USD
Planning and supervision	25 000 USD
Total cost	1 000 000 USD
On an annual basis	
Year of cost estimate	1998
Nature of cost estimate (prelimination)	nary, adequate, etc.)
Preliminary calculation	
<b>6.2 Estimated Operational</b>	Cost
Expected annual (operational) r	
50 000 USD	controlle cost (in real terms)
20 000 022	
Repair and replacement cost	10 000 USD
Total operational cost	50 000 USD
<b>T</b> 7	1000
Year of cost estimate	1998
	nary, adequate, sources of information)
Nature of cost estimate (preliminary.) The nature of cost is preliminary.	nary, adequate, sources of information)
Nature of cost estimate (prelimi	nary, adequate, sources of information)
Nature of cost estimate (preliminary.) The nature of cost is preliminary.	nary, adequate, sources of information)
Nature of cost estimate (preliminary). The nature of cost is preliminary. The sources of information are the	nary, adequate, sources of information)
Nature of cost estimate (preliminary). The nature of cost is preliminary. The sources of information are the <b>6.3 Estimate of Revenues</b>	e titleholder and RAAR.
Nature of cost estimate (preliminary). The nature of cost is preliminary. The sources of information are the 6.3 Estimate of Revenues  Expected annual revenues (in recognition).	e titleholder and RAAR.
Nature of cost estimate (preliminary). The nature of cost is preliminary. The sources of information are the <b>6.3 Estimate of Revenues</b>	e titleholder and RAAR.
Nature of cost estimate (preliminary). The nature of cost is preliminary. The sources of information are the <b>6.3 Estimate of Revenues</b> Expected annual revenues (in real 100 000 USD	e titleholder and RAAR.  eal terms)
Nature of cost estimate (preliminary). The nature of cost is preliminary. The sources of information are the 6.3 Estimate of Revenues  Expected annual revenues (in real 100 000 USD)  Year of estimate	e titleholder and RAAR.  Pal terms)
Nature of cost estimate (preliminary). The nature of cost is preliminary. The sources of information are the open cost is preliminary. The sources of information are the open cost in the sources of information are the open cost in the open cost	e titleholder and RAAR.  Pal terms)
Nature of cost estimate (preliminary). The nature of cost is preliminary. The sources of information are the 6.3 Estimate of Revenues  Expected annual revenues (in real 100 000 USD)  Year of estimate	e titleholder and RAAR.  Pal terms)
Nature of cost estimate (preliminary). The nature of cost is preliminary. The sources of information are the open cost is preliminary. The sources of information are the open cost in the sources of information are the open cost in the open cost	e titleholder and RAAR.  Pal terms)

6.4 Financial Internal Rate of return (FIRR)				
Has a FIRR been calculated?	C yes	<b>X</b> no		
6.5 Anticipated/Proposed Fu	nding Scheme			
Source of funding	Secured	Requested	Non- secured	
		Currency [USD]		
1. Equity of project owner			150 000	
2. National Environmental Fund				
3. Water Management Fund				
4. Public loan – central budget				
5. Public loan – regional budget				
6. Public grant – central budget				
7. Public grant – regional				
budget				
8. International loan				
9. International grant				
10. Commercial bank loan			700	
			000	
11. Other sources			150	
			000	
Total funds / requirements			1 000	
			000	

Project No.

Dams Rehabilitation alongside Danube River from the "Iron Gates" - km 875 to Isaccea - km 103

Date of first setting up:	1995	Date of latest update :	01.1998
Project Title :	Dams rehabilitati Gates" – km 875 to Isaccea –	on alongside Danube River fro	om the "Iron

Responsible/Le	gal Body			
Authority/Company	Ministry of Water, Forest and Environmental Protection			
Name	Ing. Octaviav Ceac	hir - director		
Address	Bd Libertatii nr. 12, Bucuresti			
Telephone	41.00.255			
Fax	40.1.41.00.282			
e-mail				
<b>Project Target</b>	Human health and	goods protection in the Danube river valley		
<b>Investment Costs</b>	2.850.000 USD			
<b>Status of Project</b>	▼ ongoing	☐ planned ☐ emerging concept		
Language of Proj	ect Documents	⊠ Romanian  □ English  □     German     Summary in English: □ yes  ☒ no		

## 1 Project title

Dams rehabilitation alongside Danube River from the "Iron Gates" – km 875 to Isaccea - km 103

#### 2 Investor Details

## 2.1 Authority/Company

Name	Regia Autonoma "Apele Romane"
Address	Str. Edgar Quinet, nr.6, Bucuresti, cod 70106
Telephone	40.1.315.55.35
Fax	40.1.312.21.74

#### 2.2 Contact persons

Dr.ing. Gheorghe Baran – director general

#### 2.3 Advisor/Consultant

CalCe Victor, N.N152d73r4SBuris5S5s5sd57rs1ur3r, N.N152d7

#### 2.4 Legal/Financial Status

State company

#### 2.5 Authority/Company profile

The company is responsible for water management throughout country. The company comprises

11 branches responsible for water management in the main inland river basins.

Number of employees (1997): 13500

Annual revenue (1997): 299215 x 10  $^6$  lei ( $\approx 34.000.000$  USD) Annual expenses (1997): 279823 x 10  $^{6}$  lei ( $\approx$  32.000.000 USD) Profit (1997): 19392 x 10  $^{6}$  lei (2.200.000 USD)

## 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, supervision, operation and maintenance of the new structures.

## 2.7 Institutions/Enterprises beside the Investor

AQUAPROIECT - Tel: 40.1.637.31.45, Fax: 40.1.637.79.65

## 3. PROJECT DESCRIPTION

### 3.1 Project Outline

Dams rehabilitation alongside the Danube River. The project is a structural one.

## 3.2 Primary Needs for the Project

The target of the project is protecting human health and goods. The project will contribute to

economic development of the zone, which is possibility, affected by flood.

## 3.3 Status of Project Preparation

The project is at the level of feasibility study.

### 3.4 Technology proposed

The technology provided to for rehabilitation the respective hydraulic structures is a traditional one.

# 3.5 Ownership of project Site

The site is in the ownership of the investor.

3.6 Specific Project Items			
A total length of 16-km dams	of the Danube riverside is to be rehabilitated.		
4 D 4 E.C	T., 4		
4. Project Effects and			
4.1 Public's Expression	of Interest		
Public's attitude is positive.			
4.2 Environmental Impa	act Assessment		
□yes	$\mathbf{X}_{no}$		
4.3 Sensitivity of Localit	y/Receptor		
The protected area is sensitive possible danger to injure unpre-	with its specific bio-diversity and with its specific otected population.		
4.4 Primary Effects of P	roject		
The primary effect of the project is the protection of a surface area of 418.000 hectares against flood.			
5. Economic Project	Justification		
5.1 Economic Project Be			
The project is ongoing now and the economic benefits have not been calculated.			
<b>Employment/income effects</b>			
during construction period	80 – 100 employees		
during operation period	Not significant		

5.2 Economic Internal Rate of Return (EIRR)				
	yes			
Has an EIRR been calculated	⊠ no			
total investment costs of project	2.850.000 USD			
planned annual depreciation	NA			
planned annual operation costs	100.000 USD			
planned annual revenues	475.000 USD			
6. Financial Viability				
6.1 Estimated Investment C	Cost			
Investment cost	2.850.000 USD			
	llocation of capital cost			
Land	0			
Construction and machinery	2.810.000 USD			
Planning and supervision	50.000 USD			
Total cost	2.850.000 USD			
On an annual basis				
Year of cost estimate	1998			
Nature of cost estimate (prelimin	nary, adequate, etc.)			
Preliminary calculation				
6.2 Estimated Operational	Cost			
Expected annual (operational) r				
2.850.000 USD				
Repair and replacement cost	20.000 USD			
Total operational cost 100.000 USD				
Year of cost estimate 1998				
Nature of cost estimate (prelimin	nary, adequate, sources of information)			
Preliminary evaluation. The source of information: NEAP				
<b>6.3 Estimate of Revenues</b>				
<b>Expected annual revenues (in re</b>	eal terms)			
475.000 USD				
Year of estimate	1998			
Nature of estimate (preliminary, adequate, etc.)				
The estimation of annual revenue is preliminary.				

6.4 Financial Internal Rate of return (FIRR)				
Has a FIRR been calculated?	☐ yes	X no		
6.5 Anticipated/Proposed Fu	nding Scheme			
Source of funding	Secured	Requested	Non-	
			secured	
	Cı	urrency [USD]		
1. Equity of project owner				
2. National Environmental				
Fund				
3. Water Management Fund		2.850.000		
4. Public loan – central budget				
5. Public loan – regional budget				
6. Public grant – central budget				
7. Public grant – regional				
budget				
8. International loan				
9. International grant				
10. Commercial bank loan				
11. Other sources				
Total funds / requirements		2.850.000		

Project No.

**Modernization of Water Treatment Installation at SC OLTCHIM SA** 

Date of first setting up:	1996	Date of latest update: April 1998	
<b>Project Title:</b>	Modernization of water treatment installation at SC OLTCHIM SA		
Responsible/Leg	gal Body		
Authority/Company	SC OLTCHIM SA		
Name	Eng.Constantin Roibu		
Address	Str.Uzinei nr.1, Rm.Valcea, judet Valcea		
Telephone	050-732 406		
Fax	050-735 030		
e-mail			
Project Target	Removal of micropollutants (mercury, heavy metals, etc.) as well as BOD5 to meet the requirements of NTPA 001		
<b>Investment Costs</b>	662 000 USD		
<b>Status of Project</b>	x ongoing	planned emerging concept	
Language of Proj	ect Documents	Romanian English German Summary in English: yes no	

## 1 Project title Modernization of water treatment installation at SC OLTCHIM SA

#### 2 Investor Details

## 2.1 Authority/Company

OLTCHIM SA – Ramnicu-Valcea
da Uzinei, nr.1, Ramnicu-Valcea, judetul Valcea
732 406
735 030
ŀ

#### 2.2 Contact persons

Eng.Dragos Preoteasa Tel.050-732 406

#### 2.3 Advisor/Consultant

ICIM Bucharest, Spl.Independentei 294, sector 6, Bucuresti, Tel 40.1.637 30 20, Fax.40.1.312.13.93

#### 2.4 Legal/Financial Status

Private company with majority shares of state

#### 2.5 Authority/Company profile

Production of basic chemicals for chemical industry (e.g., chlorinated solvents, HCH-

Lindon, policarbonates, etc.)

Number of employees: 6828 (197)

Annual revenue: 1951 504 411 x 10<sup>6</sup> lei= 195 billion USD (1997) Annual expenses: 1891 284 053 x 10<sup>6</sup> lei= 189 billion USD (1997)

Profit:  $60\ 220\ 388\ x\ 10^6\ lei = 6\ billion\ USD\ (1997)$ 

# 2.6 Planning/Implementing Extent/Capacity of the Investor

The investor has capacity of administration, supervision of erection and operation of the new structures.



SC VILMAR SA, SC Chloro-sodium factory-Govora, "ELECTROCENTRALE"-Govora

#### 3. PROJECT DESCRIPTION

## 3.1 Project Outline

Structural project.

The project comprises the modernization of the electrolysis installation and the modernization of "oxo" section.

#### 3.2 Primary Needs for the Project

The main target of project is to comply with the requirements of NTPA 001 regarding the effluent quality know how and special devices to get off the micropollutants discharged into the river Olt are needed.

## 3.3 Status of Project Preparation

The project is ongoing now and the designed installations are to be put into operation in 1999.

#### 3.4 Technology proposed

The technology which is to be applied is based on ion separation by means of ion exchanger membranes. Besides, in order to eliminate cobalt ion from the effluent the cobalt catalizer used in "oxo" section is to be avoided.

## 3.5 Ownership of project Site

The site is in the ownership of the investor.

3.6 Specific Project Item	NS .			
The project will apply BAT for micropollutants removal focusing the prevention of				
pollution taking measures at the place of production primarily.				
4. Project Effects and				
4.1 Public's Expression of				
Positive attitude of the public	for the project has been met.			
407				
4.2 Environmental Impa	act Assessment			
<b>x</b> yes	□ no			
planned in progr	ess x finished/completed accepted rejected			
N Ap				
4.3 Sensitivity of Localit	y/Receptor			
The receiving water in river O	It and there are water users downstream the discharging			
	ed with water from this natural resource. The biological			
state of the river needs to be improved, too.				
4.4 D	• ,			
4.4 Primary Effects of P	·			
The biological state of the river (fishlife) will be improved. The risk of transfer of toxic				
substances to numan body via	plants and animals will be diminished.			
5. Economic Project J	<b>Justification</b>			
5.1 Economic Project Be	enefits			
The economic project benefits have not been estimated.				
<b>Employment/income effects</b>				
during construction period	15-20 employees			
during operation period	5-10 employees			
Other economic benefits				
No available data				

5.2 Economic Internal Rate of Return (EIRR)		
Has an EIRR been calculated	☐ yes	
	X no	
total investment costs of project	662 000 USD	
planned annual depreciation	32 400 USD	
planned annual operation costs	30 000 USD	
<u> </u>	110 000 USD	
planned annual revenues	110 000 03D	
6. Financial Viability		
<b>6.1 Estimated Investment C</b>	lost	
Investment cost		
All	location of capital cost	
Land	0 USD	
<b>Construction and machinery</b>	647 000 USD	
Planning and supervision	15 000 USD	
Total cost	662 000 USD	
On an annual basis		
Year of cost estimate	1995	
Nature of cost estimate (prelimin	nary, adequate, etc.)	
Preliminary calculation		
<b>6.2 Estimated Operational</b>	Cost	
<b>Expected annual (operational) r</b>	,	
Wastewater treatment: 25 000 US	D	
Monitoring: 5 000 USD		
Repair and replacement cost	10 500 USD	
Total operational cost	30 000 USD	
Year of cost estimate	1995	
	nary, adequate, sources of information)	
	The cost estimation is based on the similar costs spent	
on the operation of other works. So	ource: NEAP	
6.3 Estimate of Revenues		
Expected annual revenues (in re	al tamma)	
110 000 USD	ai terins)	
110 000 03D		
Year of estimate	1995	
Nature of estimate (preliminary,		
	y and it is based on the updated indexes for investment	
in wastewater treatment.	r	

6.4 Financial Internal Rate of return (FIRR)					
Has a FIRR been calculated?	☐ yes	<b>x</b> no			
6.5 Anticipated/Proposed Fu	6.5 Anticipated/Proposed Funding Scheme				
Source of funding	Secured	Requested	Non-		
			secured		
	Cı	urrency [USD]			
1. Equity of project owner	662 000				
2. National Environmental					
Fund					
3. Water Management Fund					
4. Public loan – central budget					
5. Public loan – regional budget					
6. Public grant – central budget					
7. Public grant – regional					
budget					
8. International loan					
9. International grant					
10. Commercial bank loan					
11. Other sources					
Total funds / requirements	662 000				

Project No.

Completion and Modernisation of WWTP at Phoenix Baia Mare

Date of first setting up:	1995	Date of latest update: 1998	
<b>Project Title:</b>	Completion and modernization of WWTP at Phoenix Baia Mare		
Responsible/Leg	gal Body		
Authority/Company	SC PHOENIX SA	Baia Mare	
Name	Vasile Manole		
Address	str.Eliberarii, nr.15	, Baia Mare	
Telephone	062-216 113		
Fax	062-213 802 062-213 968		
e-mail			
Project Target	Reduction of suspe requirements	ended matter and compliance with NTPA 001	
<b>Investment Costs</b>	1 250 000 USD		
<b>Status of Project</b>	x ongoing	planned emerging concept	
Language of Proje	ect Documents	x Romanian	

Summary in English:  $\square$  yes  $\boxed{\mathbf{x}}$  no

# 1 Project title Completion and modernization of WWTP at Phoenix Baia Mare

## 2 Investor Details

## 2.1 Authority/Company

Name	SC PHOENIX SA Baia Mare
Address	str.Eliberarii, nr.15, Baia Mare
Telephone	062-216 113/ int.248
Fax	062-213 802

## 2.2 Contact persons

Eng. Vasile More

## 2.3 Advisor/Consultant

ICIM Bucharest, Spl.Independentei 294, sector 6, Tel.40.1.637.30.20, Fax.40.1.312.13.93

## 2.4 Legal/Financial Status

Private company with state majority shares

## 2.5 Authority/Company profile

Non ferrous metal production and sulphuric acid production.

## **2.6 Planning/Implementing Extent/Capacity of the Investor**

The investor has capacity of administration, supervision of erection and operation of the new structure.

2.7 Institutions/Enterprises beside the Investor
Not applicable.
3. PROJECT DESCRIPTION
3.1 Project Outline
The project will comprise the construction of a new main sewage collection pipe, a new
30 m diameter final sedimentation tank, new aeration system, a new recirculation system
of water, petroleum products pollution prevention system.
3.2 Primary Needs for the Project
The main target of project is achieving the effluent quality requirements (NTPA 001)
and to reduce the Sasar river water pollution with suspended mater.
Primary needs refer to the financial issue.
Timary needs felor to the intanetal issue.
3.3 Status of Project Preparation
The project is an ongoing process of achievement.
3.4 Technology proposed
The technology proposed is based on the plain sedimentation process and oxidation by
means of aeration unit operation applied.
3.5 Ownership of project Site
The site is in the ownership of the investor.
2110 Sive 15 III the Officeromp of the Infection

3.6 Specific Project Item	$\mathbf{s}$			
The project will focus the separation of suspended matter, including heavy metals and				
continuous monitoring of the effluent discharging only in one point into the river.				
4. Project Effects and	Interactions			
4.1 Public's Expression of	of Interest			
It appears that the public attitu	de regarding this project is positive.			
44-				
4.2 Environmental Impa				
<b>X</b> yes	C no			
C planned C in progre	C no ess C finished/completed accepted C rejected			
N Ap	J. J			
4.3 Sensitivity of Locality	v/Receptor			
· · ·	asar that has a transboundary influence (Hungary).			
	is required in this river as well as the quality of water for			
the riparian users downstream.				
4.4 Primary Effects of Pr	roject			
The primary effects of the proj	ject will be felt at the local and regional level. The			
*	ced (750 tones per year-reduction). The probability of			
pollution accidents on the river	pollution accidents on the river (petroleum products) will be decreased.			
5 Fagnamia Project 1				
5. Economic Project J				
5.1 Economic Project Be				
	have not been calculated because the project is ongoing			
now.				
Elavarant/income offorts				
Employment/income effects	20.25 ampleyees			
during construction period	20-25 employees			
during operation period	insignificant			
Other economic benefits				

5.2 Economic Internal Rate of Return (EIRR)				
Has an EIRR been calculated	C yes			
	<b>X</b> no			
total investment costs of project	1 250 000 USD			
planned annual depreciation	43 000 USD			
planned annual operation costs	40 000 USD			
planned annual revenues	200 000 USD			
6. Financial Viability				
<b>6.1 Estimated Investment C</b>	lost			
Investment cost				
All	location of capital cost			
Land	0 USD			
Construction and machinery	1 200 000 USD			
Planning and supervision	50 000 USD			
Total cost	1 250 000 USD			
On an annual basis				
Year of cost estimate	1998			
Nature of cost estimate (prelimin	nary, adequate, etc.)			
Preliminary calculation				
<b>6.2 Estimated Operational</b>	Cost			
<b>Expected annual (operational) r</b>	ecurrent cost (in real terms)			
Wastewater treatment: 30 000 US				
Sewage collection system: 5000 U	ISD			
Repair and replacement cost	5 000 USD			
Total operational cost	40 000 USD			
Year of cost estimate	1998			
Nature of cost estimate (prelimin	nary, adequate, sources of information)			
The cost estimate is preliminary. T	The estimation is based on the similar costs spent on			
the operation of other sewage water	er works. Source of information: RAAR.			
<b>6.3 Estimate of Revenues</b>				
Expected annual revenues (in re	al terms)			
200 000 USD				

Nature of estimation is preliminary and it is based on the indexes of investments in sewage works (25 million lei/l/s).

Nature of estimate (preliminary, adequate, etc.)

1998

Year of estimate

6.4 Financial Internal Rate of return (FIRR)					
Has a FIRR been calculated?  C yes x no					
6.5 Anticipated/Proposed Fu	6.5 Anticipated/Proposed Funding Scheme				
Source of funding	Secured	Requested	Non-		
			secured		
	Cu	rrency [USD]			
1. Equity of project owner			1 250		
			000		
2. National Environmental					
Fund					
3. Water Management Fund					
4. Public loan – central budget					
5. Public loan – regional budget					
6. Public grant – central budget					
7. Public grant – regional					
budget					
8. International loan					
9. International grant					
10. Commercial bank loan					
11. Other sources					
Total funds / requirements			1 250		
			000		

Project No.

Wastewater Treatment Plant of Galați City

Date of first setting up:	1996	Date of latest update :
Project Title :	Wastewater trea	tment plant of Galați city
Responsible/Leg	gal Body	
Authority/Company	Council of the C	Galați county
Name	Antonaș Liviu	
Address	B-dul Republici	i, nr. 56, Galați
Telephone	036/43.71.00 -1	20
Fax	036/46.07.63	
e-mail		
Project Target	Abatement of or	ganic load on the Danube River.
<b>Investment Costs</b>	29.500.000 USI	
<b>Status of Project</b>	ongoing	☐ planned ☐ emerging concept
Language of Proje	ect Document	Romanian English German

Summary in English:  $\square$  yes  $\boxtimes$  no

## 1 Project title

Wastewater treatment plant of Galați city

#### 2 Investor Details

## 2.1 Authority/Company

Name	Regia Autonomă pentru Gospodărie Comunală – RAGCL Galați
Address	Str. C. Brâncoveanu, nr. 2
Telephone	40.36.47.33.80
Fax	40.36.47.33.67

## 2.2 Contact persons

Ing. Aristide Tănăsescu – general director

Ing. Niță Podaru – director

#### 2.3 Advisor/Consultant

PROED București, Str. Tudor Arghezi 21, București ICIM București, Spl. Independenței 294, sector 6, București

## 2.4 Legal/Financial Status

State company

## 2.5 Authority/Company profile

The company is specialized on water supply and sewerage works.

Number of employees: 3024 (1997)

Annual revenue (1997): 173 141 527 000 lei (≈ 19 901 325 USD) Annual expenses (1997): 161 165 804 000 lei (≈ 18 524 805 USD)

Profit (1997): 11 975 723 000 lei (1 376 520 USD)

# 2.6 Planning/Implementing Extent/Capacity of the Investor

Administration, consulting, supervision during erection and operation of new structures.

### 2.7 Institutions/Enterprises beside the Investor

PROED București, Str. Tudor Arghezi 21

ICIM București - Spl. Independenței 294, Tel.: 40.1.6373020, Fax: 40.1.3121393

#### 3. PROJECT DESCRIPTION

## 3.1 Project Outline

#### Structural project

A wastewater treatment plant will be built based on activated sludge process. The title holder will be RAGCL Galați and the site is to be located on Siret River bank upstream the point of discharge into the Danube river.

#### 3.2 Primary Needs for the Project

The main target of the project is to reduce the organic load on the Danube River with the transboundary effects (the city of Galați is located on the opposite side of the Ukrainian city of Reni, across the Danube.

#### 3.3 Status of Project Preparation

The project is proposed to be included in the priority list of NEAP so, its status is at the prefeasibility level.

#### 3.4 Technology proposed

It is supposed that activated sludge process will be applied consisting in primary sedimentation followed by aeration tanks and secondary sedimentation.

#### 3.5 Ownership of project Site

The site of the plant is to be in the ownership of the investor. The Council of the county with the mayoralty will take actions to solve this problem.

3.6 Specific Project Item	S	
Disinfection by chlorination will be finally applied in order to reduce bacteriological contamination of the river.		
4. Project Effects and	Interactions	
4.1 Public's Expression of		
The public attitude is supposed	d to be positive.	
4.2 Environmental Impa	ect Assessment    X   no	
	ress	
4.3 Sensitivity of Locality	y/Receptor	
The point of wastewater discharge is not so far upstream the Danube River Delta and upstream the city of Tulcea which uses Danube water to prepare drinking water.		
4.4 Primary Effects of Pr	roject	
By project implementation the quality of the raw water used after treatment for drinking purpose will be improved. Besides, being a boundary with Ukraine, the effect of the improved quality of the river will be received by the neighboring country.		
5. Economic Project J	<b>Justification</b>	
5.1 Economic Project Be	nefits	
It is not possible to quantify because the project is just before prefeasibility study.		
Employment/income effects		
during construction period	80 – 100 employees	
during operation period	50 – 60 employees	
Other economic benefits		

5.2 Economic Internal Rate	of Paturn (FIPP)
5.2 Economic Internal Kate	
Has an EIRR been calculated	☐ yes
The the Ellie Scott Chicarotte	⊠ no
total investment costs of project	29.500.000 USD
planned annual depreciation	610.000 USD
planned annual operation costs	560.000 USD
planned annual revenues	1.960.000 USD
6. Financial Viability	
6.1 Estimated Investment C	ost
Investment cost	29.500.000 USD
	location of capital cost
Land	472.000 USD
Construction and machinery	28.497.100 USD
Planning and supervision	531.000 USD
Total cost	29.500.000 USD
On an annual basis	3,000,000
Year of cost estimate	1998
Nature of cost estimate (prelimin	
Preliminary calculation	<b>v</b> / <b>1</b> / /
6.2 Estimated Operational (	Cost
Expected annual (operational) re	
Wastewater treatment: 610.000	· ,
• Sewage collection: 1.030000 U	
Repair and replacement cost	295.000 USD
Total operational cost	1.640.000 USD
Year of cost estimate 1998	
	nary, adequate, sources of information)
The cost estimate is preliminary.	
6.3 Estimate of Revenues	
Expected annual revenues (in re	al tarms)
Expected annual revenues (in re	ar terms)
1.960.000 USD	
Year of estimate	1998
Nature of estimate (preliminary,	, adequate, etc.)
<u> </u>	y and it is based on the updated indexes for investment
of sewerage works.	

6.4 Financial Internal Rate of return (FIRR)			
Has a FIRR been calculated?	☐ yes	X no	
6.5 Anticipated/Proposed Fu	nding Scheme		
Source of funding	Secured	Requested	Non-
			secured
	Cı	irrency [USD]	
1. Equity of project owner			
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget		29.500.000	
6. Public grant – central budget			
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements		29.000.000	

# Project No.

**Expansion of Discharging Facilities and Final Disposal of Waste at SC UPSOM SA OCNA MURES** 

Date of first setting up:	1995	Date of latest update: 1998	
Project Title:	Expansion of discharging facilities and final disposal of waste at SC UPSOM SA OCNA MURES		
Responsible/Leg			
Authority/Company	SC UPSOM S	A Ocna Mures	
Name	Eng.Ioan Bogo	dan - General Manager	
Address	str.Mihai Emii	nescu nr.1, Ocna Mures, judetu Alba	
Telephone	058-870 923		
Fax			
e-mail			
Project Target	Prevention of (Cl <sup>-</sup> ) and suspe	Mures river water pollution by dissolved solids ended solids.	
<b>Investment Costs</b>	120 000 USD		
<b>Status of Project</b>	<b>X</b> ongoing	☐ planned ☐ emerging concept	
Language of Proje	ect Documer	nts X Romanian	

Summary in English: yes no

# 1 Project title Expansion of discharging facilities and final disposal of waste at SC UPSOM SA OCNA MURES

## 2 Investor Details

#### 2.1 Authority/Company

Name	SC UPSOM SA Ocna Mures
Address	str.Mihai Eminescu nr.1, Ocna Mures, judet Alba
Telephone	058-871 223
Fax	

#### 2.2 Contact persons

Violeta Kocsis

#### 2.3 Advisor/Consultant

ICIM Bucharest, Spl.Independentei 294, sector 6, Tel.40.1.637.30.20, Fax.40.1.312.13.93

#### 2.4 Legal/Financial Status

Private company with the majority shares of state.

# 2.5 Authority/Company profile

Chemical production.

Number of employees: 1676

Annual revenue: 199.6 billion lei (11 months in 1998)= 19 960 000 USD Annual expenses:219.6 billion lei (11 months in 1998)= 21 960 000 USD

Profit= - 20 billion lei (losses)= 2 000 000 USD

## 2.6 Planning/Implementing Extent/Capacity of the Investor

The investor has capacity of administration, supervision of erection and operation of the new structures.

2.7 Institutions/Enterprises beside the Investor
Not applicable
3. PROJECT DESCRIPTION
3.1 Project Outline
The project is a structural one.
Mainly the project consists in construction of new facilities for liquid and solid waste removal and final disposal.
3.2 Primary Needs for the Project
Primary needs for the project are know-how to apply BAT for chlorides and other DS
removal. Funds are also needed for the project implementation.
3.3 Status of Project Preparation
The project is ongoing being 86 percent implemented, now.
3.4 Technology proposed
The technology of treatment consists of mechanical treatment (plain sedimentation) and
liquid retention in Socsoara Valley.
3.5 Ownership of project Site
The site is in the investor, but new lands are necessary for storage of waste.
2.10 2.10 10 in the investor, out hew lands are necessary for storage or waste.

3 6 Specific Project Item	ag .
3.6 Specific Project Item	
	ponds taking up 120 l/s wastewater with the supernatant
and sludge retention in a valle	y (Socsoara).
4. Project Effects and	Interactions
4.1 Public's Expression	
it appears that the public does	not have objections on this activity in the respective zone.
4.2 Ei	
4.2 Environmental Impa	ict Assessment
<b>X</b> yes	□ no
<b>x</b> planned $\square$ in progre	ess $\square$ finished/completed $\square$ accepted $\square$ rejected
N Ap	J
4.3 Sensitivity of Locality	v/Recentor
	cted by the activity subjected to this project. The
	yed solids, especially chlorides. River Mures is a
transboundary river.	, ••• solies, •sp••imily •inolies, in •• 1120100 is w
4.4 Primary Effects of P	roject
The primary effect of project i	s avoidance of river Mures pollution with chlorides,
continuing the respective econ	nomic activity.
5. Economic Project J	<b>Justification</b>
5.1 Economic Project Be	enefits
Not available data.	
<b>Employment/income effects</b>	
during construction period	30-40 employees
during operation period	0
Other economic benefits	<u> </u>
No available data.	
110 avanabie data.	

5.2 Economic Internal Rate of Return (EIRR)		
Has an EIRR been calculated		
lias an EIKK been calculated	□ yes	
	X no	
total investment costs of project	120 000 USD	
planned annual depreciation		
planned annual operation costs	0	
planned annual revenues	12 000 USD	
6. Financial Viability		
<b>6.1 Estimated Investment C</b>	Cost	
Investment cost	120 000 USD	
Al	location of capital cost	
Land	50 000 USD	
Construction and machinery	60 000 USD	
Planning and supervision	10 000 USD	
Total cost	120 000 USD	
On an annual basis		
Year of cost estimate	1998	
Nature of cost estimate (prelimin	nary, adequate, etc.)	
Preliminary calculation		
6.2 Estimated Operational	Cost	
Expected annual (operational) r	ecurrent cost (in real terms)	
The operational costs are included in the existing one.		
Repair and replacement cost	0	
Total operational cost	0	
Year of cost estimate		
	nary, adequate, sources of information)	
Not applicable.		
6.3 Estimate of Revenues		
Expected annual revenues (in real terms)		
12 000 USD		
Year of estimate	1998	
Nature of estimate (preliminary, adequate, etc.)		
Nature of estimation is preliminary.		
1		

6.4 Financial Internal Rate of return (FIRR)			
Has a FIRR been calculated?	☐ yes [	<b>X</b> no	
6.5 Anticipated/Proposed Funding Scheme			
Source of funding	Secured	Requested	Non-
			secured
	Currency [USD]		
1. Equity of project owner	1 600		
2. National Environmental			
Fund			
3. Water Management Fund			
4. Public loan – central budget			
5. Public loan – regional budget			
6. Public grant – central budget	104 000		
7. Public grant – regional			
budget			
8. International loan			
9. International grant			
10. Commercial bank loan			
11. Other sources			
Total funds / requirements	120 000		