

DANUBE POLLUTION REDUCTION PROGRAMME

NATIONAL REVIEWS 1998 MOLDOVA

PROJECT FILES



NATIONAL ACADEMY OF ECOLOGICAL SCIENCES

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: <ul style="list-style-type: none">- 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 **Moldavian National Reviews** were prepared under the supervision of the Country Programme Coordinator, **Mr. Ion Ilie Dediu**. The authors of the respective parts of the report are:

- Part A: Social and Economic Analysis: **Ms. Tatiana Belous**
- Part B: Financing Mechanisms: **Ms. Tatyana Lariusin**
- Part C: Water Quality: **Mr. Dumitru Drumea**
- Part D: Water Environmental Engineering: **Mr. Alexander Yakirevich**

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.

The National Academy of Ecological Sciences and the Parliament of Moldova

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Vienna – Austria, November 1998

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List of abbreviations

DAC	Development Assistance Committee (<i>of OECD</i>)
EBRD	European Bank for Reconstruction and Development
FY	Fiscal Year
GTZ	Deutsche Gesellschaft für Technische
IBRD	International Bank for Reconstruction and Development
M&E	Monitoring and Evaluation
MoER	Ministry of Economy and Reforms
MoF	Ministry of Finance
NEI	Netherlands Economic Institute
OECD	Organization of Economic Co-operation for Development
PIP	Public Investment Programme
TA	Technical Assistance
TACIS	Technical Assistance for the Commonwealth of Independent States
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
WB	World Bank
\$	US Dollars
\$m	million dollars (e.g., \$20m = 20 million dollars)
Lei	Moldovan Unit of Currency (exchange rate Sept. 1998, 4.99 Moldovan Lei = \$1)

1. Introduction

In 1993-97 the total environmental domestic expenditures stabilized at the 1.1-1.3% of the GDP. This includes following components:

- operational costs (60-70% of total amount), consisting of expenditures on operation and maintenance of environment protection facilities, expenditures on the control over the state of environment, as well as expenditures on the activity of governmental agencies in the field of environmental management and protection;
- expenditures on the capital repair of assets like water and wastewater treatment facilities (10% of total expenditures); and
- capital investments in environment protection and rational use of natural resources (25% of total expenditures).

As per provision of funds, currently there are used following domestic sources of environmental financing in Moldova:

- i state budget,
- ii local budget,
- iii enterprises' resources, and
- iv environmental funds.

Despite the fact that financial conditions and mechanisms of the market economy are developing in Moldova, the *State Budget* still remains the main contributor to the funding of environmental expenditures. However, the dynamic of state financing has been negative, decreasing in 1997 to 0.23% of GDP, what constitutes only 44% of the funds available in 1993.

It should be noted, that state capital investments were the most hindered component, constituting in 1997 only 0.07% of GDP (or 31% in comparison with 1993). The capital investments into wastewater treatment facilities and sewage systems (around 70%), as well as investments into rational use of land resources (25-30%) predominated in the distribution of funds.

Breakdown of capital investment by source of funding of environmental expenditure, 1995 (source of data: Department of Statistics)

	Total	<i>State Budget</i>	Local budget	Enterprises
Total investment (million Lei), <i>of which</i>	11.65	6.49	0.26	4.90
Water	6.72	1.91	0.25	4.55
Soil	4.47	4.44	-	0.03
Air	0.46	0.14	-	0.32
Forests, flora and fauna	0.00	0.00	0.00	0.00
Wastes	0.01	0.00	0.00	0.01
Share of total, %	100.00	55.70	2.23	42.6

The *enterprises resources* channeled to capital investments in environment protection facilities increased last years. For instance, in 1993 only 15% of the capital investments were available from the own funds of enterprises. By 1997 it encountered 65% of total capital investments in environmental protection. However, this figure is quite changing because of general tendency to invest in activities with an immediate profit.

According to existing estimations, the *input of local authorities* into environmental financing, particularly into construction of environment protection facilities, is being very low: 3.4% of total capital investments in 1993, 3% - in 1994, 2.2% in 1995, 0% in 1996 and 5% in 1997. At the same time, the responsibilities of local authorities in the field of management and financing of municipal services, such as water supply or waste collection and disposal, are much broader than previously.

Special extra budgetary funds - the *national and local ecological (environmental) funds* - were primarily established in 1990 for financing environment protection activities. The National Ecological Fund is functioning under the Ministry of Environment and local ecological funds - under the Regional Ecological Agencies (previously - under local authorities). The incomes of ecological funds were quite low: 0.01% of GDP in 1995, 0.02% - in 1996 and 0.01% in 1997. In relation to total environmental expenditure this constitutes only 0.13-0.26%. The balance sheet of NEF will depend very much on the environmental charges prescribed by the law on environmental charges (ecological taxes), and a substantial increase in Fund's incomes from taxes is foreseen in the near future. The environmental funds will have to spend about 60 per cent of their revenues on specific environmental projects.

Incomes of the national and local ecological funds

	1993	1994	1995	1996	1997
Total (thousand lei), including:	206.8	304.2	938.1	1515.8	1022.4
Local Funds	125.6	208.5	744.9	1307.0	855.4
National Fund	81.2	95.7	193.2	208.8	167.0

Moldova has received financial assistance from international sources -the International Monetary Fund, the World Bank and European Bank for Reconstruction and Development, as well as grants from the organizations of the United Nations system, European Union, France, Germany, Italy, Japan, the Netherlands, Romania, Turkey and the United States.

According to 1996 data, the total amount of technical assistance exceeded US\$ 42 million. The main areas that received technical assistance are: support for financial reform and the banking sector (27.38%), restructuring of enterprises (12.17%), development of entrepreneurship (11.87%), and development of social infrastructure (11.02%). Technical assistance for environmental protection amounted to only 2.18% of the total in 1996.

The task to co-ordinate international technical assistance for environmental protection was assigned to the Division of Environmental Strategies and Programmes. In the same division resides the GEF Focal Point. However, until now its influence and functions was reduced to the subdivisions of the Ministry, hardly having a real impact in the cross-sectoral context.

Foreign direct investment (FDI) flows are modest in real terms but relatively large in comparison to GDP. In 1995, they represented 3.8% of GDP, or US\$ 15 per capita. Cumulative flows at the end of 1995 stood at US\$ 76 million, and at US\$ 121 million at the end of 1996. After a substantive increase between 1994 and 1996, FDI inflows diminished in the first half of 1997. The majority of FDI projects are directed to utilities and services (47%), manufacturing (13%), wholesale and retail trade (12%). Agriculture, construction and transport take less than 1% each.

The MoE's role in promoting/preparing investment projects is quite weak at the moment, and reduced to the approval of the prepared documents with regard to environmental impact of the project. The low enforcement of environmental legislation sometimes leads even to disregard of this procedure.

(Source: Informational Material for PPC Sub-Regional Meeting. Prepared by NEAP Implementation Unit Moldova, First Draft, 15 July 1998)

In 1997 the Ministry of Economy and Reforms prepared the Public Investment Programme (PIP) of Moldova, which covers the period 1998-2000.

The areas of investment funded by the PIP include economic and social infrastructure, services and institutions. The PIP includes all priority public investment projects, which the Government will finance or will seek to finance. Projects in the PIP are both on-going and new investments. They are financed through the State Budget from two types of resources:

- government's own resources;
- external loans or grants (in whole or in part).

In addition, the government provides some state guarantees for loans to former state enterprises or organizations. It can create a potential liability on the budget, so the projects are named in the PIP and potential liability is calculated and included in the PIP. Projects being implemented or proposed for a part of public utilities during 1998-2000 (energy sector, railways, etc.), which are still scheduled for privatization, are also accounted for and named in this document.

PIP includes projects implemented by the state, municipalities and local authorities (district councils). This conforms to the consolidated State Budget as laid down in the Budget Process Law of 1997. Over time the government envisages that the municipalities and local authorities will increasingly take a greater share of responsibility for planning and budgeting of their own projects.

In general, the PIP does not contain grant-funded projects for Technical Assistance although many PIP projects include some TA.

The inclusion of a project in the PIP does not mean that it will be automatically funded and implemented. In cases of new investment projects in the PIP, many are included with a funding gap, which may or may not attract external funding support. Moreover, even in cases where projects are in the course of preparation, it is often the case that careful preparatory study reveals difficulties for implementation or, appraisal results suggest that it is uneconomic to proceed. Such changes are, in fact, a major reason for annual updating of the PIP to create a rolling programme. The government is preparing to implement annual review and update of the PIP as part of a wider set of institutional measures.

1.1. Public Investment Programme Background

The first Public Investment Programme (PIP) of Moldova was prepared in the autumn of 1994 for the period 1995-1997. It contained a set of 19 investment projects and, in addition, 4 contingency projects, which were to be implemented by the government. The planned PIP amounted to \$169m for the three years.

As a result of severe resource constraints at the time of the last PIP, the projects selected represented only the highest sectoral priorities, whilst their planned expenditures were commensurated with the size of available resources, both domestic and external. The PIP was matched with the Technical Assistance Programme of government for the period 1995-1996.

The first PIP was prepared from a list of about 4,000 public investment projects, most of which had been inherited from the pre-1991 period. In the period up to 1995, implementation of most of them was very limited because government lacked resources. In addition to 4,000 projects, the changing role of the state necessitated new types of investment projects. Many of the latter had already attracted donor interest before the preparation of the PIP and some projects were already on-going whilst several were in the course of preparation. Most of the projects included in the first PIP were to be funded by external donor loans.

The government has decided that the current PIP should make appropriate provisions for their inclusion. In doing so, the government feels that a crucial step will be taken to develop the integration of investment programming into the government budget system. The Government has proposed that the state transfers most unfinished construction projects to local authorities in 1998. Those authorities will select projects for completion in their area from their own resources. These resources will come from: the sale of uncompleted projects, transfers from the state budget, own resources, and in certain cases from foreign/local loans.

1.2. Public Investment Strategies and Priorities

Of the 19 projects included in the first PIP¹, only two projects - Road Maintenance and Rehabilitation, which was started by August 1997 and another, Energy Efficiency, which are not directly related to development of national Pollution Reduction Programme, are currently being tendered. The other 17 were not started. The main reasons for the slow implementation recorded were lack of resources in other priority areas, insufficient capacity to complete the preparatory phase of the new projects and/or difficulties with appraisal results. In addition, a shift of government attention to other priorities, especially to Moldavian enterprises, which had previously been state corporations and which were still having problems in attracting their own investment, meant that the PIP composition changed during the three years.

The two projects continuing from the first PIP are both substantial in amount (together \$62m) and are funded by foreign loans (EBRD). The donor applies his standard rules for project preparation, appraisal and procurement of goods and services because until 1996, the government did not have any international procurement rules and procedures but they have now been put in place and should be acceptable to the donor community. Both projects are well targeted:

- the Road Rehabilitation Project aims at financing a programme of highway rehabilitation of Moldova's major international routes, assisting transit traffic and facilitate integration with the rest of Europe. The main components of the project are: definition of the programme of urgent works to be implemented and assurance of an adequate future funding for road maintenance based on the principle of cost recovery from road users through the implementation of a fuel surcharge. The roads covered are from Kishinev to Balti and the northern areas and it is out of Prut River basin.
- the Energy Efficiency Project aims at upgrading the heating distribution system in Kishinev (out of Danube River basin as well) and to reduce heat transfer losses in district heating systems through rehabilitation. The main components of the project are: installation of a metering system, insulation of hot water distribution pipelines and commercialization of the Kishinev's district heating systems. The project contains two TA components, which are not included in the loan; German government grant for Heat Tariffs study (ECU 195,000) and EU grant for the commercial management system (ECU 449,000).

¹ Four additional projects were also included to provide additional investments in the event of additional funding becoming available.

1.3. Other Projects Financed by Donors

Altogether six projects are financed by foreign donors. Their total value is \$99 mln. They are:

- The Energy Project (WB) aims to improve the metering of gas consumption, the efficiency of electricity production and gas distribution and to support the implementation of a framework for ensuring the financial viability of the energy companies. The main component of the project is the introduction of metering gas. The other component concerns the increase in the efficiency of energy production and the gas distribution network in Moldova.
- Private Sector Development Project I (PSD I) aims to support reform programme in the enterprise and financial sector, through post-privatization assistance, automation of the tax administration, credit through local banks to private enterprises, technical assistance to participating local banks, automation of the NBM, and the further development of the payments system. The project comprises two components: an enterprises sector strengthening component (ESSC) and a financial sector-strengthening component (FSSC).
- First Agriculture Project aims to support the development of Moldova's agricultural research system and preparation of future lending operation in agriculture. The project has four components: (i) agro-technology development and transfer (\$ 13.2 mln) in viticulture, in horticulture, in animal breeding and finally including integrated pest management; (ii) institutional strengthening (\$1mln.); (iii) project preparation and policy development (\$ 0.3 mln); and (iv) project management (\$0.67 mln).
- Wine Export Promotion (EBRD) aims to promote privatization in the wine production sector and to create new business opportunities through improving the quality and packaging of Moldavian wines for sale in western markets. The main components of the project are (i) the delivery and installation of equipment (\$6m), (ii) reconstruction of 9 wineries, (iii) construction of a bottle factory (\$24m) and (iv) advisory services for the same (\$0.25m) and (v), the preparation of a marketing programme for wines (\$0.5m).
- Giurgiulesti Oil Terminal Port (EBRD equity investment and loan in the amount of USD 2.5 million and USD 16.5 million respectively, Technovax SA, Greece equity investment and loan in the amount of USD 4.8 million and USD 9.0 million respectively, and equity contribution of \$3.1m of the Government of Moldova) aimed at increasing flexibility of extraction of oil products and therefore bargaining power of Moldova; reduce transport cost for oil products imports; introduce market-oriented practices in the procurement and distribution of oil products in Moldova; and develop a modern oil products importing river-port facility.

General picture of the governmental priorities in the funding of various projects throughout the Republic has been distributed by the next way.

1.4. Economic Trends and Performance

Up to 1997, the rate of growth of the Moldavian economy was negative. In 1996, the decline in GDP was about 8% in real terms and was to a large extent a consequence of adverse weather conditions. It is expected that the tide will turn by the end of 1997. In the first three quarters of the current year, a small decline was registered. However, the generally good harvests provide grounds to expect a modest growth for the full year. Some activities seem to have already bottomed out. In particular, in the vitally important food and beverage sector, a growth in the production of wine, meat products and processed fruit and vegetables was recorded. Inflation continued to decelerate, and might be further reduced to about 13% by the end of this year. The national currency remains stable. The pensions and state government salary arrears have been substantially reduced during 1997.

It is expected that from 1998 a modest positive rate of growth in GDP will take place and will continue throughout the whole PIP period. Recovery will be led in the medium term by the agricultural/food-processing sector. There are some signs of increased investment in housing and other activities, mostly trade and services. A key indicator of improved economic performance is the significant increase in the volume of exports. Of course, much of economic activity remains unreported, currently estimated anywhere from 5-30% of GDP. During the PIP period, the government proposes to capture at least 85% of taxable income.

The restructuring of the economy has been moving slowly but with some positive results. The privatization programme in land is leading to continued growth in the number of private farms, albeit from a small base. This programme is envisaged to expand extensively during the period of this PIP. Legislation on Property and Land Ownership, which was finally approved by the Parliament in July 1997, will permit the buying and selling of land. This development will foster the growth of the private land market which, in turn, will provide the major form of collateral for the release of credit by the banks. After some considerable delay the 1997/98 Privatization Programme has now been passed by Parliament. This will permit the sale of enterprises, which is expected to lead to an increase in foreign direct investment. The energy sector is in a critical state but it is now subject to serious restructuring and investments are on-going and planned in this crucial area.

Notwithstanding the positive signs, the economic reforms have resulted in social costs and hardship. The total GDP decreased in the period 1992-1996 by 40%. Indicators of human development have declined accordingly with limited service delivery especially evident in the worsening health indicators. The country has a proportionately high share of elderly with 26% of the population in the retired category. This imposes a higher than average burden (by CIS standards) on the Social Fund, increasing numbers of the population needing social assistance which, in turn, limits the availability of resources for public investment.

Moldova's medium term growth prospects will depend on ensuring actual and new markets for agricultural exports, but it may be limited by protectionism policies of Moldova's trading partners, higher expectations in the requirements of the traditional markets and difficulty in reaching the high standards expected by new markets.

1.5. Revenue and Expenditure

A brief review of income and expenditure is provided here as a background to later estimation of the PIP resource envelope.

Consolidated Budget (\$m)

	1995	1996	1997 (expected)
Revenues	426	495	551
Expenditures	523	610	654
o/w			
Capital expenditures	31	35	29
Deficit, % of GDP (cash basis)	-5.7	-6.3	-4.9
Deficit, % of GDP (commitment basis)	-7.6	-9.7	-3.9

Note: exchange rate applied 4.6 Lei = 1 \$

The latest trends in revenue collection show a slight improvement. It is expected that as a result of concerted efforts being undertaken by the Government and, in particular, with the new Tax Code to come in force in January 1998, collection rates will increase significantly.

On the expenditure side, social spending is the largest item. In 1996, without taking into consideration the social fund budget, its share in the consolidated budget expenditures was about 52%. The next largest item is debt service, which has grown over the 1995-97 period. Due to overall budget constraints, the expenditure on capital investment amounted to a very small proportion of expenditure.

Overall, in 1996, the budget deficit reached 9.7% of GDP on commitment basis. The Government fiscal programme for 1997 expects to bring this down to about 4% of GDP. Given a need for such a great fiscal tightening, the amount of resources available for capital expenditures can not be expanded significantly.

Overall, capital expenditure allocations are extremely limited. This results in stop/go implementation of investments, which results in higher costs in the longer term or even can nullify investment already made. The unreliable situation, which this pattern presents is demotivating for those, who have to manage the funds, and makes for a lot of difficulty in the planning of project implementation.

In addition to the capital expenditure shown in the budget, a Road Fund and a Customs Fund have been set up, external to the budget. The former fund allocated 125m Lei (\$27.4m) in 1997, of which nearly 50% represents investments in structural road rehabilitation which are of the same type as those of on-going and planned PIP projects. As of September 1997, only 51.3m Lei of this fund has been released, 41% of the allocation. It is now expected that only about 60% of this fund will be released by the end of the year. These major rehabilitation expenditures should be channeled through the capital budget and incorporated into the PIP because they are capital investments, not repairs/maintenance. The large differences between allocated and released amounts would indicate, as is the case in the capital budget, that these planned expenditures are over-estimated.

The level of investment in Moldova has been low and, as seen above, continues to be low. This leaves little resources for the replacement of worn out facilities let alone new investment. In such a situation it is important to focus the available resources on those investments, which are of highest priority to the country and to make sure that existing investments are managed effectively. Energy, agricultural restructuring, transport infrastructure, utilities, constructions and the social sphere are priorities for this public investment programme. Some other sectors such as telecommunications, public transport, industry, trade and commerce are excluded because their functioning is better assured by the private sector.

The 1998-2000 PIP emphasizes the need for investments to be directed towards rehabilitation of existing infrastructure to support the emerging private sector. Rehabilitation and modernization are being given a higher priority in this PIP than new investments because small investments made now can save large investments for replacement infrastructure in the future and small investments now can recoup benefits from investments made in the past, which were not completed. In addition, energy and utilities investments create the opportunity to recoup costs through new user charges.

The major challenge in constructing this PIP is to balance demands from the following sources against a limited availability of government funding, whilst at the same time, ensure that the ceilings set together with the IMF for engagement in foreign debt are respected. The sources for PIP projects included the following:

- DONORS: a stock of on-going or recently started donor projects/programmes, which represent a clear-cut package for sectors consisting of an investment project proper, associated technical assistance, management, rules and regulations such as procurement as well as monitoring and evaluation of the project;
- DONORS: new offers for donor loan-funded projects;

- LINE MINISTRIES/LOCAL AUTHORITIES: emphasis on completion of construction projects currently funded only through local resources;
- LINE MINISTRIES/LOCAL AUTHORITIES: proposals for PIP projects submitted as their highest priorities.

Based on its policies and transition strategies the government has chosen for the Public Investment Programme the following investment projects and programmes, which to a certain extent could be related to Pollution Reduction Programme.

Investments proposed for PIP 1998-2000

Code	Project name	1998-2000 (during PIP period)				Total project cost
		Total	Budget	Foreign credits	Other sources	
1. Ongoing projects added to the PIP		32.7	6.0	21.7	5.5	111.7
AG02 (WB)	First Agriculture Project	12.0	3.0	9.0	0.0	18.5
AG01 (EBRD)	Wine Export Promotion	0.2	0.0	0.2	0.0	55.2
EN04 (EBRD)	Giurgiulesti Oil Terminal	20.5	3.0	12.5	5.0	38.0
2. PIP candidate projects under preparation		302.2	20.0	281.7	0.5	324.3
2.a. With committed financing		9.2	1.5	7.2	0.5	12.0
UT02 (WB)	Water Resources Development Project	9.2	1.5	7.2	0.5	12.0
2.b. Without committed financing		293.0	18.5	274.5	0.0	312.3
TR04	Southern Areas Road Rehabilitation	17.0	4.0	13.0	0.0	33.0
CON-WS	Water and Sewage Completion Programme	54.0	8.0	46.0	0.0	54.0
TR08	Electrification of the railway Bender-Ungeny	105.0	0.0	105.0	0.0	108.0
TR10	Modernization of the railway border crossing in Ungeni	5.5	0.0	5.5	0.0	5.5
TR11	Programme of Complementary Investments for Giurgiulesti Oil Terminal	111.5	6.5	105.0	0.0	111.8
Total		334.9	26.0	303.4	5.5	436.0

The investments consist of two groups of projects:

- The first group (1) *Ongoing projects added to the PIP* are the projects, which are currently being implemented. The first group of projects costs \$111.7 m. The project AG01 is nearly completed;
- The second group (2) *PIP candidate projects under preparation* represents the new projects proposed by the government to be included into the PIP. There are two types of these projects: with and without financial commitment. The projects with financial commitment have already assured financing from either multilateral donors such as World Bank (UT02), or EBRD (UT01, etc.). These projects cost \$324 m.

Among other new projects, the most important investment is required for transport sector projects. Oil Terminal in Giurgiulesti is one of them. This project was planned to be implemented by the private sector with only a small government commitment of \$6.5m for basic infrastructure. The value of the projects was planned for \$38m (\$27.80m from EBRD). However, at present this project requires from the state budget a loan guarantee and a contribution for the equity capital. Additionally for the oil terminal to function will require complementary projects, which are included in the Programme of Complementary Investments for Giurgiulesti Oil Terminal. They are: Railway in Giurgiulesti, Transport vehicles, Construction of the Railway Giurgiulesti-Cahul, Road Kishinev-Giurgiulesti, Basic Infrastructure in Giurgiulesti. This programme, as Ministry of Transport estimated, shall cost \$111m.

Projects without assured financial commitment are worth \$790.9m and will require \$657.6 m during the PIP period.

Generally the programme is very ambitious, but it should be realized that the government is committed to use potentially available foreign resources for PIP investments (especially concessional loans) and to restrain foreign loans guarantees for non-PIP projects.

2. Project Portfolio

2.1. First Agricultural Project

Project code/title

AG02 First Agriculture Project

Project cost

US\$ 18.49 million

Projected expenditure 1998-2000

US \$ 12.0 million

External financing committed

The World Bank

Financing gap 1998-2000

1. Project Host Agency:

Ministry of Agriculture and Food (MAF), Selectica, Moldagroeco,
National Viticulture Institute, Research Institute for Fruit Production

Mr. Eugen Revenco (Project Manager, MAF),

tel: 723-277, 721-952, fax: 723-277.

e-mail: revenco@idfap.mldnet.com.

2. Project Objective

Support for the development of Moldova's agricultural research system; and technical assistance for strengthening agriculture knowledge system and preparation of future lending operations in agriculture.

3. Background and Justification

Growth and sustained recovery of Moldova's economy greatly depends on agricultural exports. Moldavian agriculture is characterized by a high proportion of viticulture and horticulture production. These are typically high value and labor intensive crops and, once processed, are the country's major exports. Fertile soils, a favorable climate, well educated agricultural specialists, and an abundance of low-cost labor will form the basis for successful agriculture after the restructuring of the sector is completed.

4. Project Description

The project comprises four components. The viticulture improvement component supports the existing research programme to develop and distribute improved wine varieties in Moldova and to improve winemaking. The horticulture improvement component supports the Research Institute for Fruit Production and the Research Institute for Maize and Sorghum for their horticulture research programmes, the production of elite planting material and the establishment of farming technology demonstrations on selected farms. The animal-breeding component promotes better utilization of

artificial insemination resources through the provision of modern laboratory, semen equipment and storage equipment. The integrated pest management component promotes sustainable agricultural production by supporting IPM applications on Moldavian farms.

5. Current Project Stage

Implementation started in 1997, completion expected in 2001.

6. Project Cost

Estimated at US\$ 18.49 million.

7. Project Financing Consists of

IBRD: US \$ 10.0 million.

8. Impact of the Project on the Budget

9. Impact of the Project on Environment

The project would strongly benefit the environment by introducing and supporting integrated pest management and sustainable agricultural practices. The assistance to improve pest forecasting methods and to support a projected training Center for sustainable agricultural practices would lead to a reduction of the use of pesticides in Moldova.

10. Technical Assistance Requirements

Technical assistance from USAID

2.2. Wine Export Promotion

Project code/title

AG01 Wine Export Promotion

Project cost

ECU44.9m

Projected expenditure 1998-2000

\$0.23m

External financing committed

EBRD, Spanish Banks

Financing gap 1998-2000

nil

1. Project Host Agency

Name: Vin Invest St.

Street: Stefan cel Mare, 162

Location: Chisinau

Post code: 2004

Project manager: Constantin Vitaru

Telephone: +373-2-23-70-60

Telefax: +373-2-248128

2. Project Objective

To promote privatization in the sector and create new business opportunities through improving the quality and packaging of Moldavian wines for sale in Western markets.

3. Background and Justification

Wine is one of the main products of Moldova. However, due to the lack of proper packaging and marketing skills the product has not been exported to the Western Market. The projects aim to alleviate this problem.

4. Project Description

The main components of the projects are, the delivery and installation of equipment (\$6m), reconstruction of 9 wineries, construction of a Bottle Factory (\$24m) and advisory services for the same (\$0.25m) and the preparation of a marketing programme for wines (\$0.5m).

5. Current Project Stage

Almost completed.

6. Project Cost

Estimated at ECU44.9m (\$55.23m).

7. Project Financing Consists of

the EBRD contribution ECU24.9m (\$28.6m); Spanish Banks (\$4.9m), foreign partner (\$8.5m), local banks (\$5.7m), government budget (\$3.3m).

8. Impact of the Project on the Budget

The government is guaranteeing the loans; the increase of export can contribute to budget incomes.

9. Impact of the Project on Environment

Positive - the new equipment is more environmentally friendly than hitherto.

10. Technical Assistance Requirements

The project contains a TA component

2.3. Giuriulesti Oil Terminal

Project code/title

Giuriulesti Oil Terminal

Project cost

\$38.0m

Projected expenditure 1998-2000

\$20,5mln

External financing committed

EBRD, three Greek banks

Financing gap 1998-2000

1. Project Host Agency

Name: Ministry of Transport

Street: 12-1 Bucuriei str.

Location: Chisinau

Post code: 2004

Project manager: V. Bynzari

Telephone: +373-2-62.07.25 or 62.85.13 or 62.12.05

Telefax: +373-2-

2. Project Objective

To construct a river-port oil terminal

3. Background and Justification

The Oil terminal was planned to be implemented by private sector with only a small commitment of the government for basic infrastructure (\$6.5m). However, now this project requires from the state budget contribution of the equity capital (which was supposed to be paid in by the state company Tyrex-Petrol) in amount of \$7m.

4. Project Description

Construction of the oil terminal consisting of: riverside mooring facilities, pipelines from the facilities to a storage area with a tank-farm located 1 km from the river, and a pumping station for fuel transport.

5. Current Project Stage

Documentation prepared.

6. Project Cost

Estimated at \$38.0m

7. Project Financing Consists of

EBRD contribution (74% of the project cost), the Greek banks and a contribution of a Moldavian party Tirex-Petrol (now to be provided by the government).

8. Impact of the Project on the Budget

This project requires \$7m of the government contribution to the equity capital. Additionally, the oil terminal to function will require many complementary projects such as: Railway in Giurgiulesti, Transport vehicles, Construction of the Railway Giurgiulesti-Kahul, Road Chisianu-Giurgiulesti, Basic Infrastructure in Giurgiulesti, which as Ministry of Transport estimated costs \$389.9m.

9. Impact of the Project on Environment

Can be negative, and special disaster abatement precautions have to be incorporated into the project (see feasibility study TACIS 1994).

10. Technical Assistance Requirements

The project will include a TA component.

2.4. Water Resources Development Project

Project code/title

UT02 Water Resources Development Project

Project cost

\$12.0m

Projected expenditure 1998-2000

\$9.2m

External financing committed

WB

Financing gap 1998-2000

\$7.2m

1. Project Host Agency

Name: Ministry of Agriculture and Food

Street:

Location: Chisinau

Post code:

Project manager:

Mr. Valeriu Catrinescu

Telephone: +373-2-23.38.44

Telefax:

2. Project Objective

To rehabilitate the irrigation system to ensure lower operating costs. (i) improve productivity and marketing of irrigated agriculture, (ii) increase economic viability of irrigation, (iii) introduce energy saving techniques, and (iv) improve management and institutions in irrigation.

3. Background and Justification

Government strategy for the irrigation sub-sector aims to achieve four major objectives: improve productivity and marketing of irrigated agriculture; increase the economic viability of irrigation; introduce energy saving techniques; and improve management and institutions in irrigation. The Project supports these objectives directly.

4. Project Description

The project will focus on (a) rehabilitation and modernization of the existing public irrigation infrastructure; (b) rehabilitation and modernization of on-farm irrigation equipment; (c) rehabilitation of drainage systems; (d) establishment of surface and small scale irrigation demonstration schemes; (e) a program to promote farm restructuring and the formation of Water User Associations; and (f) technical assistance and training for agricultural advisory and marketing services for irrigated areas.

5. Current Project Stage

Under preparation. The preparatory work is financed in part by a PHRD grant from the Government of Japan.

6. Project Cost

Estimated at \$12m.

7. Project Financing will Consist of

the WB contribution and some co-financing.

8. Impact of the Project on the Budget

The WB loan carries an interest rate of about 7% and is to be repaid over a 20-year period. Interest and commitments (0.25%) are payable immediately and repayment of the principal of the loan starts after 5 years.

9. Impact of the Project on Environment

Not applicable.

10. Technical Assistance Requirements

The project will include a TA component.

2.5. First Cadaster Project

Project code/title

First Cadaster Project

Project costs

\$22.98 mln

Project expenditures

\$22.98 mln

External financing committed:

Financing gap 1998-2000

1. Project Host Agency

National Cadaster Agency

Address: Puschin str. 47 Chisinau

Project Manager: Valeriu Ginju

Telephone: 212-244

Telefax: 226-373

2. Project Objective

Building the institutional framework to complete and manage the legal cadaster in urban areas; implement a rural land registration system; and initiate the fiscal cadaster.

3. Background and Justification

Current real state cadaster system is inadequate and bureaucratic

4. Project Description

The components are as follows: production of new maps and updating existing maps, Urban Cadasteral Services Programme (institutional basis for cadasteral information in urban areas to be registered, stored, administered, and readily available to all potential users), Rural Cadasteral Services Programme (institutional basis for cadasteral information in rural areas to be registered, stored, administered, and readily available to all potential users), and Institution and Capacity Building program.

5. Current Project Stage

Implemented in 1997 and expected to be completed in 2001

6. Project Cost

\$22.98 mln

7. Project Financing

\$22.98 mln, of which IDA credit of \$15.9 mln

8. Impact of the Project on the Budget

\$15.9 mln 10 years grace, for 35 years, no interest rate

9. Impact of the Project on the Environment

none

10. Technical Assistance Requirements

TA component envisaged.

2.6. Rural Finance Project

Project code/title

Rural Finance Project

Project costs

\$15 mln

Project expenditures

\$15 mln

External financing committed

Financing gap 1998-2000

1. Project Host Agency

Rural Finance Corporation

Address: Cosmonautilor St. Chisinau

Project Manager Victor Chiriac

Telephone: 223-106

Telefax: 223-106

2. Project Objective

To develop the rural credit delivery mechanisms for private farmers, and finance on-farm private activities in the rural sector

3. Background and Justification

Private farmers currently receive infrequent and unfavorable credits from financial institutions. Project will funnel financial credits to private farmers.

4. Project Description

Project components are as follows: 1) formulate Credit and Savings Associations throughout Moldova 2) formulate and implement Credit Union law in Moldova and 3) establish the Rural Finance Corporation for managing the disbursement of credits to private farmers.

5. Current Project Stage

Association pilots began in 1997 and BIRD loan is scheduled for December 1997.

6. Project Cost

Estimated at \$15 mln.

7. Project Financing

Grant funded to date. Loan scheduled for December 1997.

8. Impact of the Project on the Budget

Not applicable.

9. Impact of the Project on the Environment

None

10. Technical Assistance Requirements

The project contains a TA component (\$500,000)

2.7. Southern Areas Road Rehabilitation

Project code/title

TR04 Southern Areas Road Rehabilitation

Project cost

\$33.0m

Projected expenditure 1998-2000

\$17.0m

External financing committed

Financing gap 1998-2000

1. Project Host Agency

Name: Ministry of Transport

Street: 12-1 Bucuriei St.

Location: Chisinau

Post code: 2004

Project manager: V. Bynzari

Telephone: +373-2-62.07.25 or 62.85.13 or 62.12.05

Telefax: +373-2-

2. Project Objective

To finance a programme of highway rehabilitation and to build some new border bypass connections in the South of Moldova.

3. Background and Justification

The road network in Moldova is extensive in relation to the size of the country. However, it has deteriorated through lack of resources for repair and maintenance. Many of the roads cross over international borders in several places.

4. Project description

The main components of the projects are:

- bypass North of Chisinau 17 km, new road \$6.5m, IRR 32%;
- Chisinau-Hincesti, 20.4 km, rehabilitation \$7.3m, IRR 26%;
- Hincesti-Cimislia, 35.3 km, rehabilitation \$7.8m, IRR 22%;
- bypass Bolgrad, 15 km, new road \$7.1m, IRR 35%.

The IRR for all the four connections exceeds 20%, which indicates a high economic benefit for the country. Initially the projects contained also a new 21 km road to Giurgiulesti for \$11.1m; however, this road proved to be of no economic benefit (IRR only 2%). The project includes TA for tender procedure (2% of the total value), procurement of goods and services and technical support to monitor work progress (3%).

5. Current Project Stage

in preparation.

6. Project Cost

Estimated at \$33.0m.

7. Project Financing

request made to the Government end foreign credit.

8. Impact of the Project on the Budget

will be in the form of debt service (interest and principal) and recurrent costs.

9. Impact of the project on environment

Not applicable.

10. Technical Assistance Requirements

Necessary for proper project elaboration and calculation of recurrent implications for the state budget (Road Fund).

2.8. Water and Sewage Completion Programme

Project code/title

CON-WS Water and Sewage Completion Programme

Project cost

\$54.0mln

Projected expenditure 1998-2000

\$54.0mln

External financing committed

being sought

Financing gap 1998-2000

1. Project Host Agency:

Name: Ministry of Territories Development, Construction & Housing

Street: Location: Chisinau Post code:

Project manager: Mr. J. Rajlanu, Mr. Stirban

Telephone: +373-2-23.41.59 or 22.31.02

Telefax: +373-2-

2. Project Objective

To complete projects in the areas of water and sewage.

3. Background and Justification

There are currently about 68 uncompleted water and sewage projects with an estimated completion cost (based on August 1994 prices) of \$90.5m.

4. Project Description

The project consists of transfer of uncompleted housings assets to regional and municipal authorities so that they could complete or sale the assets.

5. Current Project Stage

Concept stage.

6. Project Cost

The total value of projects is \$54.0mln

7. Project Financing

consists of the government contribution of about \$3m/year. \$40m should come from budgets of local authorities. The remaining part seeks foreign funding.

8. Impact of the Project on the Budget

User charges will cover recurrent costs and loan repayment.

9. Impact of the Project on Environment

Positive impact to improve health.

10. Technical Assistance Requirements

To be determined.

2.9. Electrification of the Railway Bender-Chisinau-Ungheny

Project code/title

TR08 Electrification of the Railway Bender-Chisinau-Ungheny

Project cost

\$108 mil.

Projected expenditure 1998-2000

\$ 105 mil.

External financing committed

Under consideration

Financing gap 1998-2000

1. Project Host Agency

Institute "Calea ferata din Moldova"

Project manager - Ilie Turcanu. Tel. 254408. Fax 221380

2. Project Objective

Electrification of the railway section covers cargo and passenger transportation, suburban circulation and includes Moldavian section of the corridor N 9 (Crivic). Increase of sectoral speed and trains circulation safety, increase of labor efficiency, fuel saving, environment improvement of the surrounding territory.

3. Background and Justification

Railway section Bender-Ungheni is the main international line and is the priority for the development and operation of railway network in Moldova. It is of great importance since the section Cotovsk-Rasdelnaya (Odessa railway, Ukraine) and the section Iasi (Romania) are currently being electrified.

4. Project Description

Electrification of the main railway line Bender-Chisinau-Ungheni (174 km) together with electrification of the section Cotovsk-Rasdelnaya (Odessa railway) and Iasi section (Romanian railway) foresees installation of contact network from Rasdelnaya to Ungheni through reconstruction of three drive stations, three stations for servicing contact network, reconstruction of electric network and communication line, construction of airline (110 km). This will increase labor efficiency by 6.9 %, sectoral train speed by 38 %, average train loading capacity by 33%, fuel economizing by 25 % and exclude atmosphere pollution.

5. Current Project Stage

The project has been developed, submitted and approved. Construction has been suspended due to the lack of funds.

6. Project Cost

USD 108 mln. (including procurement of spare parts for trains).

7. Project Financing

By the Government of the Republic of Moldova and out of the proceeds of the foreign credit.

8. Impact of the Project Budget.

None

9. Impact of the Project on Environment

The project has been coordinated with the Department of Environment Protection.

10. Technical Assistance Requirements

To be determined.

2.10. Modernization of the Railway Border Crossing in Ungheny

Project code/title

TR10 Modernization of the Railway Border Crossing in Ungheny

Project cost

\$ 5.5 mil.

Projected expenditure 1998-2000

\$ 5.5 mil.

External financing committed

Financing gap 1998-2000

1. Project Host Agency

Moldovan Railway, Ministry of Transport.

str. Vlaicu Parcalab 48, Chisinau, Moldova

Mr. Iliu Carcan.

Tel. 37 32 254408.

Fax 37 32 221380

2. Project Objective

To increase Ungheni railway conjunction capacity. Existent equipment is out-dated and needs renovation.

3. Background and Justification

4. Project Description

To install additional line for replacement narrow gauge wheels with wide gauge once and vice versa at the exit from and entry to Europe.

5. Current Project Stage

At the stage of completion.

6. Project Cost

US\$ 5.5 mln.

7. Project Financing

Foreign credit (loan)

8. Impact of the project on the budget

None

9. Impact of the project on environment

None

10. Technical assistance requirements

To be determined.

2.11. Programme of Complementary Investments for Giurgiulesti Oil Terminal

Project code/title

TR11 Programme of Complementary Investments for Giurgiulesti Oil Terminal

Project cost

\$111.8 mln.

Projected expenditure 1998-2000

\$111.5 mln.

External financing committed

being sought

Financing gap 1998-2000

1. Project Host Agency

Name: Ministry of Transport

Street: 12-1 Bucuriei str.

Location: Chisinau Post code: 2004

Project manager: V. Bynzari

Telephone: +373-2-62.07.25 or 62.85.13 or 62.12.05

Telefax: +373-2-

2. Project Objective

To provide infrastructure necessary for the operation of the Giurgiulesti Oil Terminal.

3. Background and Justification

The Government supports the construction of an Oil Terminal at Giurgiulesti by the private sector (with participation of foreign capital). However, for the terminal to operate, some elements of economic and social infrastructure must be in place. This project aims to provide the necessary infrastructure.

4. Project Description

The main components of the projects are:

- Railway in Giurgiulesti, \$1.54m;
- Construction of the railway Giurgiulesti-Kahul, \$66.96m;
- Road Chisianu-Giurgiulesti, \$26.8m;
- Tankers for the transport of oil products, \$10.0m;
- Basic social infrastructure in Giurgiulesti, \$6.5m.

Because of the very small, planned turnover of the future oil terminal, the complementary projects have a very small IRR, which indicates considerable loss on the investments. Additionally, as a Tacis feasibility study (April 1997) shows, high transport cost of products from Giurgiulesti to Chisinau might discourage private businesses to use this infrastructure at all and to bring oil products via different routes. Because the earlier feasibility study (Tacis, November 1994) indicated the need for 160-180 tanker trucks, these have been included in this project. Additionally basic social infrastructure (housing, water, sewerage, heating) will be needed to serve the terminal (already \$2.4m spent by the government).

5. Current Project Stage

Projects are at the concept stage.

6. Project Cost

Estimated at \$111.8m.

7. Project Financing

Foreign loans

8. Impact of the Project on the Budget

The state budget will have to serve the loan (pay interest and principal), which is beyond budget resources within this PIP.

9. Impact of the Project on Environment

Not applicable.

10. Technical Assistance Requirements

The TA for sub-project preparation, appraisal and management of the implementation.

2.12. Installation of Nutrient Removal Facilities at the Wastewater Treatment Plant

Project Title

Installation of Nutrient Removal Facilities at the Wastewater Treatment Plant

Responsible/Legal Body

Authority/Company Ministry for Environment
Name Capcelea Arcadie
Address Stefan cel Mare, 73, Kishinev, Moldova, MD-2012
Fax 373.2.232338
E-mail oicos@cni.md

Project Target

Prut River water quality

Investment Costs

non

Status of Project

Planned

Language of Project Documents

Romanian

1. Project Title

Installation of Nutrient Removal Facilities at the Wastewater Treatment Plant

2. Investor Details

Non

2.1. Authority/Company

Ministry of Environment
Name: Arcadie Capcelea
Address: Stefan cel Mare, 73, Kishinev, Moldova
Fax: 373.2.23338
e-mail: oikos@cni.md

2.2. Contact Persons

non

2.3. Advisor/Consultant

2.4. Legal/Financial Status

2.5 Authority/Company Profile

2.6. Planning/Implementing Extent/Capacity of the Investor

2.7. Institutions/Enterprises beside the Investor

3. Project Description

The Ungeni wastewater treatment plant was built in 1976 and since that time has been renewed neither technically, nor technologically. Obsolete equipment and technologies are still used and its maintenance and repair is often too expensive. Pollution standards for residual wastewater, in particular with regard to nutrients load are sporadically ignored because of limited technological capacities. The population number connected to Ungeni wastewater treatment plant constitutes 38000; in average the amount of wastewater production - 40000 population equivalent per year. Installation of tertiary stage in Ungeni wastewater treatment plant will allow to increase sharply the effectiveness of the residual water cleaning and to reduce nutrient pollution load on Prut River.

3.1. Project Outline

Installation of tertiary stage in wastewater treatment

Structural project

Beneficiaries: Ministry for Environment, Local Authorities

Stakeholders: Municipalities, Local authorities

Prut River middle stream

Town Ungeni

The same

3.2. Primary Needs for the Project

Health benefits

Aquatic environment

Biodiversity

Transboundary effects

3.3. Status of Project Preparation

Feasibility level

Project documents in English - non

3.4. Technology Proposed

Standard elements

3.5. Ownership of Project Site

Municipal property

3.6. Specific Project Items

Non

4. Project Effects and Interactions

4.1. Public Expressions of Interest

Generally the social acceptance assessment has not undertaken and local community is not involved in the discussing of the project. People concerned to current project are strongly encouraged its implementation.

4.2. Environmental Impact Assessment

Planned

4.3. Sensitivity of Locality/Receptor

Ungeni wastewater treatment plant is situated quite close to Prut River, which water quality will be significantly improved due to project implementation

4.4. Primary Effects of Project

Regional

Transboundary

5. Economic Project Justification

non

5.1. Economic Project Benefits

5.2. Economic Internal Rate of Return (EIRR)

EIRR has not been calculated

6. Financial Viability

non

6.1. Estimated Investment Cost

6.2. Estimated Operational Cost

6.3. Estimate of Revenues

6.4. Economic Internal Rate of Return (EIRR)

EIRR has not been calculated

6.5. Anticipated/Proposed Funding Scheme

Sources of Funding	Secured	Requested	Non-secured
	(Currency)	(Currency)	(Currency)
(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 loan - municipal loan			
(7) Public grant - central budget			
(8) Public grant - regional budget			
(9) Public grant - municipal loan			
(10) International loan			
(11) International grant			
(12) Commercial bank loan			
(13) Other sources			
Total funds/requirements			

2.13. Installation of Second and Advanced Stages of Treatment at the Cantemir Wastewater Treatment Plant

Project Title

Installation of Second and Advanced Stages of Treatment at the Cantemir Wastewater Treatment Plant

Responsible/Legal Body

Authority/Company Ministry for Environment, Institute of Ecology

Name Drumea Dumitru

Address 58, bvd. Dacia, Kishinev, Moldova, MD-2060

Fax 220 601

E-mail drumead@usm.md, oikos@cni.md

Project Target

Prut River water quality

Investment Costs

non

Status of Project

Planned

Language of Project Documents

Romanian

1. Project Title

Installation of Second and Advanced Stages of Treatment at the Cantemir Wastewater Treatment Plant

2. Investor Details

non

2.1. Authority/Company

Name:

Address:

Fax:

e-mail:

2.2. Contact Persons

2.3. Advisor/Consultant

2.4. Legal/Financial Status**2.5. Authority/Company Profile****2.6. Planning/Implementing Extent/Capacity of the Investor****2.7. Institutions/Enterprises beside the Investor****3. Project Description**

The Cantemir wastewater treatment plant was built in 1974 and still old equipment and technologies are used. Pollution standards for discharging wastewater are often ignored because of extremely restricted technological capacities. The population number connected to Cantemir wastewater treatment plant constitutes about 20000; in average the amount of wastewater production more 40000 population equivalent per year. Installation of nutrient removal facilities at Cantemir wastewater treatment plant will permit to improvement of the effectiveness of the residual water cleaning and to decrease nutrient pollution load Prut River. In order to ensure the efficient functioning of Cantemir WWTP should be installed also automated control system.

3.1. Project Outline

Structural project

Beneficiaries: Ministry for Environment, Local Authorities

Stakeholders; Municipality

Prut river downstream

Town Cantemir

The same

3.2. Primary Needs for the Project

Health benefits

Aquatic environment

Biodiversity

Transboundary effects

3.3. Status of Project Preparation

Feasibility level

Project documents in English - non

3.4. Technology Proposed

Standard elements

3.5. Ownership of Project Site

Municipality property

3.6. Specific Project Items

Non

4. Project Effects and Interactions

4.1. Public Expressions of Interest

The social acceptance assessment was not conducted and local community is not involved in the discussing of the project. People concerned to this project encourage its implementation.

4.2. Environmental Impact Assessment

Planned

4.3. Sensitivity of Locality/Receptor

Cantemir Wastewater Treatment Plant is located right on the Prut River, and river water quality will be sufficiently improved due to project implementation

4.4. Primary Effects of Project

Regional

Transboundary

5. Economic Project Justification

non

5.1. Economic Project Benefits

5.2. Economic Internal Rate of Return (EIRR)

EIRR has not been calculated

6. Financial Viability

non

6.1. Estimated Investment Cost

6.2. Estimated Operational Cost

6.3. Estimate of Revenues

6.4. Economic Internal Rate of Return (EIRR)

EIRR has not been calculated

6.5. Anticipated/Proposed Funding Scheme

Sources of Funding	Secured	Requested	Non-secured
	(Currency)	(Currency)	(Currency)
(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 loan - municipal loan			
(7) Public grant - central budget			
(8) Public grant - regional budget			
(9) Public grant - municipal loan			
(10) International loan			
(11) International grant			
(12) Commercial bank loan			
(13) Other sources			
Total funds/requirements			

2.14. Pilot Project on Sewerage Systems in Rural Area

Project Title

Pilot Project on Sewerage Systems in Rural Area

Responsible/Legal Body

Authority/Company Ministry for Environment

Name apcelea Arcadie

Address Stefan cel Mare, 73 , Moldova, Kishinev, 2012

Fax 373.2.23338

E-mail oicos@cni.md

Project Target

Groundwater quality

Investment Costs

non

Status of Project

Planned

Language of Project Documents

Romanian

1. Project Title

Pilot Project on Sewerage Systems in Rural Area

2. Investor Details

non

2.1. Authority/Company

Name:

Address:

Fax:

e-mail:

2.2. Contact Persons

2.3. Advisor/Consultant

2.4. Legal/Financial Status

2.5. Authority/Company Profile

2.6. Planning/Implementing Extent/Capacity of the Investor

2.7. Institutions/Enterprises beside the Investor

3. Project Description

Only 2% of total rural population in the Prut River basin is connected to sewerage system, what is a great source of groundwater pollution, what in turn has a negative impact on drinking water quality.

The objective of project is creating of constructed wetland and preliminary phase includes some kinds of activities similar with construction artificial waterbody followed by introduction of relevant species of plants and animals.

3.1. Project Outline

Structural project

Beneficiaries: Ministry for Environment, Local Authorities, Ministry for Communal Service and Housing

Stakeholders: Local environmental and municipal authorities

District Glodeni

Village Ustia

Agricultural field out of use

3.2. Primary Needs for the Project

Health benefits

Biodiversity

Transboundary effects

3.3. Status of Project Preparation

Prefeasibility level

Project documents in English - non

3.4. Technology Proposed

Standard elements

Special features

3.5. Ownership of Project Site

Municipal property

3.6. Specific Project Items

Non

4. Project Effects and Interactions

4.1. Public Expressions of Interest

The social acceptance assessment was not conducted and local community is not involved in the discussing of the project. People concerned to current project welcome its implementation.

4.2. Environmental Impact Assessment

Planned

4.3. Sensitivity of Locality/Receptor

Groundwater quality

4.5. Primary Effects of Project

Local

5. Economic Project Justification

non

5.1. Economic Project Benefits

5.2. Economic Internal Rate of Return (EIRR)

EIRR has not been calculated

6. Financial Viability

non

6.1. Estimated Investment Cost

6.2. Estimated Operational Cost

6.3. Estimate of Revenues

6.4. Economic Internal Rate of Return (EIRR)

EIRR has not been calculated

6.5. Anticipated/Proposed Funding Scheme

Sources of Funding	Secured	Requested	Non-secured
	(Currency)	(Currency)	(Currency)
(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 loan - municipal loan			
(7) Public grant - central budget			
(8) Public grant - regional budget			
(9) Public grant - municipal loan			
(10) International loan			
(11) International grant			
(12) Commercial bank loan			
(13) Other sources			
Total funds/requirements			

2.15. Valcanesti Dump

Project Title

Valcanesti Dump

Responsible/Legal Body

Authority/Company National Institute of Ecology

Name Drumea Dumitru

Address 58, bvd. Dacia, Kishinev, Moldova, MD-2060

Fax 220 601

E-mail drumead@usm.md

Project Target

Groundwater quality

Investment Costs

non

Status of Project

Planned

Language of Project Documents

English

1. Project Title

Valcanesti Dump

2. Investor Details

2.1. Authority/Company

Name: European Commission, TACIS

Address: Rue de la Loi, 200, B-1049, Brussels

Fax: 32.2. 296 33 77

e-mail:

2.2. Contact Persons

Saimon HILL

2.3. Advisor/Consultant

Ove Arup and partners

2.4. Legal/Financial Status

about 50.000 ECU

2.5. Authority/Company Profile

Environmental consulting

2.6. Planning/Implementing Extent/Capacity of the Investor

available at TACIS

2.7. Institutions/Enterprises beside the Investor

no

3. Project Description

A vast amount of expired and prohibited pesticides has been accumulated within 10 years. Total surface area of pesticides dump constitutes about 2 ha, depth 5 meters. According to various assessments total amount of burned chemicals varies from 4000 to 40000 tons.

The objective of this project is analyzing and assessment of content and amount stored pesticides. Its activities include drilling of 12-15 boreholes. From each borehole will be collected soil samples taken from three different depths, and also groundwater samples. They will be preliminary screened in order to determine the most typical groups of burned pesticides followed by qualitative and quantitative detailed analyses.

3.1. Project Outline

Non-structural project

Beneficiaries: Ministry for Environment, Ministry of Health, Local authorities

Stakeholders: Local environmental and municipal authorities

District Vulcanest

Village Cimicoi

The same; adjacent area is used for agricultural needs

3.2. Primary Needs for the Project

Health benefits

Biodiversity

Transboundary effects

3.3. Status of Project Preparation

Ongoing

3.4. Technology Proposed

Standard elements

3.5. Ownership of Project Site

Communal property

3.6. Specific Project Items

non

4.1. Public Expressions of Interest

The social acceptance assessment was not conducted however local communities welcome correct assessment the pesticides dump impact on human health. Generally people concerned to current project encourage its implementation.

4.2. Environmental Impact Assessment

Planned

4.3. Sensitivity of Locality/Receptor

Groundwater quality

4.4. Primary Effects of Project

Local

Regional

International

5. Economic Project Justification

will be available after finalizing of the project

5.1. Economic Project Benefits

5.2. Economic Internal Rate of Return (EIRR)

EIRR has not been calculated

6. Financial Viability

6.1. Estimated Investment Cost

not available

6.2. Estimated Operational Cost

not available (around 50000 ECU)

6.3. Estimate of Revenues

6.4. Economic Internal Rate of Return (EIRR)

EIRR has not been calculated

6.5. Anticipated/Proposed Funding Scheme

Sources of Funding	Secured (Currency)	Requested (Currency)	Non-secured (Currency)
(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 loan - municipal loan			
(7) Public grant - central budget			
(8) Public grant - regional budget			
(9) Public grant - municipal loan			
(10) International loan			
(11) International grant			
(12) Commercial bank loan			
(13) Other sources			
Total funds/requirements			

2.16. Utilization of Toxic Industrial Waste

Project Title

Utilization of Toxic Industrial Waste

Responsible/Legal Body

Ministry for Environment

Institute of Ecology

Authority/Company National Institute of Ecology

Name Drumea Dumitru

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E-mail drumead@usm.md

Project Target

Groundwater quality

Investment Costs

Status of Project

Planned

Language of Project Documents

English

1. Project Title

Utilization of Toxic Industrial Waste

2. Investor Details

non

2.1. Authority/Company

Name:

Address:

Fax:

e-mail:

2.2. Contact Persons

2.3. Advisor/Consultant

2.4. Legal/Financial Status

2.5. Authority/company Profile**2.6. Planning/Implementing Extent/Capacity of the Investor****2.7. Institutions/Enterprises beside the Investor****3. Project Description**

The need for advanced storage capacities has increased sharply. This led to the problem of wrong emplacement of such type of reservoirs, as well as their improper construction, which entails leakage, and pollution of soil and water resources, especially dangerous in vulnerable natural areas. Altogether the similar project could be implemented refer to other industrial enterprises because presently large amounts of toxic wastes (galvanic sediments, old and banned pesticides) are stored at the uncovered territory of industrial and agricultural units. The objective of this project is installation of new treatment technologies and construction of advanced polygon to prevent any pollution due to possible leakage of toxic waste.

3.1. Project Outline

Structural project

Beneficiaries: Ministry for Environment, Local Authorities

Stakeholders: Industrial enterprises

Prut River down stream

Giurgiulesti

Close to Giurgiulesti Terminal

3.2. Primary Needs for the Project

Health benefits

Aquatic environment

Biodiversity

Transboundary

3.3. Status of Project Preparation

Ongoing

3.4. Technology Proposed

Standard elements

3.5. Ownership of Project Site

State property

3.6. Specific Project Items

Non

4. Project Effects and Interactions

4.1. Public Expressions of Interest

The construction of polygon is a problem of major public concern, because terminal is designed to receive annually about 2 million tons of oil products (petrol, diesel, kerosene and fuel oil).

4.2. Environmental Impact Assessment

Accepted

4.3. Sensitivity of Locality/Receptor

Giurgulest Oil Terminal will be located in a zone with complicated hydrological, geological and seismic conditions.

4.4. Primary Effects of Project

Local

International

5. Economic Project Justification

non

5.1. Economic Project Benefits

5.2. Economic Internal Rate of Return (EIRR)

EIRR has not been calculated

6. Financial Viability

6.1. Estimated Investment Cost

6.2. Estimated Operational Cost

6.3. Estimate of Revenues

6.4. Economic Internal Rate of Return (EIRR)

EIRR has not been calculated

6.5. Anticipated/Proposed Funding Scheme

Sources of funding	Secured	Requested	Non-secured
	(Currency)	(Currency)	(Currency)
(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 loan - municipal loan			
(7) Public grant - central budget			
(8) Public grant - regional budget			
(9) Public grant - municipal loan			
(10) International loan			
(11) International grant			
(12) Commercial bank loan			
(13) Other sources			
Total funds/requirements			

2.17. Rehabilitation of Wastewater Facilities in Industrial Enterprises

Project Title

Rehabilitation of Wastewater Facilities in Industrial Enterprises

Responsible/Legal Body

Authority/ Company Ministry for Environment, Institute of Ecology

Name: Drumea Dumitru

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Fax 220 601

E-mail drumead@usm.md, oikos@cni.md

Project Target

Prut River water quality

Investment Costs

non

Status of Project

Planned

Language of Project Documents

Romanian

1. Project Title

Rehabilitation of Wastewater Facilities in Industrial Enterprises

2. Investor Details

Non

2.1. Authority/Company

Name:

Address:

Fax:

e-mail:

2.2. Contact Persons

2.3. Advisor/Consultant

2.4. Legal/Financial Status

2.5. Authority/Company Profile

2.6. Planning/Implementing Extent/Capacity of the Investor

2.7. Institutions/Enterprises beside the Investor

3. Project Description

Generally introducing environmentally friendly industrial processing and wastewater treatment practices implies the introducing of technologies with reduced energy consumption, water and raw material consumption and installation of modern technologies. The objective of this project is rehabilitation of existing facilities for utilization and recycling of industrial wastes due to introducing of advanced technologies for treatment facilities and close circuits.

3.1. Project Outline

Non-structural project

Beneficiaries: Local authorities

Stakeholders: Environmental and local authorities

Location: Upper Prut basin

Site: Edinet, Riscani

Industrial territory

3.2. Primary Needs for the Project

Health benefits

Aquatic environment

3.3. Status of Project Preparation

Prefeasibility level

Project documents in English - non

3.4. Technology Proposed

Standard elements

3.5. Ownership of Project Site

State property

3.6. Specific Project Items

Non

4. Project Effects and Interactions

4.1. Public Expressions of Interest

Generally the social acceptance assessment has not undertaken and local community is not involved in the discussing of the project but people concerned to current project encourage its implementation.

4.2. Environmental Impact Assessment

Planned

4.3. Sensitivity of Locality/Receptor

Surface water quality

Underground water quality

4.4. Primary Effects of Project

Local

National

5. Economic Project Justification

non

5.1. Economic Project Benefits

5.2. Economic Internal Rate of Return (EIRR)

EIRR has not been calculated

6. Financial Viability

6.1. Estimated Investment Cost

6.2. Estimated Operational Cost

6.3. Estimate of Revenues

6.4. Economic Internal Rate of Return (EIRR)

EIRR has not been calculated

6.5. Anticipated/Proposed Funding Scheme

Sources of Funding	Secured (Currency)	Requested (Currency)	Non-secured (Currency)
(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 loan - municipal loan			
(7) Public grant - central budget			
(8) Public grant - regional budget			
(9) Public grant - municipal loan			
(10) International loan			
(11) International grant			
(12) Commercial bank loan			
(13) Other sources			
Total funds/requirements			

2.18. Modernization of Wastewater Treatment Facilities and Improving Wastewater Management at Wineries

Project Title

Modernization of Wastewater Treatment Facilities and Improving Wastewater Management at Wineries

Responsible/Legal

Authority/Company Ministry for Environment, Institute of Ecology

Name Drumea Dumitru

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E-mail drumead@usm.md, oikos@cni.md

Project Target

Prut River water quality

Investment Costs

non

Status of Project

Planned

Language of Project Documents

Romanian

1. Project Title

Rehabilitation of Wastewater Facilities in Industrial Enterprises

2. Investor Details

Non

2.1. Authority/Company

Name:

Address:

Fax:

e-mail:

2.2. Contact Persons

2.3. Advisor/Consultant

2.4. Legal/Financial Status

2.5. Authority/Company Profile**2.6. Planning/Implementing Extent/Capacity of the Investor****2.7. Institutions/Enterprises beside the Investor****3. Project Description**

The importance of the current project due to such a situation that at the moment in Moldova solid waste recycling and reuse in enterprises is still at a extremely low level due to in the first turn lack of economic incentives and appropriate technologies. Therefore, the amount of accumulated industrial wastes constitutes altogether about 15 million tons, of which 23000 tons of highly toxic, including polyphenols discharged from wineries. The objective of this project is a construction of proper disposal dump.

3.1. Project Outline

Structural project

Beneficiaries: Ministry for Environment, Local authorities

Stakeholders: Industrial and local authorities

Lower Prut

Village Colibas

3.2. Primary Needs for the Project

Health benefits

Groundwater quality

Aesthetic

3.3. Status of Project Preparation

Prefeasibility level

Project documents in English - non

3.4. Technology Proposed

Standard elements

3.5. Ownership of Project Site

State property

3.6. Specific Project Items

Non

4. Project Effects and Interactions

4.1. Public Expressions of Interest

Generally the social acceptance assessment has not undertaken and local community is not involved in the discussing of the current project. People concerned to current project welcome its implementation.

4.2. Environmental Impact Assessment

Planned

4.3. Sensitivity of Locality/Receptor

Groundwater quality

Primary Effects of Project

Local

5. Economic Project Justification

non

5.1. Economic Project Benefits

non

5.2. Economic Internal Rate of Return (EIRR)

EIRR has not been calculated

6. Financial Viability

non

6.1. Estimated Investment Cost

6.2. Estimated Operational Cost

6.3. Estimate of Revenues

6.4. Economic Internal Rate of Return (EIRR)

EIRR has not been calculated

6.5. Anticipated/Proposed Funding Scheme

Sources of Funding	Secured	Requested	Non-secured
	(Currency)	(Currency)	(Currency)
(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 loan - municipal loan			
(7) Public grant - central budget			
(8) Public grant - regional budget			
(9) Public grant - municipal loan			
(10) International loan			
(11) International grant			
(12) Commercial bank loan			
(13) Other sources			
Total funds/requirements			

3. Projects Discussed at the National Planning Workshop Supported by UNDP/GEF (Kishinev, July 1998)

At the National Planning Workshop held in Kishinev, 27-30 July 1998 supported by UNDP/GEF it has been concluded that in order to decrease pollution due to industrial sector in the Moldavian part of the Danube River basin the following results have been identified as prior: adequate industrial and mining practices applied; appropriate management of transport activities implemented; institutional and legal framework improved.

3.1. Industry

So that to achieve adequate industrial and mining practices the following projects have been identified:

Existing projects:

- Waste management I in the framework of Giurgiulesti Oil Terminal Project
Activities: construction up-to-date facilities for proper waste keeping, utilization and rendering harmless
- Waste disposal in the framework Wine Export Promotion Project
Activities: rehabilitation of existing facilities and construction of new ones for appropriate toxic waste treatment
- Accident Emergency Warning System and Monitoring, Laboratory and Information Management for Ukrainian and Moldavian part of the Danube Basin (TACIS)
Activities: Providing the equipment, training and expert advice required for establishing AEWS and TNMN systems in Ukraine and Moldova
Total cost: 1.0 MECU
- Development of energy conservation programmes at national and local levels
Activities: introducing of industrial technologies with reduced energy consumption
- Gas extraction at the south of the Republic
- Petrol extraction in Valeni
- Creation and Maintaining of Environmental Training Center
The main *activities* of the Center will be the environmental knowledge exchange and spreading of international experience in this field and training of specialists, organizing of environmental regional seminars.
Total cost: 100,000.00 USD
- Creation of the National Environmental Information System
Activities: the project is conceived as a three phases process of substitution of existing mode of collecting, analyzing, keeping and transmission of information with electronic information management. NEIS is planned to be a virtual network of interconnected computers distributed territorially among environmental organizations in order to implement modern technology of information management, provide public access to environmental data and facilitate decision making process.
Total cost: 605,000.00 USD
- Port of Giurgiulesti Oil Terminal
Activities: appraisal study for potential EBRD financing of Guirgiulesti oil reception facilities to Moldavian Parliament and EBRD approved project
Total cost: 0.45 MECU

Planned Projects:

- Rehabilitation and modernization of equipment at the Edineti, Glodeni, Nisporeni, Cantemir, Cahul canneries
- Installation of new equipment at the Ungeni biochemical plant
- Use of by-products in mining activities
- Extraction of sand and gravel in the vicinity of Bolotino village (district Glodeni)
- Rehabilitation project for food processing plant on Chiadir-Lunga and Comrat
- Modernization of Ungeni railway facilities and waste treatment process

Proposed Project:

- Proper waste treatment in wine processing
- Clean production demonstration project in sugar processing
- Creation of National Register of Toxic Wastes
The objective of the project is to create the National Register of Toxic Wastes. This will improve the management of toxic wastes in the country.
 Total cost: 16,000.00 USD
- Toxic wastes incineration in cement kilns
Background: presently big amounts of toxic wastes (galvanic sediments, old and banned pesticides) are stored on the territory of industrial and agricultural units. There are no special sites in Moldova, where such wastes can be stored. One of the possible solutions is the incineration of some toxic wastes in cement kilns. The costs of the re-construction of cement kiln in order to be used as toxic wastes incinerator constitutes 5% from the cost of a standard commercial incinerator. The requested sum is to be spent for installation of a waste dosator, the procurement of a control system, and the training of the staff.
 Total cost: 1,000,000.00 USD
 New technologies for treatment of waste and wastewater containing heavy metals
 The following *activities* are planned: (1) Evaluation of the total amount of galvanic wastes accumulated in Moldova; (2) Elaboration of new treatment technologies for such wastes.
 Total cost: 50,000.00 USD
- Rehabilitation of wastewater facilities in industrial enterprises

3.2. Transport

To achieve appropriate management of transport activities the following projects have been identified:

Existing Projects:

- Development of basic infrastructure at the Giurgiulesti Oil Terminal
- Improvement of Traffic flows in Trans-European Network corridors II and IX
Activities: to improve traffic flows on corridors Germany-Russia and Finland-Greece
 Total cost: N/A
- Environment quality control within the framework of Giurgiulesti Oil Terminal Project
- Construction of railway Giurgiulesti-Cahul
- Road Kishinev-Vulcanesti-Giurgiulesti
- Railway in Giurgiulesti

- Southern Area Road Rehabilitation
 - road Kishinev-Hancesti
 - road Hancesti- Chimislia
- Electrification of railway Bender-Kishinev
- Management Gas and Oil Pipelines Extensions to Ukraine and Moldova
Activities: seminars
- Priority Emergency Investments in Oil and Gas Pipelines
Assistance to improve security of gas pipelines
Total cost: 6.0 MECU

Planned Projects:

- Enlargement of protected areas and strengthening of control on their status
- Appropriate management of solid and liquid waste disposals within the framework of

Proposed Projects

- Utilization of toxic industrial wastes
- Local projects for reconstructing and repairing of roads
- Utilization of toxic industrial wastes

3.3. Institutional and Legal Framework

To achieve improving of institutional and legal framework the following projects have been identified:

Existing Projects:

- Small GEF Grants within the Environmental Programme for the Danube River Basin
This regional programme was designed to create a framework for the long-term solution of the problem of pollution in the Danube River Basin. In the framework of this programme, the UNDP office in Moldova supported the participatory development of the Danube Strategic Action Plan with the involvement of Moldavian experts and non-governmental community, as well as assisted Moldavian environmental NGOs in building their capacity to solve problems of a basin-wide character at the local level. The small project component is going to be renewed in the nearest future.
Total cost: 43,000 USD
- Creation of free economic zone Ungeni-Kishinev
- Energy Efficiency Programme
Activities: support to the Energy Efficiency Programme: energy audit, staff training, energy awareness programme. Extension of residential energy saving measures.
Total cost: 0.68 MECU
- Development of Energy Conservation Programmes at the National and Local Levels
Activities: development of energy-use statistics; implementation of energy-saving survey; of audits; of a pilot scheme for offices of the NEEO at regional level to provide advice to consumer demonstration of energy efficient technologies; training in energy saving
Total cost: 1.25 MECU

- Widened environmental action programme
Activities: support to the activities of the Regional Environmental Center in project preparation, creation of mechanism for financing feasibility studies, environmental legal advice service; intra-ministerial and intra-NIS environmental cooperation and enhancement of environmental awareness.
 Total cost: 6.50 MECU
- Regional seas programme - Black Sea, Caspian Sea and the Danube River Basin
Activities: funding of selected parts of the Strategic Action Plan Implementation Programme: wetland rehabilitation; pesticides dumps; industrial waste treatment and others
 Total cost: 1 MECU
- Development of Common NIS Environmental Policies
Activities: support to the establishment of common national environmental action plans for NIS countries. Colloquia, documentation and training
 Total cost: 4.00 MECU

Planned Projects:

- Prut River Management
Activities: creation of an Environmental Information System; development of river and ground monitoring strategy; development of wastewater management strategy; modernization of monitoring laboratories
 Total cost: 2.5 MECU

Proposed Projects:

- Creation of free economic zone Giurgiulesti-Galati- Reni- Cahul
- Supply of analytical laboratories with modern equipment for water quality control
- Integrated water management of the Costesti-Stanca reservoir on the Prut River
Activities: the project is intended to elaborate an action plan for the management of water resources in order to ensure a sustainable water use by various users in Romania and Moldova, including the sensitive river ecosystems. Other objectives are to develop a plan for reduction of pollution loads into the reservoir in order to prevent accumulation of micropollutants in sediments and eutrophication and to establish a bilateral monitoring programmes to control the quality of water and sediments in the reservoir.
 Total cost: 300,000.00 USD
- Raising Public Awareness, Developing Environmental Media and Resourcing Good Practice
Activities: development of the capacity of the media to report environmental issues; continued support to the CIS Inter-Parliamentary Assembly; building of the Best Practice Resource
 Center for promotion of Best Practice models; transfer of the resources to the new REC.
 Total cost: 2.5 MECU

Proposed Projects:

- Strengthening of institutional and management capacities in the industrial sector

3.4. Municipalities

In order to decrease pollution in the Danube River due to municipal sector of the Moldavian part of the Danube River basin through properly managed environment in communities three results have been identified as prior: pollution from wastewater reduced; appropriate solid waste management applied; general framework conditions for correct environmental management in communities improved.

In order to reduce pollution from wastewater discharge, the following projects have been identified:

Existing projects:

- Modernization of wastewater treatment plant in Nisporeni
- Completing construction of wastewater treatment plant in Falesti
- Prut River water management (TACIS).

The objectives of this project include: to develop a wastewater management strategy whereby the operation and efficiency of the largest sewage treatment plants can be assessed and which will provide the method, by which the local requirement for sewerage and piped potable water systems in regional rural areas will be investigated. To install appropriate software system(s) and programmes, which can be used to analyze data as listed above and support other aspects of assessment. To upgrade and modernize, as appropriate, a minimum of three laboratories, each of which will be able to analyze water and soil samples in accordance with international standards.

- Construction of collective water supply network in districts Riscani, Falesti, Nisporeni
- Development of unique tariffs for all categories of consumers

Planned projects:

- Construction of a wastewater treatment plant in town Cantemir
- Rehabilitation of drainage system in Comrat, Cahul
- Construction of centralized water supply systems in Ungeni, Glodeni, Leova, Cantemir, Cahul, Vulcanesti, Comrat, Taraclia, Ciadir-Lunga.
- Construction of a plant producing individual and collective filters for use in case of inadequate drinking water
- Demonstration project for rural water supply development.

Activities: the project should be considered as pilot, for demonstration of flexible, adapted to local conditions and problem oriented approaches for water supply system planing and materialization. The experience and lessons learned will be used for development of rural water supply schemes in Moldova.

- Local groundwater resources and their adequate utilization for water supply in rural areas.
Activities: the project should be considered as pilot, for demonstration of Good Practices in case of shallow groundwater utilization for drinking water supply. Because shallow groundwater resources are relatively limited and vulnerable to human activities, the rational and environmentally safe management, as well as public participation are crucial aspects.

Proposed projects:

- Construction of wastewater treatment plants in rural areas (one plant may render services to a number of villages)
- Modernization of wastewater treatment plants in Ungeni, Leova, Cahul, Ciadir-Lunga, Comrat, Vulcanesti, Taraclia

- Modernization of local wastewater treatment facilities at enterprises: Ungeni Carpet Plant, Ungeni Biochemical Plant, warehouse at Ungeni railway
- Implementation of modern technologies for use of sludge, including production of biogas
- Modernization of wastewater treatment facilities and improving waste management at wineries
- Rehabilitation of sewage system in Falesti, Ungeni, Leova, Cantemir, Nisporeni
- Pilot project on sewage system in rural area
- Development of a Regulation regarding operation of water supply systems and sewage systems in basements of apartment houses
- Construction of a bottling plant for high quality drinking water for large consumption
- Pilot project regarding use of dual water supply system
- Construction of water supply network in Hancesti

3.5. Solid Waste Management

In order to achieve appropriate solid waste management, the following projects have been identified:

Existing projects:

- MOLDOVA 21.
Through this project the global Capacity 21 programme will assist the Republic of Moldova to undertake a series of activities aimed at the development of the Moldova 21 Action Programme, which would focus at: upgrading the existent institutional framework and reviewing the state policy for launching a participatory process for designing a unified vision on Moldova's path to the 21st Century; supporting the cross-sectoral integration of the existing and future economic, social and environmental initiatives in the country; and strengthening the capacities of local and international actors as well as the knowledge of the general public on the key sustainable development issues. The coordination and monitoring of the Moldova 21 project will be assigned to the High Economic Council under the Presidency of the Republic of Moldova.

Planned projects:

- Development of Master Plan and Feasibility Study on Solid Waste Management in Moldova.
The main objectives of the project are: on basis of a comprehensive assessment of waste management system in Moldova, to develop a Master Plan and evaluate feasibility of priority actions in this sector; to enhance local capacity in the field of assessment, planning, management and control of solid waste; to raise public awareness with regard to waste management issues.
- Complex Programme of toxic wastes management in the Prut river basin.

Proposed projects:

- Development of a Regulation stipulating measures to shut down of dumping sites and appropriate waste handling in settlements
- Development of the Code of good household practices
- Setting up a system foreseeing marketing of new technologies
- Pilot project foreseeing separate collection of household solid wastes

- Development of regulations and setting up a control system regarding use of chemical in settlements
- Setting up an information system dissemination knowledge among population on use of chemicals and mineral fertilizers
- Development of a centralized system for distribution of chemicals

3.6. General Framework Conditions

In order to improve general framework conditions for correct environmental management in communities, the following projects have been identified:

Existing projects:

- Development of a realistic system of water quality standards.
A project has been identified, which aims at enhancing the capacity of national authorities to revise the system of ambient water quality standards, with a strategy of gradually achieving their harmonization with EU standards.

Planned projects:

- Prut River tributaries –TACIS CBC’98 (appraisal phase).
The project is intended for involvement of local administration, sectoral (environmental, health, land planning, etc.) authorities and population to the process of environmental planning and decision making. The project will assist local authorities to obtain actual information regarding water quality of tributaries (local surface water resources) and Riparian Zones status. The project should help in prioritization of water quality problems, establishing of water quality goals and protection targets, introduction of strategic environmental planning at the local level (tributary basin), and identification of cost-effectiveness measures to reach environmental goals and targets.
- Protection of settlements against over-flooding
- Development of a geo-informational system for settlements
- Set up of the network of regional services in the basin

Proposed projects:

- Training in ecological management for local officials
- Development of a restructuring programme for enterprises delivering services (creation of joint stock companies, privatization)
- Development of measures to ensure favorable environment for the operation of private enterprises delivering services in this area
- Setting up a legal framework encouraging capital investments in environment protection facilities
- Development of a set of manuals and teaching materials on protection of environment meant for use in higher education institutions
- Setting up central and regional training and information centers in environmental issues
- Updating of Civil, Penal Codes, of sector legislation in line with environmental legislation
- Supply of control systems with materials for modern express experiments and adequate automatic equipment
- Development of a programme stipulating creation of a united body for the environmental quality control

- Development of standardization program of methodologies and equipment for the environmental quality control
- Pilot project on sewage system in rural areas
- Pilot project concerning the use of dual water supply system
- Modernization of wastewater treatment facilities and improving waste management at wineries
- Development of a restructuring program for enterprises delivering services (creation of joint stock companies, privatization)

3.7. Agriculture

In order to decrease pollution in the Danube River due to agricultural sector of the Moldavian part of the Danube River basin through optimal use and planning of land and water resources the following results have been identified as prior: adequate agricultural practices adopted; appropriate piscicol practices adopted; sustainable forest management applied; institutional capacity and public involvement in the protection of water and land resources increased; adequate agricultural practices adopted.

In order to reduce pollution through adequate agricultural practices, the following projects have been identified:

Existing projects:

- Support to the Agency for Restructuring Agriculture (TACIS Moldova)
- First Agriculture Project

Proposed projects:

- Implementation of alternative resources processing technologies in agriculture
- Pesticide management in privatization conditions
- Adaptation of agricultural machinery in small farms
- Introduction of new ploughing methods in erosion-prone areas
- Creation a center for monitoring of sedimentary soils in the Prut River valley
- Financing system for farm development (Agricultural Bank etc.)
- Animal waste management
- Production of biogas from animal waste
- Creation of husbandry systems in the market economy
- Creation of Farming Consulting Center
- Rehabilitation of degraded pasture
- Improving pasture quality (irrigation, plantation)
- Rehabilitation of eroded soil through creation of highly productive pastures
- Studying of pasture capacity for husbandry support
- Creating of a Center for Public Information regarding sustainable pasture use
- Rehabilitation of irrigation system in the Prut River basin
- Reorganization of irrigation system
- Regular checking of the water balance for the maintenance of environmental state of irrigation system
- Creation of irrigation system on environmental effective land

3.8. Fishing

In order to achieve appropriate piscicol practices the following projects have been identified:

Proposed projects:

- Rehabilitation of existing fishing systems
- Organization of staff training for the exploitation of river basin
- Hydrological and hydrochemical monitoring of artificial fish-ponds water
- Elaboration of protection areas schemes for the Prut River basin
- Implementation of advanced technologies in the fishing practice in Moldova
- Feasibility study on updating the existing technical facilities with new technologies
- Amendment of existing legislation in accordance with new technology requirements
- Adjusting of economic mechanisms in accordance with requirements for new technology implementation
- Improvement of exploitation rules for artificial fishing ponds management for increased water resources protection
- Restoring of valuable fish species in piscicol ponds
- Hydrotechnical activities in piscicol ponds for increasing of biodiversity

3.9. Forest Management

To achieve sustainable forest management, the following projects have been identified:

Existing Projects:

- Energy Sector Reform (World Bank)
- Biodiversity Strategy Development
- General Education Project (World Bank)
- Civil Education (USAID)

Proposed Projects:

- Improvement of the run-off regime on slopes for erosion control
- Anti-erosion projects (optimal land use pattern etc.)
- Implementation of new agricultural technologies for erosion control
- Information project on anti-erosion measures
- Extending of forest covered areas
- Reorganization of control bodies in forestry
- Economic leverage for forest legislation implementation
- Updating of legislation toward the export and import of timber
- Updating the legal framework in the forestry field
- Inventory of the alternative energy sources possibilities
- Public information programme on alternative energy resources
- Accordance between water and land use legislation
- Legislation enforcement through strengthening control units

- Creation of economic leverage for legislation enforcement
- Involvement issues on water and soil protection in the national education programmes
- Creation of bank for assistance to environmental projects
- Creation of economic stimuli for the use of clean technologies in the field of water and soil use

Source: National Planning Workshop Report. Moldova, July 1998

Annexes

Annex 1.

Public Investment Programme 1998-2000

Public Investment Programme 1998-2000

Project code	Project name	Before 1998	1998			1999			2000			1998-2000 (during PIP period)			Cost after 2000	Total project cost		
			Total	Budget	Foreign credits	Other sources	Total	Budget	Foreign credits	Other sources	Total	Budget	Foreign credits	Other sources				
Agriculture																		
AG01	Wine Export Promotion	55.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	55.2	
AG02	First Agriculture Project	3.5	7.0	1.0	6.0	0.0	4.0	2.0	0.0	1.0	2.0	0.0	0.0	12.0	3.0	9.0	18.5	
UT02	Water Resources Development Project	0.0	2.5	1.0	1.0	0.5	4.0	4.5	0.0	4.5	0.0	4.5	0.0	9.2	1.5	7.2	12.0	
Transport																		
TR0D	Southern Areas Road Rehabilitation	0.0	4.0	1.0	3.0	0.0	6.0	7.0	1.0	6.0	0.0	4.0	0.0	17.0	4.0	13.0	0.0	33.0
TR09	Construction of the railway Revakakainary	0.9	20.1	0.0	20.1	0.0	25.0	25.0	0.0	25.0	0.0	25.0	0.0	79.1	0.0	79.1	0.0	80.0
TR10	Modernisation of the railway border crossing in Ungeny	0.0	4.5	0.0	4.5	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	5.5	0.0	5.5
TR11	Programme of Complementary Investment for Giurgiulesti Oil Terminal	0.3	33.5	3.5	30.0	0.0	45.0	48.0	3.0	30.0	0.0	30.0	0.0	111.5	6.5	105.0	0.0	111.8
Utilities																		
CON-WS	Water and Sewage Completion Programme	0.0	23.0	3.0	20.0	0.0	20.0	23.0	3.0	20.0	0.0	6.0	0.0	54.0	8.0	46.0	0.0	54.0

(Source: Public Investment Programme, 1998-2000. Prepared by Ministry of Economy and Reforms of the Republic of Moldova (Kishinev, November, 1997))

Annex 2.

Project Portfolio

Projects Portfolio

Sector	Donor(s)	Level	Total cost	Project title	Duration	Start date
Status						
Completed						
Type of financing	grant					
<i>Capacity building</i>	EU Tacis Programme	Regional	n/a	DEVELOPMENT OF COMMON ENVIRONMENT POLICIES IN THE NEWLY INDEPENDENT STATES AND MONGOLIA	8 months	1997
<i>Capacity building</i>	Organization for Economic Co-operation and Development	National	30,000 USD	PILOT PROJECT ON DEVELOPING NEAP ENVIRONMENTAL INDICATORS IN MOLDOVA	8 months	1996
<i>Capacity building</i>	The World Bank	National	200,000 USD	DEVELOPMENT OF THE NATIONAL ENVIRONMENTAL ACTION PLAN IN MOLDOVA	14 months	1994
<i>Capacity building</i>	United Nations Economic Commission for Europe	National	200,000 USD	ENVIRONMENTAL PERFORMANCE REVIEW OF MOLDOVA	12 months	1997
<i>Energy</i>	EU Tacis Programme	National	0.68 MECU	EXTENSION OF ASSISTANCE TO THE GOVERNMENT OF MOLDOVA IN THE FURTHER DEVELOPMENT AND IMPLEMENTATION OF AN ENERGY EFFICIENCY PROGRAMME COVERING THE INDUSTRIAL AND RELATED ECONOMIC SECTORS	28 months	1996
<i>Land resources</i>	United States Agency for International Development	National	2,500,000 USD	ENVIRONMENTAL POLICY AND TECHNOLOGY PROJECT	24 months	1995
<i>Ozon depletion</i>	Global Environment Facility / United Nations Programme for Development	National	80,000 USD	FORMULATING COUNTRY PROGRAMME AND PREPARATION OF TECHNICAL ASSISTANCE/INVESTMENT PROJECTS FOR IMPLEMENTING THE MONTREAL PROTOCOL IN MOLDOVA	12 months	1997

Sector	Donor(s)	Level	Total cost	Project title	Duration	Start date
<i>Public participation and awareness</i>	EU Tacis Programme	Regional	n/a	RAISING ENVIRONMENTAL AWARENESS AND DEVELOPING ENVIRONMENTAL MEDIA IN THE NIS AND MONGOLIA - PHASE 1	10 months	1997
<i>Public participation and awareness</i>	German Technical Co-operation	National	n/a	DEVELOPMENT OF ENVIRONMENTAL PROTECTION SECTOR IN MOLDOVA (GTZ)	24 months	1996
<i>Public participation and awareness</i>	Global Environment Facility / United Nations Programme for Development	National	43,000 USD	SMALL GEF GRANTS WITHIN THE ENVIRONMENTAL PROGRAMME FOR THE DANUBE RIVER BASIN	24 months	1996
<i>Water resources</i>	The World Bank	National	200,000 USD	STUDY ON THE QUALITY OF RURAL DRINKING WATER	15 months	1996
Status						
On-going						
Type of financing						
Capacity building						
	EU Tacis Programme	Regional	n/a	WIDENING OF THE ENVIRONMENTAL ACTION PROGRAMME TO THE NIS AND MONGOLIA	24 months	1998
<i>Capacity building</i>	United Nations Development Programme	National	100,000 USD	BUILDING CAPACITY FOR THE IMPLEMENTATION OF THE NATIONAL ENVIRONMENTAL ACTION PLAN IN MOLDOVA	24 month	1997
<i>Energy</i>	EU Tacis Programme	National	1.25 MECU	DEVELOPMENT OF ENERGY CONSERVATION PROGRAMMES AT NATIONAL AND LOCAL LEVELS	24 months	1996
<i>Forests</i>	Ministry of the Environment of Finland	National	N/A	DEVELOPMENT OF THE NATIONAL STRATEGY OF SUSTAINABLE FOREST MANAGEMENT	12 months	
<i>Global warming</i>	Global Environment Facility / United Nations Programme for Development	National	325,000 USD	ENABLING MOLDOVA TO PREPARE ITS FIRST NATIONAL COMMUNICATION IN RESPONSE TO ITS COMMITMENTS TO THE UN FCCC	24 months	1998

Sector	Donor(s)	Level	Total cost	Project title	Duration	Start date
<i>Water resources</i>	EU Tacis Programme	National	1.00 MECU	ACCIDENT EMERGENCY WARNING SYSTEM AND MONITORING LABORATORY AND INFORMATION MANAGEMENT FOR THE UKRAINIAN AND MOLDOVAN PARTS OF THE DANUBE RIVER BASIN	24 month	1998
<i>Type of financing</i>	Loan					
<i>Energy</i>	European Bank for Reconstruction and Development	Local	34.7 MECU	ENERGY EFFICIENCY PROJECT TARGETED AT DISTRICT HEATING NETWORK	n/a	1997
<i>Energy</i>	The World Bank	National	10,000,000 USD	WORLD BANK ENERGY PROJECT	n/a	1997
<i>Land resources</i>	The World Bank	National	11,800,000 USD	FIRST AGRICULTURAL PROJECT	n/a	1997
<i>Water supply and sanitation</i>	European Bank for Reconstruction and Development	Local	41.00 MECU	CHISNAU WATER SERVICES REHABILITATION	1997	
Status	Proposal					
<i>Type of financing</i>	Grant					
<i>Biodiversity and protected areas</i>	Global Environment Facility / World Bank	Regional	750,000 USD	WATER QUALITY AND BIODIVERSITY CONSERVATION OF MIDDLE AND LOW DNIESTER AREA IN MOLDOVA	n/a	
<i>Biodiversity and protected areas</i>	To be determined	Local	100,000 USD	DEVELOPING THE CODRII NATURAL AREA IN THE REPUBLIC OF MOLDOVA	6 months	
<i>Capacity building</i>	To be determined	National	85,000 USD	TRAINING ON ENVIRONMENTAL PROJECT DEVELOPMENT FOR THE LOCAL ENVIRONMENTAL AND PUBLIC AUTHORITIES	8 months	
<i>Ecotourism</i>	United Nations Development Programme	National	To be determined	ECOTOURISM AS A TOOL FOR SUSTAINABLE DEVELOPEMENT OF MOLDOVA	36 months	
<i>Food quality</i>	To be determined	Local	500,000 USD	CLEAN PRODUCTION PILOT PROJECT IN A SUGAR FACTORY IN DROCHIA	To be determined	

Sector	Donor(s)	Level	Total cost	Project title	Duration	Start date
<i>Ozon depletion</i>	Multilateral Fund of the Montreal Protocol / UNDP	National	393,450 USD	REFRIGERANT RECOVERY AND RECYCLING PROGRAMME	12 months	
<i>Ozon depletion</i>	Multilateral Fund of the Montreal Protocol / UNDP	National	700,000 USD	PHASING OUT OF CFCs IN THE PRODUCTION OF DOMESTIC REFRIGERATORS	12 months	
<i>Ozon depletion</i>	Multilateral Fund of the Montreal Protocol / UNEP	National	135,000 USD	INSTITUTIONAL STRENGTHENING: ESTABLISHMENT OF A NATIONAL OZONE UNIT	36 months	
<i>Ozon depletion</i>	Multilateral Fund of the Montreal Protocol / UNEP	National	61,000 USD	TRAINING IN MONITORING AND CONTROLLING OF ODS	3 months	
<i>Ozon depletion</i>	Multilateral Fund of the Montreal Protocol / UNEP	National	91,300 USD	TRAINING OF TRAINERS IN REFRIGERATION	12 months	
<i>Public participation and awareness</i>	EU Tacis Programme	National	1 MECU	SUPPORT TO THE REGIONAL ENVIRONMENTAL CENTRE IN MOLDOVA	12 months	
<i>Radiologic hazard</i>	To be determined	Regional	1,500,000 USD	CONTROL AND MANAGEMENT OF RADIOLOGICAL HAZARD IN THE NATIONAL AND TRANSBOUNDARY CONTEXT	24 months	
<i>Waste management</i>	JICA	National	To be determined	DEVELOPMENT OF MASTER PLAN AND FEASIBILITY STUDY ON SOLID WASTE MANAGEMENT IN MOLDOVA	18 months	
<i>Waste management</i>	To be determined	Local	1,500,000 USD	CUPCINI BIOGAS PROJECT	12 months	
<i>Waste management</i>	To be determined	National	2,600,000 USD	BIOGAS PILOT PROJECT IN MOLDOVA	24 months	
<i>Water quality and pollution</i>	To be determined	National	45,000 ECU	DEVELOPMENT OF A REALISTIC SYSTEM OF WATER QUALITY STANDARDS	6 months	
<i>Water resources</i>	EU Tacis Programme	Regional	2.48 MECU	PRUT RIVER TRIBUTARIES: ENVIRONMENTAL REVIEW, PROTECTION STRATEGY AND OPTIONS	30 months	
<i>Water resources</i>	To be determined	Regional	2.27 MECU	SEDIMENTS ASSESSMENT IN THE PRUT RIVER	24 months	

Sector	Donor(s)	Level	Total cost	Project title	Duration	Start date
<i>Water resources</i>	To be determined	Regional	5.0 MECU	UKRAINE-MOLDOVA DNISTER RIVER BASIN MANAGEMENT SYSTEM: COOPERATING IN THE SUSTAINABLE USE AND PROTECTION OF TRANSBOUNDARY WATERS	24 months	
<i>Water supply and sanitation</i>	To be determined	Local	480.000 USD	DEMONSTRATION PROJECT FOR RURAL WATER SUPPLY DEVELOPMENT	To be determined	
<i>Water supply and sanitation</i>	To be determined	Local	700.000 USD	LOCAL GROUNDWATER RESOURCES AND THEIR ADEQUATE UTILIZATION FOR WATER SUPPLY IN RURAL AREAS	To be determined	
Status	Recently approved, to be launched					
Type of financing	Grant					
<i>Biodiversity and protected areas</i>	Global Environment Facility / World Bank	National	125,000 USD	BIODIVERSITY STRATEGY, ACTION PLAN AND NATIONAL REPORT	14 months	1998
<i>Capacity building</i>	United Nations Development Programme	National	150,000 USD	MOLDOVA 21	24 month	1998
<i>Water resources</i>	EU Tacis Programme	National	2.50 MECU	PRUT RIVER WATER MANAGEMENT	24 months	1998
<i>Water resources</i>		Regional	1.00 MECU	SELECTED ACTIONS IN MOLDOVA AND UKRAINE FROM THE ENVIRONMENTAL PROGRAMME FOR THE DANUBE RIVER BASIN	18 months	1998

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