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ISPA Measure No:
2002 BG 16 P PE 017

FINANCING MEMORANDUM

**Agreed between the European Commission and
the Republic of Bulgaria**

**Concerning the grant of assistance from the Instrument for Structural Policies for
Pre-Accession to the following measure**

Balchik Integrated Water Project in Bulgaria

2002 BG 16 P PE 017

FINANCING MEMORANDUM

The European Commission, hereinafter referred to as "the Commission", acting for and on behalf of the European Community, hereinafter referred to as "the Community" represented by the Acting Director General for Regional Policy, Mr Graham Meadows, for the Commission

on the one part, and

The Government of Bulgaria, hereinafter referred to as "the beneficiary"

on the other part,

HAVE AGREED AS FOLLOWS:

Article 1

The measure referred to in Article 2 below shall be implemented and financed out of the budgetary resources of the Community in accordance with the provisions set out in this Memorandum. The measure referred to in Article 2 below shall be implemented in line with the General Conditions annexed to the Framework Agreement signed between the Commission and the beneficiary and supplemented by the terms of this Memorandum and the provisions annexed hereto.

Article 2

Identification of the measure

The Instrument for Structural Policies for Pre-accession shall contribute, by way of a grant, towards the financing of the following measure as described in Annex I:

Measure number: 2002 BG 16 P PE 017

Title: Balchik Integrated Water Project in Bulgaria

Duration: **Start date:** The date of signature of the financing memorandum by the Commission

End date: 31 December 2008

Location: Municipality of Balchik, Varna Region, Bulgaria

Group: Black Sea Basin

Article 3

Commitment

1. The maximum public or equivalent expenditure which may be taken into account for the purpose of calculating assistance shall be € 21 589 225;
2. The rate of Community assistance granted to the measure is fixed at 75 % of total public or equivalent expenditure as indicated in the financing plan in Annex II;
3. The maximum amount of assistance from the Instrument for Structural Policies for Pre-accession is fixed at € 16 191 919;
4. An amount of € 12 953 535 is committed from the 2003 budget under budgetary line B7-020. Commitments in respect of subsequent instalments shall be based on the initial or revised financing plan for the measure, subject to the state of implementation of the measure and to budgetary availability.

Article 4

Payments

1. Community assistance shall cover payments on the measure for which legally binding commitments have been made by the beneficiary and for which the requisite finance has been specifically allocated. These payments must relate to the works described in Annex I.
2. Payments made before the date of signature of financing memorandum by the Commission shall not be eligible for assistance from the Instrument for Structural Policies for Pre-accession.
3. The measure described in Annex I and payments by the body responsible for the implementation of the measure shall be completed no later than the 31 December 2008.

The report required for the payment of the final balance should be submitted not later than 6 months after this date.

4. The advance payment is fixed at € 3 238 384, which shall be transferred as follows:
 - An amount of € 1 619 192 is paid out after signature of this memorandum by the beneficiary;
 - The remainder is paid out after signature of the first substantial works contract to be agreed between the beneficiary and the Commission, and fulfilment of the other conditions specified in Article 8 (3) hereunder.
5. In accordance with Annex III. 1, Section III, point 5, the Commission will accept for this measure a total amount of advance and intermediate payments of 90 % of the total assistance granted.

Article 5

Respect of Community law and policies

The measure shall be carried out in compliance with the relevant provisions set out in the Europe Agreements and shall contribute to the achievement of Community policies, in particular those concerning environmental protection and improvement.

Article 6

Intellectual property

The Beneficiary and the authority responsible for implementation mentioned in Annex I point 3 shall ensure that they acquire all necessary intellectual property rights to studies, drawings, plans, publicity and other material made in conjunction with planning, implementation, monitoring and evaluation of the project. They shall guarantee that the Commission, or any body or person delegated by the Commission shall have access and the right to use such material. The Commission will only use such material for its own purpose.

Article 7

Permits and authorisations

Any type of permits and or authorisations required for the implementation of the measure must be provided by the competent authorities of the Beneficiary in due time and in accordance with national law.

Article 8

Specific conditions related to the measure

Without prejudice to the general provisions specified in Annex III the Community grant for the measure is subject to the following conditions:

1. Condition on the assumptions and the status of the assets:

The Commission reserves the right to revise the amount of the assistance for ISPA set out in Article 3 if, within five years of the date of the completion of works, the operating conditions (tariffs, revenues, etc.) vary significantly relative to the original assumptions made in determining the level of the grant and/or there is a substantial modification:

- affecting the nature of the operation or its implementing conditions, or giving to a private or public body an undue advantage; and
- resulting either from a change in the nature of the ownership of any part of the financed infrastructure, or a cessation or material change in the operating arrangements.

The beneficiary country shall inform the Commission of any such change, and shall seek the ex-ante agreement of the Commission to these changes.

2. Condition on viability:

The Community grant for the measure is subject to the authorities concerned making available sufficient resources in order to ensure the effective operation and maintenance of the assets.

3. The second advance payment shall be subject to:

- a) the presentation of a statement from the competent environmental authorities that subject to Art. 4 (2) of the EIA Directive, a screening has been conducted of the sludge disposal site. Where these authorities decide that this component of the measure shall be subject to an EIA procedure, this should also take account of the other components of the measure.
- b) the appointment for the measure of a project manager and a project implementation unit (PIU) under terms acceptable to the Commission to be located in the regional water company in Dobrich and assisted by a technical assistant financed by the measure.

4. The final payment shall be subject to:

- a) the presentation of evidence that:
 - (i) Industrial wastewater is pre-treated in compliance with EC Directives and/or recycled as appropriate.
 - (ii) The pre-treatment and/or the recycling of industrial wastewater is monitored and enforced by the appropriate environmental authorities.
 - (iii) The industrial loads are not harmful to the designed technology of the treatment plant.
 - (iv) An appropriate charge will be introduced for industries that is acceptable to the Commission, based on the quantity and quality of effluent produced and on the cost of treatment.
- b) the presentation of a final programme for the treatment, reuse and disposal of the sludge under terms acceptable to the Commission.

Article 9

The implementation provisions described in the Annexes to this financing memorandum form an integral part of it.

Non-compliance with the conditions and implementation provisions shall be dealt with by the Commission according to the procedure stipulated in Annex III.1. Section VIII.

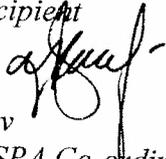
Article 10

The authentic text of this financing memorandum is the present document as signed hereunder.

Done at

10.02.2004

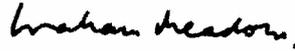
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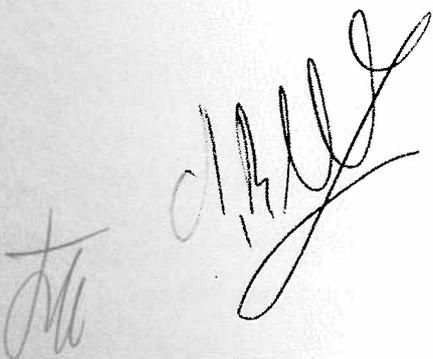
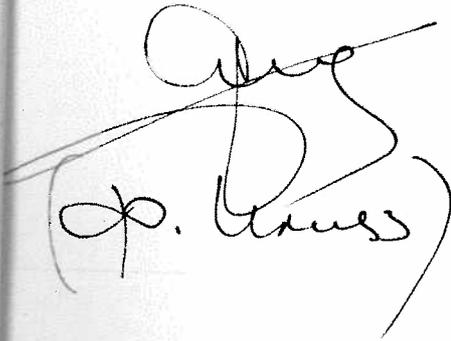
M. Veltchev
National ISPA Co-ordinator

Done at Brussels,

For the Community



G. Meadows
Acting Director General



List of Annexes

Annex I	Description of measure
Annex II	Financing plan
Annex III	
Annex III.1	ISPA Financial Implementation provisions
Annex III.2	Provisions governing eligibility of expenditure for measures assisted by ISPA
Annex III.3	Model for submission to the Monitoring Committee and request for modification
Annex III.4	Management and control systems for assistance granted from ISPA and the procedure for making financial corrections
Annex III.5	Agreement with respect to irregularities and recovery of sums wrongly received under ISPA
Annex III.6	Information and Publicity requirements

Description of measure

Balchik Integrated Water Project in Bulgaria

Commission code No: 2002 BG 16 P PE 017

1. MEASURE TITLE

Balchik Integrated Water Project in Bulgaria

2. AUTHORITY MAKING THE APPLICATION (NATIONAL ISPA CO-ORDINATOR)

2.1. Name: Ministry of Finance, Mr Lyubomir Datzov, Deputy Minister

2.2. Address: 102 Rakovski Str., 1040 Sofia, Bulgaria

E-mail: L.Datzov@minfin.bg

3. AUTHORITY RESPONSIBLE FOR IMPLEMENTATION (AS DEFINED AT SECTION II (2) OF ANNEX III.2)

3.1. Name: EU Funds for Environment (EUFE) Department, Ministry of Environment and Waters (MoEW)

3.2. Address: 67 W.Gladstone Str., 1000 Sofia, Bulgaria

E-mail: marianasir@moew.government.bg

4. FINAL BENEFICIARY (IN CASE IT IS A DIFFERENT BODY FROM THE AUTHORITY MENTIONED UNDER 3)

4.1. Name: Municipality of Balchik

4.2. Address: 2, Dionisopolis Str., 9600 Balcik, Bulgaria

E-mail: Kmetstvo@balchik.net

5. LOCATION

5.1. Beneficiary country: Bulgaria

5.2. Region: Black Sea Basin

6. DESCRIPTION

The measure forms part of a group of projects in the Black Sea Basin.

The measure is a part of the National Programme of priority construction of Waste Water Treatment Plants in towns of population above 10 000 equivalent inhabitants.

6.1. Background

The Town of Balchik is located on the Bulgarian coast of the Black Sea, in the Dobrudzha coastal district, approximately 30 km north of the City of Varna, and 60 km south of the Bulgarian/ Romanian border.

The Town is located on a steep limestone escarpment, which rises some 200 m above the Black Sea. The old sector of the Town rises from sea level up the slope of the escarpment, in which there are a series of dry valleys running down to the Sea. The newer uphill area of Levski is located at the top of the limestone escarpment on relatively level ground. The lower reaches of the town are constructed on a fragile limestone which overlies a soft naturally saturated clay.

Balchik has a small tourist industry that has developed further in recent years. The population amounts to 20 900. Many holiday chalets and villas surround the town to the south and south west.

There are two small streams to the east and west that reach the Black Sea in two of the larger ravines. The East Ravine is significant as it carries a great deal of the existing wastewater produced by the town.

Water Supply Network Rehabilitation

All water supplies are taken from ground water sources, with no direct abstraction from surface waters. The raw waters are taken from a combination of springs and deep boreholes, which abstract from the karst limestones.

Other than the statutory disinfection (chlorination) of water supplies, no treatment of the ground waters is undertaken. The problems with the quality of water abstracted for town use are its contamination with domestic wastewaters.

The total length of the water mains network is approximately 42 km, which comprises the distribution system consists of predominately asbestos cement pipes (42 %), with some steel, spun iron, PVC and polyethylene pipes. The existing network covers 100 % of the population. The main problem experienced with the water mains network in Balchik is the slow but continuous movement of the local soils on the slopes of the limestone escarpment. As a result of ground movement and periodic slips, there have been many pipe fractures. Problems are also being experienced during peak demand periods with lack of hydraulic capacity in some sections of the pipe network.

Sewerage Network Rehabilitation

The existing sewerage network (collectors and secondary sewers) covers only approximately 40 % of the needs.

In the lower town, there is a combined storm-water, land drainage water and foul sewerage system. There is also a drainage gallery into the cliff face at the back of the lower town for abstraction of subterranean water for land stabilisation purposes. The output of the entire drainage system discharges at two points into the East Ravine and at one point into Balchik harbour. The higher part of the town has a very limited sewerage network. Sanitation there is mainly via separated septic tanks. In this high area only two collector sewers exist which connect the industrial and the Balchik residential zone.

Wastewater Treatment

Most of the existing wastewater flows reach the East Ravine and find their way into the harbour without any treatment. A small fraction of flows from properties immediately above an existing wastewater plant gain some treatment there, as do a group of properties at the bottom of the town whose flows find a small wastewater pumping station which is emptied once a day into the wastewater treatment plant.

The old preliminary WWTP is in a state of dereliction, but still receives a small amount of wastewater flow from properties in its immediate vicinity and properties which discharge to the wastewater pumping station.

6.2. Description

The measure proposed for Balchik, which has been prepared with the support of the Danish Environmental Protection Agency (DEPA), considers the full water cycle with investments relating to water supply, waste water collection and treatment. For the reasons mentioned above relating to the present conditions of the water supply network and geological situation, Balchik requires a highly integrated investment strategy. The measure proposed will indicatively include:

- (a) Water supply infrastructure rehabilitation (primarily the replacement of asbestos cement pipes);
- (b) Sewerage rehabilitation and extension to achieve approximately 100 % connection from the current 40 %.
- (c) New Waste Water Treatment Plant (WWTP) using re-circulated activated sludge technology and a 240m long sea marine outfall;
- (d) Technical assistance for implementation support in the Project Implementation Unit (PIU) on the Dobrich Regional water company;
- (e) Supervision during construction.

All the necessary geological stabilisation works will be financed only by the Bulgarian authorities in parallel to the ISPA Measure.

Component 1: Water Supply Network Rehabilitation

The ISPA component in the rehabilitation of the existing drinking water system will consist of the following sub-components:

- 1.1. Completion of Reservoir 1A (Tcarichino new) and Water Source protection to achieve a volume of about 1 350 m³ required to meet daily peak demands;
- 1.2. Chlorination equipment & head-works;
- 1.3. Introduction of a digital system mapping for completion of comprehensive water supply system documentation;
- 1.4. Water Network Rehabilitation including replacement of over 20 km of asbestos pipes and 14 km of corroded steel pipes, cast iron and galvanised pipes;
- 1.5. Replacement of house connections and water meters (approximately 2 955 m) for domestic connections;
- 1.6. Replacement of old and installation of new valves & hydrants;
- 1.7. Demolition of old network.

Component 2: Sewerage Network Rehabilitation and Extension

The ISPA component in the rehabilitation and extension of the existing sewerage network will consist of the following sub-components:

- 2.1. Main Collector from the outskirts of the town to the new WWTP (1 308 m divided in three sections of 200 m, 178 m and 930 m).

2.2. Existing Pumping Station Rehabilitation

The current pumping station has not been in operation for a long time and needs to be totally refurbished.

2.3. New Pumping Station

This new Pumping Station will be constructed to receive the wastewaters from all the facilities in the harbour (restaurants, bars, hotels, etc) and it will convey the wastewaters in the existing pumping station (see 2.2).

2.4. Remaining Sewerage collectors:

- 2.4.1 Construction of the new transmission pipeline N° 1 between the main collector to the WWTP and the collector to new sewers area of 1 011 m (four sections of 414 m, 231 m, 347 m and 19 m);
- 2.4.2 Construction of a new collector of 1 692 m (300 mm) which links the transmission pipeline to the new sewer areas;
- 2.4.3 Construction of sanitary collectors (main and secondary) for the upper town (approximately 32 km).

2.5. Separation of the drainage water:

The construction of a new waste water pipeline in order to separate in part of the old town of Balchik, the drainage water from the wastewater (2 285 m, 300 mm).

2.6. Renovation of concrete sewage branches:

This sub-component aims at reducing the high infiltration flows by means of rehabilitating the existing sewers (1 200 m, 300 mm).

Parallel to the ISPA measure, the Bulgarian Authorities will finance the elimination of the existing septic tanks and the construction of the connection between the households and the secondary sewers (which will be rehabilitated with ISPA funding).

2.7 Pipeline in chalet area.

Component 3: Waste Water Treatment Plant

The existing WWTP built in 1965 will be decommissioned with Bulgarian financing. The new wastewater treatment plant will be constructed for full secondary treatment, with biological nitrification/de-nitrification included in the process via the stabilisation of sludge in the activated sludge tanks. This process is a recirculation system and extended aeration process.

Provision for biological phosphorus removal will be made so that full tertiary treatment can be introduced in a cost-effective manner. The plant will be operated to provide treatment of wastewater to full secondary level on commissioning inclusive of nitrogen reduction, and for a period of at least three years thereafter. Full tertiary level treatment (meaning the biological reduction of Phosphorus compounds) will be introduced after this period, if required, and if the operator demonstrates sufficient technical and financial capacity.

The new WWTP will be designed for three lines, where only two lines will be constructed with the current measure referring to a treatment capacity of 22 200 p.e.

The new WWTP is proposed to consist of the following main elements:

- Coarse screen station
- Fine screen station
- Aerated grit and grease chambers
- Selectors
- De-nitrification tanks
- Mixers
- Aeration tanks
- Diffused air aeration system
- Blower station
- Final settling tanks
- Return sludge pumping station
- Effluent pumping station
- Sludge storage tank
- Sludge dewatering station
- Sludge stabilization station
- The marine outfall.

Design parameters for the Balchik WWTP

Parameters	Unit	Situation without ISPA measure 2014 (Inlet parameters)	Situation with ISPA measure 2014 (Outlet parameters)
Overall design capacity	m ³ /d	5 935	
Population equivalent	p.e.	22 200	
BoD	mg/l	79	25
CoD	mg/l	185	125
Suspended solids (SS)	mg/l	92	35
Total Nitrogen	mg/l	15	15
Total Phosphorus	mg/l	3	2*

* The phosphorous value will be achieved only in the future when the plant will be upgraded with a second intervention, but it will be designed for the full tertiary upgrading (but not constructed) with the current measure

The Bulgarian Authorities will finance any coastal protection interventions if needed.

Component 4: Technical Assistance

The technical assistance component will be mainly used to:

- as normal ISPA practice, hire independent technical expertise to participate in the international tendering process for supervision and works;
- provide management support to the project implementation unit created in the Dobrich Regional Water Company (RWC) in Dobrich to assist in the implementation of the measure and to improve the financial and operational performance of the RWC;
- prepare an in-depth review of the drinking water system in order to identify a potential second project financed by the Bulgarian authorities in the town;
- provide the RWC with the necessary equipment to monitor the entire water system and to improve the maintenance of the assets built (i.e. equipment for leakage detection);
- carry out the necessary information and publicity activities for the measure;
- prepare any other necessary studies to complement the implementation of the tender for the monitoring equipments.

Finally, concerning the institutional arrangements, all new constructed water and wastewater assets will be owned by the Municipality of Balchik. The operation and maintenance of the assets will be provided by the Dobrich Regional Water Company, which is 100 % state-owned.

If the Bulgarian authorities decide to select a new regional water operator, this operator will have to:

- be selected through an open and transparent tendering procedure, under terms acceptable to the European Commission;
- present a specific operation and maintenance programme under terms acceptable to the Commission.

Component 5: Supervision

A FIDIC supervising engineer will be appointed to supervise implementation of the works contracts. The supervising engineer will also provide assistance to the PIU.

7. OBJECTIVES

The overall objective of the measure is to protect the Black Sea Basin from pollution from discharges of untreated sewage and industrial wastewater as well as to minimise the environmental impacts and the risks to human health for the population living in and visiting the target areas served by the new WWTP and new water supply system through:

- reducing of uncollected, untreated waste waters;
- reducing leakage from sewers and septic tanks;
- reducing infiltration and ex-filtration from the sewage network;

- reducing high levels of leakage from water supply network;
- elimination of use of asbestos pipes for drinking water supply;

In particular, the measure will:

- Enable the city of Balchik to achieve compliance with the Urban Waste Water Directive;
- Reduce the risk to human health caused by usage of asbestos pipes for drinking water supply;
- Reduce the potential risk of groundwater contamination;
- Reduce the potential risk of soil contamination;
- Reduce pollution in the Trans-border region (Black Sea);
- Build-up an effective environmental infrastructure to facilitate economic activity;
- Improve the conditions for the development of the key sector of the economy - tourism;
- Create new employment opportunities - temporary and permanent and stimulate local and regional development.

8. WORK SCHEDULE (INDICATIVE)

Category of work	Commencement	Completion
Feasibility study:	February 2001	March 2002
Economic analysis:	February 2001	March 2002
Financial analysis:	February 2001	March 2002
Environmental impact assessment:	July 2001	March 2002
Design studies:	September 2002	December 2002
Tender documents:	November 2003	November 2003
Land acquisition*:	Completed	Completed
Construction:	December 2004	December 2007
Operational phase:	January 2008	

* The Municipality of Balchik is the owner of the site for the new WWTP.

9. ECONOMIC AND SOCIAL COST-BENEFIT ANALYSIS

An economic internal rate of return has not been calculated due to the difficulties in quantifying many of the economic benefits of the project. These benefits include in particular: (i) environmental benefits resulting from improved water quality in the Black Sea; (ii) health impacts resulting from improvements to water source works and networks (iii) the long term commercial implications of improved water and wastewater systems in Balchik; and (iv) land use development implications of connections to new areas.

10. MAIN ELEMENTS OF FINANCIAL ANALYSIS

The Balchik service area as defined by the Dobrich Regional Water Company includes the entire Balchik municipality as well as water services to Albena resorts.

Forecasts developed in this analysis are concerned with water and wastewater related cash-flows and the impacts of a range of anticipated investments. The analysis includes estimates of the company's overall operating costs and costs associated with existing and anticipated obligations.

The financial analysis and rationale for the project is based on the principles of (a) cost recovery; (b) polluters pays principle; (c) user charge acceptability and affordability; and (d) the need to ensure the long-term financial sustainability of water services in Balchik.

Tariff revenues can cover operating expenses of the new facilities and necessary on-going maintenance/asset replacements required to maintain operations at a constant standard throughout the planning period.

11. ENVIRONMENTAL IMPACT ANALYSIS

Only one component of the investment, which is the WWTP, falls within the scope of Annex II of the Directive 85/337. The management of sludge will be addressed by a separate design, accompanied by an EIA report if necessary (as per Annex II point 11 (d) of the above Directive). The national authorities have discretion to decide if an EIA is required and decided to carry out the EIA. The competent authority is the Ministry of Environment and Water.

The resolution on EIA for the WWTP was published in June 2002 with three distinct categories of detailed recommendations which will have to be followed before the start of the measure, during the construction and during the operation period of the new wastewater treatment plant. Public consultations were held in February 2002.

In Bulgaria the municipalities are obliged to take into account the EIA recommendations.

The measure will meet the requirements of the following EC Directives:

- 1) EC Directive 91/271 on Urban Wastewater Treatment by ensuring that the wastewater discharges will comply with the requirements for discharges into sensitive waters, for agglomerations exceeding 10 000 p.e.;
- 2) EC Directive 80/68 on Groundwater Directive as amended by EC Directive 91/692;
- 3) EC Directive 76/464 on the pollution caused by certain dangerous substances discharged into the aquatic environment;
- 4) EC Directive 76/160 concerning the quality of bathing water;
- 5) EC Directive 75/440 concerning the quality required of surface water intended for the abstraction of drinking water;
- 6) EC Directive 80/778 relating to the quality of water intended for human consumption;
- 7) Water Framework Directive 2000/60 establishing a framework for Community action in the field of water policy.

12. COST AND ASSISTANCE (IN €)

INDICATIVE COST BREAKDOWN

Item	Total Eligible cost (Euro)	Expenditures incurred before application (Euro)
Land acquisition* and previous expenditure	-	300 000
Works and Equipment :	17 875 000	
- WWTP	5 259 000	
- Sewerage	7 426 000	
- Drinking water	4 902 500	
TA for implementation support in Dobrich RWC	450 000	
TA for water survey and monitoring equipments	472 500	
TA for tender evaluation support	100 000	
Contingencies for civil works and mechanical equipment	1 572 225	
Supervision	1 407 000	
TOTAL (Euro)	21 589 225	300 000

Total cost	Private sector contribution	Non eligible expenditure	Total eligible cost	ISPA grant	Grant Rate %
21 889 225	0	300 000	21 589 225	16 191 919	75 %

The national counterpart financing will be provided by the State Budget, National Fund.

13. INVOLVEMENT OF IFIS

No IFIs are involved in the co-financing of this measure.

14. SPECIFIC CONDITIONS RELATED TO THE MEASURE

See Article 8 of the Financial Memorandum.

15. PROCUREMENT PLAN

The works and services will be implemented according to the procurement plan appended as annex I.a.

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Provisional Procurement Plan

Tender N°	Description of Works and Services to be Tendered	Type of Contract	Provisional Month of Launch of Tender	Rate of Reimburs. of Invoices Relating to Specific Contract
1	Technical assistance for implementation support in the Dobrich RWC	Services	1 st Semester 2004	75 %
2	Other TA elements	Services	1 st Semester 2004	75 %
3	Supervision during implementation	Services	1 st Semester 2004	75 %
4	Construction of WWTP and completion of main collector elements according to Yellow FIDIC design and build Conditions of Contract	Works	2 nd Semester 2004	75 %
5	Construction of the drinking water and the other sewerage elements according to Red FIDIC Conditions of Contract for construction	Works	1 st trimester 2005	75 %
6	Monitoring equipments for the Dobrich RWC	Supplies	1 st trimester 2004	75 %

The specific terms for the award of contracts will be made available in the Official Journal of the European Communities and/or the Internet.

