



# Ministry of Environment and Forests

Minister Cabinet



Nr: 2039 / R.P. 103-07-2012

Referring to: Notification on the project "*The development of the Argeş and Dâmboviţa rivers for navigation and other uses*"

17.04.2012  
13.07.2012  
A. C. C.  
G. C. C.

Dear Ms. Karadjova,

We have the pleasure to address to you regarding the development of the Romanian project "*The development of the Argeş and Dâmboviţa rivers for navigation and other uses*", whose beneficiary is The National Company – The Administration of Navigable Waterways S.A.- Constanta.

According to Article 3 of the Convention on Environmental Impact Assessment in a Transboundary Context, please find attached the Notification Form together with the Technical Memoire (Presentation Report) in English language for this project and a map with the project location within the natural protected areas, in electronic format (1 CD).

We would highly appreciate to receive your answer on whether you are interested to enter into the transboundary EIA procedure, until 30<sup>th</sup> of July 2012.

Please accept, dear Mrs. Karadjova, the assurance of my highest consideration.

Yours sincerely,

Rovana PLUMB

  
MINISTER

Ms. Nona KARADJOVA  
Minister  
Ministry of Environment and Water  
Republic of Bulgaria

**NOTIFICATION TO AN AFFECTED PARTY BY THE PROPOSED ACTIVITY  
UNDER ARTICLE 3 OF THE CONVENTION**

<b>1. INFORMATION ON THE PROPOSED ACTIVITY</b>	
<b>(i) Information on the nature of the proposed activity</b>	
Type of activity proposed:	
Is the proposed activity listed in Appendix I to the Convention?	Yes, point 9 – <i>Commercial ports and inland waterways and river ports allowing the passage of the ships over 1,350 tons.</i>
Scope of proposed activity (e.g. main activity and any/all peripheral activities requiring assessment)	<p>This project aims at creating a connection between Bucharest municipality, the Danube river and the Trans-European Transport Corridor VII via a waterway with a transport capacity of over 24 million tons/year. When this connection is achieved, there will be formed:</p> <ul style="list-style-type: none"> <li>• A direct connection between the capital of Romania, Bucharest and other European centres, such as: Belgrade, Budapest, Vienna, Frankfurt, Duisburg, Rotterdam, etc.</li> <li>• Enabling the access to Constanța port and via Rhine – Main – Danube canal to the European waterway network via an environmentally-friendly transport way of big capacity;</li> </ul> <p>Other activities developed later:</p> <ul style="list-style-type: none"> <li>• Development of recreational navigation and of tourism in the area;</li> <li>• Creating an approx. 4000 ha water body in an area with a deficit of precipitations</li> </ul>
Scale of proposed activity (e.g. size, production capacity, etc.)	<p><u>The Argeș River</u> - the works for developing the lower course of the Argeș river for navigation consist of the <b>river regulation</b> in order to enable the access of the convoys formed of a barge and its associated pusher, as well as its <b>4 step-damming</b>, assuming the level difference of about 53 m, between the Argeș water level marks in the area of Bucharest port and the confluence with the Danube river. Each damming step forms a hydrotechnical compound formed of the following works: high water spillway made of concrete, hydro-electric power plant, locks.</p> <p>The features of the navigable channel on this sector are:</p> <ul style="list-style-type: none"> <li>- the length of the waterway between the Danube river and the Port of Bucharest– 1 Decembrie is about 73 km</li> <li>- minimum width of the channel section determined by the need of high flood transit 80 m</li> <li>- minimum water depth 4.5 m</li> <li>- the normal minimum range is 1000 m long and the minimum exceptional range 750 m</li> <li>- the air span over the water level at NNR 11.0 m</li> </ul> <p>Four hydrotechnical compounds formed of <b>high water spillways, hydrotechnical plants and locks</b> have been proposed. These hydrotechnical compounds (HC) are:</p> <ul style="list-style-type: none"> <li>- HC1 – at Oltenița ensuring the connection with the Danube levels</li> <li>- HC2 – at Budești, upstream of the current confluence Dâmbovița – Argeș</li> <li>- HC3 – at Gostinari, upstream of the confluence Neajlov – Argeș</li> <li>- HC4 – at Copăceni/Varlam</li> </ul> <p><b>The high water spillways</b> have 10 m spans. They have 3 spans at the hydrotechnical compounds HC1 and HC2, after the Argeș river receives the Neajlov, Sabar and Dâmbovița rivers as tributaries and 2 spans at the compounds HC<sub>3</sub> and HC<sub>4</sub>, located upstream of these tributaries. The spillways are fitted with identical hydro-mechanical equipment.</p> <p><b>The hydroelectric power plants</b> are located in the 4 hydrotechnical compounds between spillways and locks and</p>

	<p>have an installed output of <math>4 \times 5.70 \text{ MW} = 22.80 \text{ MW}</math>. A power output of 58.20 GWh/year was considered in the years with average precipitations.</p> <p><b>Twin locks</b> have been envisaged. They are identical in all the 4 hydrotechnical compounds and have sizes in accordance with those of the design convoy, namely:</p> <ul style="list-style-type: none"> <li>• Useful length of the lock chamber 130,00 m;</li> <li>• Overall length 177.00 m;</li> <li>• Useful width of the lock chamber 12.50 m;</li> <li>• Minimum water depth on the lock sill 4.75 m.</li> </ul> <p><u>The Dâmbovița River</u> – The waterway on the Dâmbovița river and its related constructions have considered the design convoy formed of a barge with a capacity of 1,500 tons and its associated pusher.</p> <p>The features of the <b>navigable channel</b> on Dambovita are:</p> <ul style="list-style-type: none"> <li>- The length of the waterway between the port of Bucharest – Glina and the confluence with the Arges river, upstream of HC2 Budești, is about 31 km</li> <li>- Minimum width at the base of the navigable channel 36 m</li> <li>- Minimum water depth at NNR 4.0 m</li> <li>- The minimum normal range is 1,000 m and the length of the minimum exceptional range is 700 m</li> <li>- Air span over the maximum water level at NNR 11.0 m.</li> </ul> <p><b>The hydrotechnical compounds on the Dâmbovița river</b> have been fitted with the stepped dams at Tânganu and Cucuieți. They are formed of <b>high water spillways, locks and hydroelectric power plants</b>. The high water spillways have three 8m spans equipped with sluice gates - segment <math>8 \times 3.5 \times 3</math> m, and the locks are simple and have features similar to those envisaged at the Arges river (useful length 130 m, width of the lock chamber 12.50 m and depth on the sill 4.75 m). The hydroelectric power plant provided in each of the two hydrotechnical compounds is equipped with two KOS 076 – 7.35 type turbines. The power generated in the two hydroelectric power plants is 16.6 GWh/year.</p> <p><b>The ports on the two waterways</b> are located as follows:</p> <ul style="list-style-type: none"> <li>- Port of Bucharest – 1 Decembrie in the South-East area of Bucharest municipality, between the settlements of 1 Decembrie and Dărăști de Ilfov. It has a side tank and the required platforms and berths.</li> <li>- Port of Oltenița at the confluence of the Arges river with the Danube river. It has the platforms and berths located at the confluence of the Arges river with the Danube river, on the left bank, as well as to the river.</li> <li>- The Port of Bucharest-Glina is equipped with a tank and platforms located on the left bank of the river, in front of the wastewater treatment plant of Bucharest municipality.</li> </ul>
<p>Description of proposed activity (e.g. technology used):</p>	<p><i>The main component of the works is the navigable channel. Two route options have been examined for the channel, as shown below.</i></p> <p><b>Option 1</b> – the route of the navigable channel on the course of the two rivers by completely keeping the geometrical elements and all the previous works on the two courses;</p> <p><b>Option 2</b> – where the channel has been rectified in the points where they do not correspond to exigencies GT 20 – 2006 AIPCN (International Association of the Navigation Congresses).</p> <p><b>Technical solutions adopted at present</b> on each of the two rows considering the technical regulations in force, the recommendations GT-20-2006 AIPCN, as well as the findings made on the occasion of the expertises undertaken on the status of the works performed throughout 1986 – 1990 and the</p>

measures imposed.

For the **Argeş river**, the two options of the navigable channel are:

- option 1 – the length of the navigable channel up to the bottom sill is 73.465 km. A bottom sill connecting the navigable sector to the dammed area upstream has been envisaged at km 73+466 upstream the port of Bucharest – 1 Decembrie.
- option 2 – the route length up to the bottom sill is 73.328 km. The route of the navigable channel in this option has been examined/designed by considering the exigencies GT 20-2006 AIPCN.

For the **Dambovita river**, two options are also proposed, namely:

- in route option 1, the navigable channel overlaps the current riverbed of the Dâmbovița river, except the connection area to the improved Arges river.
- In option 2, the designed route considers the standards recommended by the Work Group GT 20 of AIPCN (International Association of the Navigation Congresses).

The Port of Oltenita includes the following objects used within the water supply and sewerage works:

- Multipurpose building (river station + administration);
  - Workshop building + toilets;
  - Water management;
  - Wastewater treatment plant  $Q=15 \text{ m}^3/\text{day}$ ;
  - Oil separator for platform;
- ⚡ *Management of drinking water and of water for fire fighting*

The drinking water source for the supply of the consumers within the port enclosure will be a new drilled well of  $\varnothing 4 \text{ m}$  with depth of  $H = 100 \text{ m}$ . The well will be equipped with a submersible pump with the characteristics  $Q=6\text{m}^3/\text{h}$ ,  $H=85\text{mCA}$ ,  $N=3\text{kW}$ .

The objective will be provided with a water tank with a capacity of  $200 \text{ m}^3$  coupled with a pumping station and water pressure tank. The tank capacity was calculated to keep intact the water reserve for fire-fighting with indoor and outdoor hydrants as well as the drinking water reserve to supply the ships and consumers in the port.

⚡ *Water networks*

The water distribution network will be common for domestic consumption and fire-fighting and shall supply the multipurpose building, the workshop building +toilets.

Around the multipurpose building, the water network will be ring-shaped. The fire-fighting ring-shaped network will consist of Dn 50 indoor hydrants and Dn 65 outdoor hydrants.

For supplying ships with water, there have been provided quay manholes with Dn 65 located in the waiting front.

The back-up option regarding the use of raw water in the Arges river has been envisaged for fire-fighting. A motor pump with a 10 l/s flow rate has been provided for that.

⚡ *Indoor sanitary facilities in the multipurpose building*

The multipurpose building is provided with sanitary facilities supplied with cold and hot water. The cold water for the sanitary facilities is supplied from the water system designed in the port enclosure. The hot water for the sanitary facilities will be supplied by the electric boiler designed inside the building.

The domestic waste water from the sanitary facilities will be discharged through the connecting pipes  $D = 110 \text{ mm}$  to the outdoor domestic sewage network.

The rain waters on the building roof will be captured by terrace collectors  $Dn100\text{mm}$ , channelled and discharged to the outdoor storm sewage network through pipes  $\Phi110\text{mm}$ .

✦ *Indoor sanitary facilities in the workshop building + toilets*

The workshop building is provided with sanitary facilities with cold and hot water supply

The cold water of the sanitary facilities shall be supplied from the water network designed in the port enclosure through the local pumping station and the water pressure tank.

The hot water for the sanitary facilities shall be prepared in the local electric boilers.

The domestic waste water from the sanitary facilities shall be discharged through pumping stations to the wastewater treatment plant.

✦ *Wastewater treatment plant + Domestic sewage networks*

A gravitational domestic sewage network  $Dn 200$  was provided in the multipurpose building area to take over the sewage waste from the building and carry it to the mechanical-biological treatment plant with the capacity of  $15 \text{ m}^3/\text{day}$ .

The length of the sewage network in the multipurpose building area will be  $300\text{m}$ .

The total length of the pressure sewage network will be  $250\text{m}$ .

The waste discharged into the receptor shall meet the quality conditions in the Normative act NTPA 001/2002.

✦ *Oil separator + Storm water drainage networks*

Gravitational storm water drainage networks of  $Dn 300\text{-}400\text{mm}$ , and the total length of  $450\text{m}$  were provided in the south. These networks take over the storm waters from the roof of the multipurpose buildings and from the parking platforms. The discharge of rainwater will be gravitational, in the Arges River through the discharge mouth into the receptor

Before discharging into the receptor, the rain waters from the parking platforms will pass through an oil separator.

✦ *Catchment-treatment plant of residual products from ships*

The catchment, treatment and discharge plant for the residual products from ships is a fenced enclosure with sizes of  $52 \times 12\text{m}$ , where the following will be located:

	<ul style="list-style-type: none"> <li>- a container type-sanitary facility connected to the water supply and sewage networks;</li> <li>- waste management- for collecting and storing the waste from ships by types (plastic, paper, domestic garbage)</li> <li>- bilge water catchment-treatment system;</li> <li>- domestic waste water catchment-treatment system.</li> </ul> <p><i>The bilge water catchment-treatment system</i> includes the following:</p> <ul style="list-style-type: none"> <li>- Bilge water catchment tank with the capacity of 12 m<sup>3</sup>;</li> <li>- Oil separator;</li> <li>- Oil catchment tank with the capacity of 4 m<sup>3</sup>;</li> <li>- Polluted water collection–recirculation tank of about 4.5 m<sup>3</sup>.</li> </ul> <p>The bilge water from ships is pumped into the catchment basin. The inclined-bottom tank allows the collection of the floating particles at the bottom and of the pre-separated oil from the top.</p> <p>The oil-water mixture is collected in the middle part of the tank and is treated in the separator of the second container, having a processing capacity of about 5 m<sup>3</sup>/h.</p> <p>The light separated products are collected in a tank of about 4 m<sup>3</sup>, from where they are sent to be reused. The treated waters that do not meet the parameters of discharge into the receptor are collected into in a tank of about 4.5 m<sup>3</sup> and reintroduced in the treatment process. The automatic fittings are operated pneumatically by means of a compressor.</p> <p><i>The domestic waste water catchment-treatment system</i> includes the following:</p> <ul style="list-style-type: none"> <li>- Catchment basin with a capacity of about 5.0 m<sup>3</sup>;</li> <li>- waste waters treatment mode;</li> </ul> <p>The catchment basin is equipped with all necessary connections and valves. The system has a processing capacity of about 5 m<sup>3</sup>/day and the discharged water will be treated by chlorine. The unit works completely automatically.</p> <p>The treated waters will be discharged into the Arges River and will meet the quality requirements of the Normative act NTPA 001/2002. A fixed bank outlet mouth will be arranged and the wastewater treatment plants will be connected to it by hoses.</p>
Description of purpose of proposed activity:	<p>The previously performed works have undergone major degradation and destruction over time:</p> <ul style="list-style-type: none"> <li>➤ dismantling and "reuse" of the access railway tracks to the ports of Bucharest – 1 Decembrie and Oltenita as scrap, as well as of the port crane runways and tower cranes used in the construction of hydraulic compounds;</li> <li>➤ destruction of the reinforced concrete elements made for the construction of outer ports at locks, breaking of beams and some reinforced concrete columns to extract ("recover") the reinforced concrete;</li> </ul>

	<ul style="list-style-type: none"> <li>➤ part of the reinforced concrete slabs for the protection of the inner slopes were stolen to be used for other purposes (paving the yards, access roads etc.);</li> <li>➤ the railway bridge over the Sabar River on the access line to the Bucharest – 1 Decembrie Port was converted into a road bridge on a farm road.</li> </ul> <p>We emphasize that the damage and thefts have continued without interruption.</p>
Rationale for proposed activity (e.g. socio-economic, physical geographic basis)	The proposed project is in fact the resumption of the project started in 1986 and abandoned in the 90s for the above-mentioned reasons.
Additional information/comments	-
<b>(ii) Information on the spatial and temporal boundaries of the proposed activity</b>	
Location:	
<p>Description of the location (e.g. physical-geographic, socio-economic characteristics);</p>	<p>The designed works consider the Arges river course on the sector stretching between the Danube (km 0+000) and the dam of Mihăilești – Cornetu lake (km 83+041), Bucharest port being at km 73+000, as well as the Dâmbovița river on the sector stretching between the road bridge crossing the river, at Glina and its confluence with the Arges river, at Budești. The waterway on the Dâmbovița river from Glina to Budești is 31 km long.</p> <p>The canal route overlaps the floodplain area (i.e. over the minor and major riverbed) of the Arges River, where the ground levels are between 18.0 and 20.0m (in the discharge area of the Arges River into the Danube), between 46 and 48.2 m (e.g. in the area of km 56+ 000), between 52.2 and 52.60 (e.g. in the area of km 60+000), between 62.3 and 64.2m (km 70+000) and between -76.7 and 79.0m in the area of the Mihilesti hydrotechnical compound 5 (HC5)</p> <p>Geomorphologically, the perimeter lying on the reach located between the city of Bucharest and the settlement of Budești is in the Dambovita River Floodplain, separating the Vlasiei Field from the Mostistei Field on the general direction of N NE – S SW.</p> <p>The climate type is temperate continental and influences all the geographical components. The continental climate with cold winters and hot summers is characterized by thermal contrasts from day to night and from summer to winter.</p> <p>The continental character of the climate is given by large heat amplitudes of over 22°C between the extreme seasons and a rainfall regime with a large variability throughout the year.</p> <p>The annual average rainfall of continental type reaches the rate of 500 to 600 mm and has a great variability over time. The poor rainfall regime makes dryness and drought be present almost all year round.</p> <p>Administrative- territorial units:  Măgurele, 1 Decembrie, Dărăști Ilfov, Vidra, Glina, Cernica (Ilfov county)  Mihăilești, Adunații Copăceni, Colibași, Comana, Gostinari, Hotarele (Giurgiu county)  Otenița, Chirnogi, Mitreni, Radovanu, Curcani, Șoldanu, Budești, Vasilați, Plătărești, Fundeni (Calarasi county)</p> <p>The works will be performed as much as possible on the land belonging to the public domain. Minimum necessary areas, especially the barren ground will be taken. If private properties are crossed, expropriation shall be applied according to the</p>

	<p>legislation in force considering the public utility of the work. The main protected areas lying in the vicinity of the work location are:</p> <ul style="list-style-type: none"> <li>➤ Natural Park Comana</li> <li>➤ ROSCI 0043 Comana</li> <li>➤ ROSPA 0022 Comana</li> <li>➤ ROSPA 0038 Dunare-Oltenița</li> </ul> <p>The site ROSPA0038 Dunăre-Oltenița lies on the Danube between km 451 and km 430. The proposed site includes both the Danube sector between Căscioarele-Chirnogi- Oltenița and the farm land which is part of the dammed premises Greaca-Arges-Chirnogi.</p>
Rationale for location of proposed activity (e.g. socio-economic, physical-geographic basis):	The works designed, and some of them – partially performed – are located in the territory on the Arges River, between the Danube and the Bucharest – 1 Decembrie Port, existing in the S-W part of the city. The development works on the Dambovita are located between the confluence of this river with the developed Arges River and the Bucharest – Glina Port in the S-E part of the city.
Time-frame for proposed activity (e.g.: start and duration of construction and operation)	The project start period is estimated for 2014. The construction period is anticipated to about 4 years.
Maps and other pictorial documents connected with the information on the proposed activity	See the attached drawings
Additional information/comments	-
<b>(iii) Information on expected environmental impacts and proposed mitigation measures</b>	
Scope of assessment (e.g. consideration of: cumulative impacts, sustainable development issues, impact of peripheral activities, etc.):	<p>The present assessment is developed for the facilities and activities included in the project;</p> <ul style="list-style-type: none"> <li>• The assessment will identify the impact of all the components of project, as well as of all activities typical of the system during its construction, operation, maintenance and decommissioning of the project;</li> <li>• Cases of accidents and emergency situations will also be considered;</li> <li>• A qualitative and quantitative assessment of the potential impacts of the proposed alternatives and the sites for auxiliary facilities will be carried out. The cumulative impact of the whole project will be additionally identified and evaluated.</li> </ul> <p>The study will also evaluate the potential indirect impact, taking into account the specifics of the receiving environment, as well as that of the planned facilities and the related activities.</p>
Expected environmental impacts of proposed activity (e.g. types, locations, magnitudes):	<p>At the <u>construction</u> stage , the expected impacts are typical of the construction activities:</p> <ul style="list-style-type: none"> <li>• Emissions of dust and harmful gases in the air due to excavation works and the traffic of construction machines;</li> <li>• Digging through riverbeds and protective dykes of riverbanks, additional accumulation of sediment materials in the riverbeds, temporary increase in turbidity of the river water;</li> <li>• Compaction of soils, degradation of soil quality and fertility, soil erosion, etc.;</li> <li>• Loss and fragmentation of habitats;</li> </ul>



	<p>disturbance/disappearance of animal and plant species; change of food resources for a number of species (both on land and in the water);</p> <ul style="list-style-type: none"> <li>• Disturbance of the public calm (by noise and vibrations caused by construction activities and machines);</li> <li>• Potential discovery of new archaeological sites and items;</li> <li>• Possibility to hire local workforce and services.</li> </ul> <p>No considerable environmental impacts are expected to occur during the <u>operation of the system</u> after construction.</p> <p>There will be no species or habitats affected by the proposed works within the project for the Arges river engineering, therefore no modifications will occur in the structure and dynamics of the species identified in the protected areas ROSCI0043, ROSPA0022, ROSPA0038.</p>
<p>Inputs (e.g. raw material, power sources, etc.)</p>	<p>The raw materials and the materials used in the execution of works are as follows:</p> <ul style="list-style-type: none"> <li>- Wood for formworks;</li> <li>- aggregates, sand, ballast, gravel;</li> <li>- soil for fillings;</li> <li>- cement, lime;</li> <li>- paint and thinners;</li> <li>- fuels and lubricants for equipment;</li> <li>- electric power for the equipment operation.</li> </ul>
<p>Outputs (e.g. amounts and types of: discharges in air, discharges into the water system, solid waste)</p>	<p>The following will result from the development of the Arges and Dambovitza rivers:</p> <ul style="list-style-type: none"> <li>- sludge from dredging works;</li> <li>- sludge from the domestic water treatment plants;</li> <li>- combustion gases from the equipment used in the work execution (NO<sub>x</sub>, SO<sub>x</sub>, soot, particulate matter).</li> </ul> <p>The materials that will be obtained from excavations are associated with the construction waste, namely:</p> <ul style="list-style-type: none"> <li>▪ Soil and excavated materials</li> <li>▪ Stone waste and crushed stone</li> <li>▪ Mixture of concrete and bricks</li> <li>▪ Bituminous asphalt</li> </ul> <p>Other waste types resulted from work execution:</p> <ul style="list-style-type: none"> <li>- Domestic or associated waste;</li> <li>- paper, cardboard, etc;</li> <li>- wooden waste (sawdust, wood remains from land clearing, etc.);</li> <li>- glass waste;</li> <li>- plastic waste;</li> <li>- waste of metallic mixtures;</li> <li>- used oils, used tyres, used accumulators, oil filters;</li> <li>- contaminated textile waste;</li> <li>- packages from paints, thinners, etc;</li> <li>- medical waste.</li> </ul>
<p>Transboundary impacts (e.g. types, locations, magnitudes):</p>	<p>The works for developing the Argeş and Dâmboviţa river for navigation may have a transboundary impact in point of the water quality of Argeş and Dâmboviţa rivers and of the Danube river and in point of the surface water flow regime.</p> <p><i>Regarding the water quality during the river engineering works, dredging works shall be performed in order to ensure the navigation depth. During the execution of those works, water will be disturbed, therefore the concentration of suspended solids</i></p>

will increase. If the suspended solids have a high concentration and persist by the extension of the operations, then the light intensity diminution may occur, being thus affected the photosynthesis processes specific to algae or to other aquatic organisms. Filling and stockpiling works for the dredged material are envisaged besides the dredging works. When filling is performed, the fine particles and the dust existing in the mass of the filling material will enter in suspension, contributing to the increase in the water turbidity of the port basin. The suspended particles may be resettled onto the bottom of the riverbed either by natural settlement or by choosing another place of settlement (they are mobile enough). The organic substances in the suspended material may absorb the oxygen available in the water and may temporarily create inappropriate living conditions for many aquatic animals. These effects are only local, on the short run (only during the execution of works) without affecting the quality of the Danube river.

Moreover, leaks of fuel or of other materials that may contain hydrocarbons from the equipment used for dredging works or from those used for the works in the riverbeds may occur during the work execution. These leaks are local, on the short run and accidental. They do not significantly modify the quality of the Danube river.

During the operation of the waterways, wastewater treatment plants have been envisaged in the ports arranged along the canal, thus water flow rates that will comply with the standards provided by the legislation in force, namely NTPA 001/2002 will reach the water body. Moreover, bilge water collection-treatment systems and sewerage networks with hydrocarbon separators will be arranged so that the water discharged into the receptor (the Arges river and/or the Dambovita river) should comply with the limits allowed by NTPA 001/2002 and should not modify the quality of these water bodies and implicitly of the Danube river. The water body shall be permanently monitored so that any flaw should be detected.

*Regarding the river flow regime*, it will not be negatively affected during the execution of works and during operation. The developments envisaged for this complex arrangement are mostly performed. At present, they need restoration and refurbishment works where applicable. The impact of these hydrotechnical works will be the regulation of the flow rate of the two rivers and the mitigation of the bank and riverbed bottom erosion.

Based on the above-mentioned ones, it is anticipated that the works for the development of the Arges and Dambovita rivers for navigation will have no negative effects on the water quality and on the flow regime on the arranged rivers and on the Danube river and will not affect the population and the neighbouring areas.

Proposed mitigation measures (e.g. mitigation measures to prevent, eliminate, minimize, compensate for environmental effects):

WATER  
Construction period

- The storm water in the particulate matter storage area, in the equipment park zone and on the concrete platforms shall be collected by guard ditches with a view to being pre-treated;
- Equipping the construction camps with hydrocarbon separators with a view to pre-treating the water;
- Collecting wastewater on the construction camp location site, directing and connecting it to the existing sewerage system (if applicable) or directing it to the wastewater

treatment plants or septic tanks.

Operation of the canal

- wastewater treatment plant;
- Oil separator;
- Treatment plant for the residual products from ships
- Bilge water collection/ treatment plant;

AIR

Construction period

- Provision of textile filters at the cement storage silos;
- Use of new technology for the preparation of cement concrete and of the asphalt mixture;
- Fencing and/or covering the platforms for storing the fine materials;
- Periodical wetting of the stockpiles of fine particles;
- Provision of electric boilers;
- Provision of fuel tanks with closing system;
- materials, especially the fine particles shall be carried by vehicles provided with tarpaulins;
- regular wetting of the service roads for the reduction of the concentrations of the dust particles into the atmosphere;
- regular revision of the equipment and vehicles with a view to reducing the burnt gas emissions to atmosphere.

Operation of the canal

During the operation of the canal, the only air pollution source is the gas coming from the ships and barges transiting the canal. Regular revisions and maintenance under good running order should be undertaken for these ships and barges.

SOIL AND SUBSOIL

Construction period

- location of construction camps on concrete platforms;
- concrete platforms on which the construction camps should be located. These platforms should be inclined for draining the storm water with a view to collecting it into the gutters/ side ditches, thus avoiding the puddles and potential leaks into the soil;
- arranging temporary waste storages on concrete platforms in order to prevent any type of substance leaks onto the soil;
- the fuel storage will be provided with a double coating and shall be located in a concrete space equipped with a collection gutter for the potential fuel leaks;
- mitigation measures for soil erosion and for slope stabilization by replanting the stripped areas.

Operation of the canal

- regular checking and current maintenance of storm water collection, treatment and disposal systems;
- regular checking of soil quality (especially for pH, heavy metal indicators) in the road area.

NOISE AND VIBRATION

Construction period

- use of modern working equipment with a view to ensuring a low level of noise and vibration;
- the materials on the construction site must be stored so as to create noise barriers towards the human settlements;
- distance to the residential areas and rest hours (6.00a.m. –

10.00p.m.) shall be complied both for the work points and for the borrow pits;

- distribution of the activities within the construction site so that the noise level should be limited;
- service roads should be selected outside the settlements and if this is not possible the machinery travel speed should be limited so that the noise and vibration level should be as low as possible;
- it is forbidden to cross the protected areas and the part with heavy machinery.

#### Operation of the canal

By their static nature, the works to be performed generate noise and vibration. The only noise source is the one generated by the water traffic, but there are no previous data regarding the noise level produced under these situations, therefore no assessment may be done.

### AQUATIC AND TERRESTRIAL ECOSYSTEMS

#### Construction period

- The prevention of the deterioration of the neighbouring areas in order to avoid losing and/or affecting the flora and fauna habitats;
- The scrubs and trees shall be removed only in late summer and in autumn after the blooming period of the species of conservation interest, thus enabling the restoration of the systems affected after the completion of the construction and the mitigation of the negative impact during nesting;
- It is forbidden to use soil from other areas lest invasive species likely to damage the conservation value of the local ecosystems might be introduced;
- Restriction of the excavated and cropped out areas in the floodplains of the streams;
- It is forbidden to carry out construction works in the riverbed of the bridges and of the hydrotechnical works during fish reproduction period ( 1 May- 31 August), as well as the works outside the nesting period ( May- June);
- The irrigation and/or drainage channels should be cleaned in late summer and in autumn for the protection of the existing amphibian species;
- Limiting soil compaction, the development of connected infrastructures in areas located in close proximity of Natura 2000 sites;
- Wetting the service roads and the construction site platforms when the weather conditions are not favourable in order to reduce the emissions of particles to atmosphere;
- New borrow pits must not be opened in order to avoid the increase in water turbidity likely to affect the aquatic and swamp ecosystems in the regulated rivers;
- Restoring the affected habitats at the end of the construction;
- Monitoring the construction works for bridges and hydrotechnical works with a view to mitigating the impact on fish species and habitats;
- Storing the excavated soil, sterile soil and other materials at a distance that should not allow accidental spills into the riverbeds;
- Appropriate management of the equipment traffic, of the generated waste, of the storage of hydrocarbons and other toxic substances in the construction site area;

#### Operation of the canal

- The connectivity of the river meadows must be maintained in order to preserve the conservation status of the vegetation

	<p>cover.</p> <ul style="list-style-type: none"> <li>- The fish, amphibian and reptile species in the areas adjacent to works shall be protected by collecting and settling the storm water before discharge into the watercourses and in the drainage channels.</li> </ul> <p><u>HUMAN SETTLEMENTS AND OBJECTIVES OF PUBLIC INTEREST</u></p> <p><u>Construction period</u></p> <p>The required measures for protecting the human settlements and the objectives of public interest in the work zone have been described above. The following measures are added to them:</p> <ul style="list-style-type: none"> <li>- Ensure the construction site signalling;</li> <li>- Direct the traffic so that to ensure its flow in order to avoid the agglomeration of vehicles in the work zones;</li> <li>- Ensure the lighting of works within the construction site lest the population and local traffic might be affected;</li> <li>- Periodical clean the access roads;</li> <li>- Provide the fire-fighting equipment required for response in case of fire.</li> </ul> <p><u>Operation of the canal</u></p> <ul style="list-style-type: none"> <li>- water supplies and toilets in ports shall be subject to public health regulation procedures;</li> <li>- response programmes envisaging the measures to be taken, teams and equipment shall be prepared in case accidental spills of hazardous products occur.</li> </ul>
Additional information/comments	-
(iv) Proponent/developer:	
Name, address, telephone and fax numbers	S.C. IPTANA S.A, B-dul Dinicu Golescu , nr.38, sector 1, Bucuresti ROMÂNIA
(v) EIA documentation	
Is the EIA documentation (e.g. EIA report or EIS) included in the notification?	No, only the presentation report is included in the Notification.
If no/partially, description of additional documentation to be forwarded and (approximate) date(s) when documentation will be available	-
Additional information/comments	-
<b>2. POINTS OF CONTACT</b>	
(i) Point of contact for the possible affected Part or Parties:	
Authority responsible for coordinating activities relating to the EIA (refer to decision I/3, appendix): Name, address, tel and fax numbers	<p>Ministry of Environment and Water 22 Maria Louisa Blvd. 1000 Sofia Telephone: +359 2 988 25 77 Fax: +359 2 986 25 33</p> <p>Ms. Jacquelina METODIEVA Head of EIA/EAD Department Telephone: +359 2 940 60 32 E-mail: metodieva@moew.government.bg</p>
List of affected parties to which notification is being sent	Bulgaria
(ii) Points of contact for the Party of origin	
Authority responsible for coordinating activities relating to the EIA (refer to Decision I/3, appendix) Name, address, tel and fax numbers	<p>Ministry of Environment and Forests (MEF) Head of EIA office: Ms.Daniela Pineta Blvd. Libertatii nr 12, sect. 5, Bucharest, Romania Tel 021 408 9537 Fax 021 316 04 21 e-mail: pineta.daniela@mmediu.ro</p>

Decision making authority if different than authority responsible for coordination activities relating to the EIA Name, address, tel and fax numbers	National Environmental Protection Agency (NEPA) is responsible for issuing the EIA final decision and MEF is responsible for implementation of the transboundary EIA procedure.
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### 3. INFORMATION ON THE EIA PROCESS IN THE COUNTRY WHERE THE PROPOSED ACTIVITY IS LOCATED

(i) Information on the EIA process that will be applied to the proposed activity:	
Time schedule:	
Opportunities for the affected party/parties to be involved in the EIA process	Notification, assessment of the likely impact, public hearing.
Opportunities for the affected party/parties to review and comment on the notification and the EIA documentation	Yes.
Nature and timing of the possible decision:	EIA final decision called Environmental Agreement probably issued at the end of 2013.
Process for approval of the proposed activity	After the Environmental Agreement is issued, the construction authorization will be issued by the local public authorities.
Additional information/comments	-

### 4. INFORMATION ON THE PUBLIC PARTICIPATION PROCESS IN THE COUNTRY OF ORIGIN

Public participation procedures	In accordance with Romanian legislation, public participation during the procedure: public hearing with minimum 20 working days access to the EIA documentation and an opportunity for submitting comments in writing before and during public hearing.
Expected start and duration of public consultation	Minimum 20 working days for public hearing on EIA report.  The transboundary public consultation for the project will be agreed with the environmental authorities in Bulgaria, after confirmation of their involvement in the procedure.
Additional information/comments	-

### 5. DEADLINE FOR RESPONSE

Date	30 <sup>th</sup> of July 2012
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