EUROPEAN BANK
FOR RECONSTRUCTION AND DEVELOPMENT

RIJEKA BYPASS PROJECT

ENVIRONMENTAL IMPACT ASSESSMENT UPDATE

Draft Report - EXECUTIVE SUMMARY

URB*ING* d.o.o.
Physical Planning and Environmental Protection

Zagreb, June 2004

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Zagreb, June 2004

EXECUTIVE SUMMARY

1. INTRODUCTION

1.1 Background

The development of the Croatian economy as a whole is directly linked to the development of the tourist industry. Croatia is one of the most attractive destinations in Europe, and the success of the tourist industry depends directly on development of the Croatian road network and its integration into the Central European, Adriatic, and Mediterranean road network. The arterial international motorway routes connecting Budapest – Zagreb – Rijeka – Trieste and Rijeka – Split – Dubrovnik – Podgorica – Skopje are the most important road corridors in Croatia.

These two very important directions (a longitudinal one towards Italy, Istria, and Slovenia extending to the Adriatic road direction in the direction of Lika and Dalmacija, and a transversal towards Zagreb, Budapest and Vienna) will intersect on the Rijeka Transport Junction, also called the Rijeka Bypass because of its physical and functional connections at the state, regional, and local levels. The construction of the motorway section Orehovica – Križišće is an imperative for completion of the Rijeka Transport Junction, as well as the completion of the second extension of the section Orehovica – Matulji.

Since the Bypass section from the interchange Škurinje towards Bakar, Crikvenica and on has not been built yet, most of the transit and longitudinal traffic heavily burdens the town road network. The existing roads take over long-distance transit, regional traffic, and city and intercity traffic (connections with the County centre and the tourist areas). None of the mentioned traffic levels is satisfactory, it is a cause of traffic jams during rush hours and frequent car accidents, and the travel speed is reduced. This very much affects the quality of life of local population and performance of business entities (tourist industry in particular).

1.2 Objectives of the Project

With completion of the road network a fast and a good quality link will be provided at the level of state roads. The Rijeka road network will be relieved of heavy traffic and its operation and the quality of life in the housing areas along the roads, which are currently burdened with transit traffic, will improve. By relieving the heavily congested city centre, the Adriatic highway will also become free for local transport thus improving the quality of life in the villages and the residential areas.

The newly constructed section will integrate the eastern economic zones into the international road network and connect the tourist settlements on the coast and on the island of Krk to the motorway network. Security will improve in all types of transport and the travel time and costs will be lower.

1.3 Objectives of EIA Update and Executive Summary

The Croatian Roads Company has asked the European Bank for Reconstruction and Development (EBRD) to participate in the Project funding. Prior to making a funding decision, the EBRD has commissioned an *Environmental Impact Assessment (EIA) Update* to ensure that the Project would not result significant adverse environmental impacts and that all necessary mitigation measures to minimise any adverse change in environmental conditions would be included in the Project design and the construction programme. The purpose is to update the Environmental Impact Assessment of the Bypass sections Orehovica – Vitoševo – Križišće carried out in 1986 ensuring that all relevant environmental or socio-economic issues associated with the Project will have been addressed.

The EIA Update has reviewed the 1986 EIA Study and other available environmental and technical and physical planning information that have relevance to the Project. It has verified and amended, as needed, the information on potential environmental, cultural, socio-economic and land use issues and settlement and traffic pattern changes and impacts (both positive and negative) resulting from the Project. It has also assessed the adequacy of the mitigation measures and emergency response plans and, where needed, it has determined further mitigation measures to ensure the Project meets the Croatian's and European Union's environmental standards.

This Executive Summary is made to give a non-technical abstract of key findings and conclusions of the EIA Update.

1.4 Description of Environmental Impact Assessment Update Process

The EIA Update is being carried out in three phases:

Phase I – Scoping

The scoping carried out to ensure that all potentially significant issues, including adverse impacts on the human and natural environment, are assessed in the EIA Update, and that efficient mitigation measures are incorporated in the Project. A Scoping Document describing the Project and the key findings and conclusions of the 1986 EIA study as well as the Public Disclosure and Consultation Plan were prepared and made available to the public at the beginning of March 2004. A round table discussion was held on March 18 in Rijeka to discuss the scope of the EIA Update and the process of public involvement.

Phase II - Preparation of EIA Update

The EIA Update has been prepared to address all the issues identified during the scoping phase. It amends the 1986 EIA Study to correspond with the current environmental and social status within the corridor and in its vicinity and the detail technical design as well as to meet the EBRD's EIA requirements. It has also mended the mitigation measures and emergency response plans. The draft report has been discussed with the local communities.

Phase III

The Draft EIA Update has been made available to the public for a review and comments in the local library, municipal offices and the website of Croatian Roads and EBRD from 1 July 2004. The public is invited to express their views on the assessment of environmental impacts and recommended mitigation and environmental protection measures. The public has been informed on the availability of the EIA Update in national and local newspapers. A timeframe of 120 days will be allowed for the expression of comments and suggestions, closing on 28 October 2004.

2. PROJECT DESCRIPTION

2.1 Geographical Location

The state road D-8 is part of a network of the road routes being of wider European importance and therefore included in the European Network of Roads. They are:

D-3: Letenje – Zagreb – Karlovac – Rijeka – Trieste (E – 65, E – 71, E-63)
D-8: Koper – Pula – Rijeka – Split – Dubrovnik (E – 751, E – 65 – E – 80)

The section of the state road D-8 Sv. Kuzam – Križišće is the end of the eastern section of the Rijeka Bypass that extends between Orehovica – Draga – Sv. Kuzam. The corridor (reserved area) for the bypass along the stretch Matulji – Diračje – Škurinje – Orehovica – Sv. Kuzam – Križišće was included in the Rijeka Town Master Plan already in 1974. Neither on the motorway route nor in its immient vicinity there are properties that could be an obstacle for constructing the bypass.

At the Hreljin interchange a road connects to the state road D501. At the Križišće interchange there is a road diverging to the state road D102 to the island of Krk (to the newly built intersection of the county road Ž5064 and the state road D102) north of the interchange Šmrika to D8 (The Adriatic Tourist Road).

The section of the motorway Sv. Kuzam – Križišće is a replacement for the existing Adriatic Tourist Road running through the Bakar Bay and Kostrena and bypassing the urban areas of the eastern part of Rijeka (Kostrena, Bakar, Bakarac, Kraljevica, and Šmrika).

2.2 Technical Characteristics

The Project involves the construction of the Rijeka bypass between Sveti Kuzam (Vitoševo) and Križišće. It starts at km 6+355.00 and ends at km 14+720.00 and is 8.365 km long. Two interchanges have been planned on the section, one at Hreljin and the other at Križišće.

The bypass will be constructed to a dual two-lane standard, with a high structural content, including five viaducts (total length of 2.47 km) and three tunnels (combined length of 1.33 km). There will also be bridge works associated with the Hreljin interchange. Approximately 45% of the mainline motorway will be constructed either

on viaduct or in tunnel. At straight sections the corridor comprises 100 m, with extensions in the interchange areas.

2.3 History of the Project

The construction of the state road D-8 is a spatial intervention that has undergone all legally prescribed procedures to determine the location: (i) environmental impact assessment, (ii) conformity of the Project with the physical planning documents and obtaining the location permit.

The environmental impact assessment (EIA) for the State road D-8 was made in 1986. At that time was not compulsory to grant the public an insight into such studies. The public consultation has been carried out as a part of the public physical planning procedure for the adoption of physical plans. Public participation has been ensured through public access to information and the public consultation procedures for each physical plan.

The construction of the state road D8 is planned in accordance with the relevant physical planning documentation: (a) Physical Planning Program of the Republic of Croatia; (b) Physical Plan of Primorsko Goranska County, and (c) Physical Plans of local communities, Town of Bakar, and Town of Kraljevica. The Physical Plan of Primorsko Goranska County, the Physical Plan of Bakar Municipality and the Physical Plan of Kraljevica Municipality were developed and adopted and defined in the context of the national traffic infrastructure strategy and the master plan. In accordance with the national master plan the Rijeka-Split Motorway (D-8) is an integral part of the national traffic network system.

The **Location Permit** for construction of the road Sv. Kuzam – Križišće from km 6+355,00 to km 14+720,00 and a connection road from Križišće junction to the state road D102 – Kraljevica D8 – Krk – Baška has been obtained (November 2002). The main design necessary for obtaining the building permit is being developed and the construction may start when the building permit is obtained.

2.4 Alternatives Considered

Alternative stretches for the road have been analysed through several generations of physical planning documents. All limitations and possibilities of space have been considered with regard to the existing natural resources and to the needs for a new road network. This analysis confirmed the selected location of these roads and resulted in selection of the corridor.

According to the legislation, when the physical planning documents are adopted, the discussion about alternative stretches is finished and is no longer a part of the design process of the roads. The road route has to run on the corridors approved and adopted by the State.

3. CURRENT ENVIRONMENT

Climate
The seaside i.e. the area through which the state road D-8 runs has the Mediterranean climate. It is **temperate worm rainy climate with no dry season and with hot summer** (classification Cfa). The mean temperature in the warmest month of the year is higher than 22^{o}C but with no explicitly dry period.

In the area studied only sedimentary deposits have been identified, which according to the geological age belong to the Permian, Triassic, Jurassic, Palaeogene, and Quaternary periods.

Soil and geology
The subsection Sv. Kuzam - Hreljin is almost entirely situated within the complex of carboniferous consolidated rock; primarily carbonate rock (limestone). The terrain is naturally stable. The subsection Hreljin-Križišće is situated in the complex of finely-grained solid rock with cover of semi-consolidated and unconsolidated rock. A cover of semi-consolidated and non-consolidated rock that has relative stability, and is unstable in some places follows the complex of fine-grained clastic rock. The subsection of intersection Križišće – Connection to Kraljevica and the bridge Mainland – Island of Krk is situated in the complex of carboniferous consolidated solid rock (limestone and dolomite).

The motorway section considered has been located in the epicentral area of Rijeka. The highest recorded seismic intensity was VII-VIII degrees MCS.

Groundwater
The area studied is located in the littoral catchment region. In the motorway route area, the geological structure of the ground resembles karst characteristics with no distinguished surface hydrographic network. Water flows away by subsurface passages. Because of high degree of ground permeability waters penetrate quickly into deeper strata where they form ground watercourses emerging near the seacoast or under the sea level as submarine springs. In the Bakar Bay a large number of such submarine springs can be found that confirms a large distribution of limestone base.

Surface water
The subsection Sv. Kuzam - Hreljin is located in the catchment area of the water sources in Bakarski bay downstream (II sanitary zone of protection) of the water supply facilities. The subsection Hreljin - Križišće, connection with Kraljevica and the bridge Mainland – Island of Krk is located in the catchment area of the sea-shore in the Bay of Bakar (according to the Regulation concerning the categorization and classifications of the sea, it has been included in the Category II to prevent the contamination of the coastal sea).

Ecology and biotic resources
Most of the coastal area is a zone covered with deciduous sub-Mediterranean vegetation. It consists of degraded forests and underbrush of oriental hornbeam and pubescent oak, and rocky pastureland and dry grassland. At altitudes of 350 m and higher, hop hornbeam replaces oriental hornbeam thus creating a Mediterranean-

mountain vegetation belt. Negative human impact has substantially contributed to the basic physiognomic characteristic. In addition to low and undergrown forests, rocky and bare rocky ground cover a considerable part of the area. In such a typical Mediterranean ambient, preserved forest associations are especially noticeable. In the area studied there is an area with pubescent oak forests westward of Hreljin.

In accordance with currently available data there are no recorded habitats of rare and endangered plant and animal species in the bypass corridor.

Ambient air quality
The measurement results of air pollutant concentration show that the air quality in the greater part of the County is of the Category I – clean or slightly polluted air.

Noise
No systematic tests of noise level have been conducted to indicate the general noise condition and threat to the inhabitants because of noise.

Landscape
The corridor of the studied motorway section passes through an area recorded as a valuable natural landscape. Only on its outskirts it passes through the area of cultivated landscape.

Cultural heritage
A special place is the area of steep slopes along the Bakar Bay. Continuous series of drystone walls – luxuriant vineyards in the past – dominate the landscape. Today they are only a vivid example of harmonious relationship between man and nature. In addition to the exceptional landscape value, traces of long-term operation of natural processes are clearly seen on these surfaces. The Bakar Bay with its ethno zone of drystone walls, a natural heritage value that should be preserved in the present form to the maximum possible degree, is an ambient that stands out in the natural environment by its distinctive appearance.

There are many protected and registered localities and buildings in the construction area of D8 Motorway Section Sv. Kuzam – Križišće that belongs to the cultural and historic heritage of the Republic of Croatia. They are the ethno-zone of Bakarski prezidi (vineyards – Bakar drystone walls) and the ethno-zone that covers the villages of Krasica, Praputnjak, and Hreljin, the rural settlement of Križišće, the archaeological sites of Turčin, Rebar and Crni Vrh**,** the old town of Hreljin, the Church of Holy Trinity, and the graveyard Hreljin.

Land use and settlements patterns
The entire section Sv. Kuzam – Križišće passes through an area of free nature and outside of the area of villages. The corridor does not get into any building land area intended for the purposes such as tourist, commercial, and business facilities.

4. SIGNIFICANT ENVIRONMENTAL IMPACTS AND PLANNED MITIGATION MEASURES

4.1 Groundwater Resources

The bypass section Sv. Kuzam-Križišće will pass through an area, which serves as a catchment area for drinking water supplies. The construction of the bypass will be imminent risk for pollution of the groundwater.

In order to mitigate these effects a watertight system for collection of run-off water (storm water) and possible oil spillage, hazardous material, etc. will be built along the entire section. The collected water will be diverted to a treatment plant, and only then discharged into the sea. The plant is equipped with a buffer tank, in order to make it possible to collect the spillage from a vehicle carrying liquids that require additional chemical treatment before its discharge. The buffer tank also provides the possibility to collect the liquids for recycling.

4.2 Ambient Air Quality

Rijeka bypass road runs on terrain that enables higher natural circulation of air at these higher-elevation areas and together with decreasing the transit traffic it will significantly contribute to the reduction of the local air pollution.

Construction of the Rijeka Bypass would considerably relieve the existing traffic network. The Rijeka Bypass Motorway would take over the majority of the transit traffic, a significant portion of the origin–destination traffic as well as the local traffic heading across longer distances. All previously mentioned is going to significantly reduce the air pollution in the town of Rijeka caused by emission of motor vehicle exhaust gases.

The road corridor runs close to the building land area of the villages Hreljin and Mali Dol. When approaching the village Hreljin the road runs through a tunnel so no degradation of air quality is expected.

During the construction phase of the road the impact on air quality (dust and smoke) in the villages near the construction area (Hreljin, Mali Dol, and Križišće) is possible. However, this impact will be limited in time and extent.

4.3 Ecology and Biotic Resources

The construction of the road will affect the vegetation, flora and fauna. Direct consequences of the road construction will be unavoidable intrusion in the top-soil cover by mechanical force (construction machinery or explosive), the force that will considerably affect macro - and micro region of soil and vegetation, with further consequences in terms of fauna degradation. Indirect ruining and damages will be occurring permanently. Various agents from air and water, as well as human activities, may weaken the biological properties of the entire flora.

It is necessary to restore, shape, horticulturally arrange and afforest all the route parts with autochthonous plants to reduce harmful and unfavourable impacts. The preservation of autochthonous plants is essential.

The road route is situated inside the urbanized area so high quality game, specially the big game, has already been pressed aside. Only the small-feathered fauna, of interest for hunting activities, can be expected to survive and remain in the area.

During the design activities fences must be envisages along the entire section. Special attention must be paid to the construction of the fences in the parts where the viaducts and bridges end, at the beginning of the fence, and at potential sites where animals enter on the motorway area, which has to be strictly prevented.

When designing the road it shall be checked if all the planned viaducts meet fully the requirements for facilitating game crossing.

4.4 Geology and Soil

The subsection Sv. Kuzam - Hreljin is almost entirely is situated within naturally stable terrain. With proper choice of slopes for cuts and side cuts, adverse impacts of construction will be reduced to the minimum.

The subsection Hreljin-Križišće is situated within relative stabile, and partly unstable (in some places follows the complex of fine-grained clastic rock) terrain. In addition to given geological and hydrological conditions on the slope, critical impact on stability is generated by drained groundwater, in the contact of base and cover. The impact of human activities on semi-sable slopes is also important.

The subsection intersection Križišće – Connection to Kraljevica and Bridge Mainland – Island of Krk is situated in a complex of carboniferous consolidated solid rock (limestone and dolomite). Because of stable terrain, small excavations, and the number and size of structures, the impacts of construction on the ground are expected to be negligible.

The design should include the results of stability analysis of the natural condition as well as of the as-built condition on the entire slope along the route (general stability). Design solutions of cuts and side cuts, partly also fill, are usually retaining structures that contain also have drainages in the contact of base and cover. Enclosed drainage of the surface runoff on the carriageway along the route is essential. Collected water should be taken by the enclosed impermeable ducts to the stable areas of natural (or regulated) waterbeds able to receive quantities of water that would have otherwise disturb natural drainage flows and distribution of water.

During construction the stability could be affected by various impacts, which has to be taken into account in the construction methods.

The impact on soil is manifested through a permanent conversion of the land use and represents a significant impact on the environment. The soil covered with asphalt will

permanently loose their productive and protective functions and the ground used for the verges and the road slope is usually subject to different changes (sweeping off, removal, covering, concreting, impregnation, compacting, etc.) that often result in far-reaching and irremediable consequences for the soil/ground.

4.5 Noise

The terrain configuration is from acoustic point of view rather unfavourable. Since the road route is laid mainly in the free, un-built terrain, increased traffic noise could influence only residential area of Hreljin and Mali Dol.

The noise barriers (acoustic walls) and the hedges (trees) will be planted along the road where needed.

The construction of the bypass will divert the transit traffic from the existing road running through the villages, which will decrease current high noise in the villages.

4. 6 Visual Impacts

The terrain at this section is very difficult, steep and visually very much exposed from all the sides, from the sea particularly. Special attention should be paid to the aesthetic aspect of the Project that is the roadbed design and good horticultural development of the broader area. In aesthetic terms, with respect to visually prominent edge of the plateau above the Bay of Bakar, any fills and disposal of excess material on the slopes could cause significant changes. Natural material is recommended as well as landscaping of fill on the southwestern side of the road.

4.7 Modified Communal Infrastructure

To ensure normal life in the villages near the road, new pedestrian and road passages and crossings will be constructed as a replacement during the interruption caused by the road construction.

4.8 Cultural Heritage

There are many protected and registered localities and buildings in the construction area of D8 Motorway Section Sv. Kuzam – Križišće categorized as cultural and historic heritage of the Republic of Croatia. Because of the vicinity of construction, the localities could be damaged. The vicinity of construction could also decrease the visual values of the broader surrounding of the individual sites. This particularly refers to the Bakar vineyards because of close vicinity of the motorway route (only 20 m distance from the route axis). Special attention should be paid to that site during the motorway construction to avoid potential damage to their value given their historic importance.

If during the motorway construction the presence of new individual historic sites not known thus far is found, this could be considered a positive impact of the motorway construction.

4.9 Land Acquisition

Croatian Roads will acquire the land for construction of the road D-8. The land acquisition for the adjacent section Orehovica - Draga – Sv. Kuzam has been completed. On the section Sv. Kuzam - Križišće the land acquisition process is still ongoing, and the compensation will be provided in accordance with the Croatian Law, which stipulates reimbursement at prevailing market prices.

4.10 Resettlement

There is no need for resettlement on the road route.

4.11 Environmental, Health and Safety, and Social Benefits

Substantial environmental and other benefits will result from construction of this section of motorway D8:

- Increase in traffic safety - The road has been designed according to high traffic standards with technical elements of a motorway.

- Relieve of the city road network from trucks is considered the largest improvement in the traffic situation.

- The transit will be routed to the bypass road thus avoiding the residential areas in the city and the city centre, and resolving many conflicts with complex traffic situations in the city.

- City areas will be directly connected to the bypass road by a junction.

- Shorter connections to the Rijeka port basin through Škurinje junction, Sušak basin through Draga junction, and Bakar basin through Vitoševo junction.

- Interconnection of the city parts (1/3 of the total foreseen traffic is of local character).

- The use of the natural conditions (succession of the valleys and mountains along the road route for execution of connections to the existing and planned city roads), which are the most economic ones on the route foreseen.

5. ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN

An Environmental Management Plan (EMP) has been developed to define all the activities that require recording and monitoring and to identify the responsibility for supervision and implementation of the EMPs, training needs, and reporting requirements. The Croatian Roads, a co-ordinator for environmental issues, will guarantee the compliance with the EMP. In addition, the Rijeka County Branch of the Ministry of Environment will control on a regular basis that the requirements set out in the EMPs are followed.

MITIGATION PLAN

Phase	Issue	Mitigating Measure	Cost (Euro)		Institutional Responsibility		Comments (e.g. secondary impacts)
			Install	Operate	Install	Operate	
Construction	• Groundwater, Water sources, Sea	• Impermeable surfaces and waterproof drainage • Special mining of the field (not to cause disorders in underground-waters streams) • Whole dug out material must be taken away • Separators for cleansing a water from road • Workhouses for machines and vehicles, stations for fuel, warehouses with dangerous substances should not be placed inside sanitary zones			Head of Execution Team	Water Resource Management Inspector Constructor Inspector	
	• Noise • Animal	• Special screens, acoustic walls • Construction of the fences • free crossing of game				Constructor Inspector	
	• Natural, Rural and Urban Values	• Horticultural treatment of exposed sections of the road • Recovering of any damage to Bakar terrace (value under protection) • Keep all communications for pedestrian and vehicles (cross below or above the highway)			Croatian Roads Head of Execution Team	Constructor Inspector	
	• Cultural Heritage	• Permanent/occasional expert surveillance on whole road route • Excavations without explosives is recommended on designed route from 6,5 km to 11,0 km				Ministry of Culture Constructor Inspector	
Operation	• Groundwater, Water Sources, Sea	• Road and road objects maintenance • Condition control of separators • Measurement of waste waters sampling on the separators			Croatian Roads	Water Resource Management Inspector	
	• Noise	• Measurement of noise intensity on control points			Qualified Organizations	Sanitary Inspector	
	• Traffic safety	• Control of condition of equipment for traffic managing, surveillance and control			Authorized Person	Ministry of Trafic Inspector for Trafic Safety	
	• Cultural Heritage	• Presentation of Bakar drystone walls/terraces and old town of Hreljin			Croatian Roads	Ministry of Culture	

MONITORING PLAN

Phase	What *parameters to monitor?*	Where *to monitor the parameter?*	How *to monitor the parameter / type of monitoring equipment*	When *to monitor the parameter – occasional or continuous measurement?*	Why *to monitor the parameter (optional)?*	Cost		Responsibility	
						Install	**Operate**	**Install**	**Operate**
Operate	• Air quality	• Control points	• $S0_2$, black smoke, $N0_2$ sediment (Pb)	Continuous measurement	Population protection Legal requirements			Croatian Roads	Tests at qualified organizations
	• Water Quality	• On the exit of the separators	• Measurement of a series of law-regulated parameters	Quarterly in relevant hydrological conditions (period of first rain, especially after dry period),	Sea and Groundwater protection Legal requirements				Tests at qualified organizations
	• Bio-monitoring (state of epiphyte lichen)	• Some permanent stations need to be established near the route • On the specific distance from the road • On wider area around road route	• Measuring of cellular membrane • Lead concentration • Tree drying • Changes of plants and animals	Before and after the road was in function	Vegetation and animals protection				Tests at qualified organizations
	• Hunting	• Along the road	• Monitor and report all accidents involving game or damages to the rail	Continuous	Animal protection				
	• Noise	• control points at border of residential areas	• Measurement of noise intensity on control points	Quarterly	Population protection Legal requirements			Qualified Organizations	
	• Equipment	• Drainage and separators	• Condition of drainage and separators	Twice a year	Groundwater protection			Croatian Roads	Authorized person
		• Whole route, especially junctions, viaducts	• Condition of equipment for traffic managing, surveillance and control	Monthly	Groundwater protection			Croatian Roads	Authorized person

C. INSTITUTIONAL STRENGTHENING

1. Equipment Purchases – After adoption of Main (final) design.
2. Training/Study Tours – not necessary
3. Consultant Services – not necessary
3. Special Studies - not necessary*

D. SCHEDULE

The construction of the road is a part of medium-term plan for 2005-2008. All activities considered with mitigation and monitoring will be coordinated with start and end of construction and during operate of the road.

E. INSTITUTIONAL ARRANGEMENTS

Responsibilities for mitigation and monitoring	**Environmental information flow (reporting—from who to whom and how often)**	**Decision making chain of command for environmental management (to take action, to authorize expenditures, to shut down, etc.)**	
		Activities	**Responsibility Institution or person**
HRVATSKE CESTE (Croatian Roads)	HRVATSKE CESTE (Croatian Roads) to Ministry for Environmental Protection, Physical Planning and Building (MEPPPB), Environmental Protection Division	Monitoring the implementation of Environmental Management Plan	HRVATSKE CESTE - Head of Project Team, Authorized Person Environmental Inspector - Environmental Division (MEPPP) Sanitary Inspector - State Directorate for Water Management, County Department
		Data collection and analysis	HRVATSKE CESTE (Croatian Roads) Environmental Inspector - Environmental Division (MEPPP)
		Monitoring Reports to Environmental Division (MEPPPB) – quarterly	HRVATSKE CESTE - (authorised organization)
		Operational Plan for an emergency cases - yearly	Head of the HRVATSKE CESTE Environmental Inspector Environmental Department (MEPPPB)

The organisational structure of the state and local governments in the Republic of Croatia guarantees the implementation of certain environmental protection measures and the control of their efficiency by monitoring. The implementation is controlled institutionally through the Ministry of Environmental Protection and Physical Planning and through the organisational units in the Counties.

* The study of impact on cultural and historic heritage conditioned by Location Permit was completed at the beginning of 2004.

The Investor is responsible for financing, implementation of the measures prescribed and monitoring the environment condition. The implementation of prescribed protection measures (mitigation measures) and monitoring will be supervised during construction and carried out during operation by HC (Hrvatske ceste).

During construction phase implementation of prescribed protection measures (mitigation measures) is responsibility of contractor. Control of implementation of mitigation measures in this phase is by Ministry of Environmental Protection, Physical Planning and Building, Inspection Division, Construction inspector.

During operation phase implementation of mitigation measures are responsibility of the owner, and control of their efficiency by monitoring is responsibility of either MEPPPB (Environmental Protection Division and county environmental inspector), or State Directorate for Water Management, County Department.

The monitoring of the environment condition in the Republic of Croatia is performed by the organisations authorised by the Ministry of Environmental Protection, Physical Planning and Building.

6. PUBLIC CONSULTATION AND INFORMATION

The public disclosure and consultations will follow the EIA Update process and consist of three phases:

Phase I - Scoping

The Scoping Document describing the Project and the key findings and conclusions of the 1986 EIA study as well as the Public Disclosure and Consultation Plan were made available to public at the beginning of March 2004. A round table discussion was held on 18 March in Rijeka and will address the scope of the EIA Update and the process of the public involvement. The purpose of the scoping was to ensure that all potentially significant issues, including adverse impacts on human and natural environment are assessed in the EIA Update, and that efficient mitigation measures are incorporated in the Project.

Phase II

The draft EIA Update together with this Executive Summary has been made available to public for review and comments for 120 days public comment period between (1 July and 28 October) at:

- Local library,
- Municipal offices, and
- The website of Croatian Roads and EBRD

The public has been informed on availability oh the EIA Update in national and local newspapers invited to express their views on the assessment of environmental impacts and recommended mitigation and environmental protection measures.

Phase III

Final EIA Update, with a summary of public comments and a description of how they have been taken into consideration in the Project, will be disclosed to public at the same locations as the draft EIA Update during phase II by the end of October 2004.

7. INFORMATION SOURCES

- **EIA 1986**
- The disclosure package (EIA in Croatian and English)
- Strategy of Republic of Croatia
- Physical Planning Program of Republic of Croatia
- Physical Plan of Primorsko-goranska County
- Physical Plan of Town of Bakar, 2003.
- Physical Plan of Town of Kraljevica, 2003.
- The Report of the Curent staTe of the Environment in Primorsko Goranska County, 2003.
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