#### REPUBLIC OF CROATIA

MINISTRY OF ENVIRONMENTAL PROTECTION, PHYSICAL PLANNING AND CONSTRUCTION

10000 Zagreb, Ulica Republike Austrije 20 Phone: 01/ 37 82 444 Fax: 01/ 37 72 822

Class: UP/I-351-03/07-02/54 Reg. No.: 531-08-1-1-2-6-08-11

Zagreb, 20 May 2008

Pursuant to Article 30 of the Environmental Protection Act (Official Gazette 82/94, 128/99) in connection with Article 237, paragraph 1 of the Environmental Protection Act (Official Gazette 110/07), at request of the developer, company **Hrvatske vode, Water Management Department for the Sava River Basin**, Ulica grada Vukovara 220, Zagreb, following the completion of the environmental impact assessment (EIA) procedure for the **construction of the Middle Sava basin flood control system**, the **Ministry of Environmental Protection, Physical Planning and Construction** hereby issues the following

#### **DECISION**

I The planned project – construction of the Middle Sava basin flood control system, developer: Hrvatske vode, Water Management Department for the Sava River Basin, Zagreb, based on the Environmental Impact Study prepared by the company Vodoprivredno-projektni biro d.d. Zagreb in July 2007 and based on the annex(es) to this Decision – is acceptable for the environment with the implementation of the environmental protection measures and the environmental monitoring program laid down by the law and this Decision.

#### A. ENVIRONMENTAL PROTECTION MEASURES

#### A.1 Landscape

- 1.1 Plan replacement paths to access the structures in such a way to minimize intrusion into the surrounding forest and agricultural land.
- 1.2 Define in the Detailed Design the detailed routes of replacement paths, temporary stockpiles for construction material, and surfaces and corridors for the movement and parking of construction machinery and vehicles.
- 1.3 During the design and planning of construction, foresee the improvement of the peripheral parts of the construction site to prevent the trees from falling down at the newly formed edges and landslide.
- 1.4 Retain natural meanders to the maximum possible extent.
- 1.5 Maintain all the paths and crossings on a water estate so that no water accumulates and retains there, as it could reduce their resistance and functional capacity.

- 1.6 In the phases of preparation of detailed and implementation designs, prepare landscaping designs for the landscape surrounding the structures in order for them to fit into the environment as much as possible.
- 1.7 When the vegetation is cleared from dike route, remove the top soil and temporary dispose it along the operating belt for it to be used for lining the dike crown and slopes before hydroseeding with autochthonous grass mixtures.
- 1.8 Excavate the top soil only within the limits of the dike width.
- 1.9 Restore the "material deposits" from which earth is excavated and used for the construction of dikes in accordance with the landscape, so that they eventually have irregularly shaped edges.
- 1.10 Seed the dike crown and slopes with autochthonous grass mixtures and mow the grass at least two times per year.
- 1.11 Line the visible sections of concrete structures in the dike body with natural stone.
- 1.12 During design and construction, an earth dike shall have priority over a concrete wall (a green earth dike fits better into the landscape).
- 1.13 In case of the need to elevate the existing dikes, form lateral earth superelevation along the dike wherever the required width exists.
- 1.14 A wall can be built only in those sections where there is not enough space for a dike.
- 1.15 For the base of the wall, plan widening covered with grass as a green strip between the wall and the road asphalt (a wall with a pavement is not acceptable in villages).
- 1.16 Plant hedges, ivy or other autochthonous vegetation along the wall facing the settlement.
- 1.17 Develop bike trails, walkways such as education trails with information posts about cultural and natural values, and rest areas on earth dikes, since the vistas offered from the dikes are very often interesting and display the values of settlements and landscapes.

#### A.2 Noise and air

- 2.1. In the dry period, spray all macadam and dirt roads with water during excavation, transport or construction of dike in order to prevent the formation of dust.
- 2.2. Do not transport the material required for the construction of dike through settlements at time of afternoon rest and during the night.

# A.3 Flora and fauna

- 3.1 Preserve to the maximum possible extent or widen the natural area of distribution of endangered and rare habitats in the project area.
- 3.2 Connect backwater with the main watercourses, by means of which ecological flooding is ensured in these exceptionally important bodies.
- 3.3 Restore the autochthonous aquatic plants along the river arms which will possibly be destroyed by construction works.
- 3.4 During vegetation removal works on the dike route, prevent unnecessary treading of the existing vegetation and compaction of soil with machinery.
- 3.5 Avoid the performance of works in the breeding period of amphibians, reptiles and fish.
- 3.6 Remove the trees and bushes from the project area outside of the bird nesting season.
- 3.7 Establish conditions for original and new habitats in the area with changed terrain and vegetation.
- 3.8 Enable unhindered movement of fish and aquatic fauna at the Trebež node and between the Lonjsko polje and Sava waters.
- 3.9 Avoid works at water surface profiles during the fish spawning season.

- 3.10 In the design, foresee retaining the natural riverbed drop. Instead of concrete weirs for the required drop, use sills that will enbable fish passage.
- 3.11 In cooperation with the competent service of the legal entity or natural person authorised with the right to hunt, analyse the game's well-established paths and crossings in order to timely take all the measures to prevent damage to the game.
- 3.12 During construction of structures, preserve the surrounding flora in the vicinity of a structure in order for the game to adjust as soon as possible to the changes made and return to their habitats.
- 3.13 In cooperation with the legal entity or natural person authorised with the right to hunt, relocate the present hunting facilities (shooting houses, feeding sites) or replace them with new ones.
- 3.14 Refresh forest communities with autochthonous species.
- 3.15 Immediately upon clearing the project area, establish forest order, i.e. remove tree stumps, arrange and pull out and all the felled trees. In that process, make sure that all the damaged and broken trees are felled and arranged in order for them not to become the source of infection.
- 3.16 Do not even temporarily dispose of excess excavation material at the dike route in forests or forest land.
- 3.17 In the peripheral parts of the cleared forest, plant low autochthonous bushes that are able to rapidly bind with the substrate and occupy the habitat and for which the existing micro-climate conditions are suitable.

#### A.4 Water

- 4.1 Handle fuels and lubricants for construction machinery at the place designated for their decantation with impermeable surface.
- 4.2 Provide toilet facilities connected to impermeable storage tanks to be emptied by an authorised company.

#### A.5 Waste

- 5.1 Collect separately and store the waste the valuable properties of which can be used so as to allow the management of such waste.
- 5.2 Use impermeable tanks and containers to store spare and used petroleum products, waste oils, filters and the like, and regularly hand them over to an authorised waste carrier together with the relevant register.

# A.6 Measures to prevent and mitigate the consequences of potential ecological accidents

6.1 Provide sufficient quantities of agents to neutalise potential oil spill.

#### A.7 Cooperation with the public

7.1 Enable easy access to information at the automatic water gauging stations related to flood protection and inspection of water-related documents.

# A.8 Environmental protection measures after termination of use

8.1 Flood control structures are foreseen as permanent structures for which no termination of use is foreseen in the foreseeable future. Termination of use would imply the removal (demolition) of these structures, by means of which the water regime would be restored to the present state.

#### B. ENVIRONMENTAL MONITORING PROGRAMME

- **B.1** In order to preserve the optimum process of flooding and preserve floodplain pasture and forest ecosystems, establish an appropriate number of observation (monitoring) stations within the floodplains to regularly observe (monitor) the duration and frequency of floods. Define the locations of observation stations and the observation method in cooperation with the Public Institution Lonjsko Polje Nature Park for the Sava sub-system. For the Kupa system, these are defined by Hrvatske vode.
- **B.2** In order to determine the groundwater levels, restore observations at the existing piezometers and if needed expand the network with new piezometers in cooperation with Hrvatske šume (national forest management company) and the Water Commission of the Middle Sava Basin Collaborating Board. For the Kupa sub-system, continue monitoring at the existing monitoring sites, and if needed establish new ones (once the current monitoring by Hrvatske šume is registered and at the proposal of stakeholders), which will be decided by Hrvatske vode.
- II The developer, Hrvatske vode, Water Management Department for the Sava River Basin, Ulica grada Vukovara 220, Zagreb, shall submit environmental monitoring data once a year for the preceding year to the county authorities competent for environmental protection matters of Zagreb, Karlovac and Sisak-Moslavina Counties.
- III The developer, Hrvatske vode, Water Management Department for the Sava River Basin, Ulica grada Vukovara 220, Zagreb, shall implement additional environmental protection measures if the environmental monitoring identifies changes in the environment are identified which exceed the limits required by the laws, regulations, standards and measures. These will at a later date be specified by the state administration bodies competent for environmental protection matters of Zagreb, Karlovac and Sisak-Moslavina Counties.

#### **Justification**

The developer, Hrvatske vode from Zagreb, Water Management Department for the Sava River Basin, submitted on 23 April 2007 a **request** for an environmental impact assessment (EIA) procedure for construction of the Middle Sava basin flood control system, accompanied by the Environmental Impact Study (EIS) for the Middle Sava basin flood control system. The EIS was prepared by the company Vodoprivredno-projektni biro d.d. Zagreb, to which the Ministry of Environmental Protection, Physical Planning and Construction (hereinafter: the MEPPPC) issued a Decision (Class: UP/I-351-02/06-08/144; Reg. No.: 531-08-3-1-ZV-06-4) on 5 December 2006 authorising it for the preparation of environmental impact studies for a period of three years, i.e. until 2 November 2009.

Pursuant to Article 11 of the Ordinance on EIA, the request for initiation of EIA was accompanied by a **Certificate** (Class: 350-02/07-02/21; Reg. No.: 531-06-07-2) confirming that the planned project – Middle Sava basin flood control system – is planned in the areas designated for the

flood control system defined by the Physical Plans of Karlovac, Sisak-Moslavina and Zagreb Counties, the Physical Development Plan of the City of Zagreb. The Certificate was issued by the MEPPPC, Physical Planning Directorate on 3 April 2007.

Pursuant to Article 27, paragraph 1 of the EPA and Article 12 of the Ordinance on EIA, environmental acceptability of the planned project was based on the presented EIS assessed by a Commission appointed by the MEPPPC pursuant to Article 27, paragraph 3 of the EPA by means of a **Decision** dated 1 October 2007 (Class: UP/I-351-03/07-02/54; Reg. No.: 531-08-3-1-1-6-07-6).

The appointed members of the Commission were the following: Jadranka Matić, MEPPPC, Environmetnal Management Directorate, Zagreb, Chair; Radenko Deželić, Ministry of Culture, Nature Protection Directorate, Zagreb, Deputy Chair; Neven Kuspilić, Faculty of Civil Engineering, Zagreb, Member; Marjana Gajić Čapka, Hydrological and Meteorological Service, Zagreb, Member; Jasenka Kranjčević, MEPPPC, Physical Planning Directorate, Zagreb, Member; Zoran Tonković, Physical Planning and Environmental Protection Institute, Zagreb, Member; Marija Smolčić, State Administration Office of Sisak-Moslavina County, Sisak, Member; Marinko Maradin, Physical Planning and Environmental Protection Institute, Karlovac, Member; Zrinka Valetić, MEPPPC, Zagreb, Secretary.

Pursuant to Articles 13 through 24 of the Ordinance on EIA, the **Commission analysed** the EIS, provided its additional suggestions, decided to send the EIS to public inspection, and assessed the project as environmentally acceptable.

- ❖ The **first meeting of the Commission** was held in two parts. The site was visited on 25 and 26 October 2007. The members of the Commission presented their comments concerning the EIS after the site visit on 26 October in Pojatno. The Commission assessed that the EIS contained the relevant elements to decide whether the project is acceptable, but that some of its sections required adjustment and revision. At that meeting, the members of the Commission also decided to send the EIS to public inspection.
- Once the EIS was revised according to the Commission's comments, it was sent to public inspection.
  - In Zagreb County, public inspection was organized in the towns of Velika Gorica and Jastrebarsko and in the municipalities of Pisarovina and Orle. Public inspection lasted 14 days, starting on 1 February 2008. Public consultation was held on 6 February 2008 in the Town of Velika Gorica, and on 7 February 2008 in the Town of Jastrebarsko. A notice about the public inspection was published in the daily Večernji list on 23 January 2008.
  - In Sisak-Moslavina County, public inspection was organized in the town of Sisak and in the municipalities of Martinska Ves, Popovača and Lipovljani in the period from 4 to 17 February 2008. Public consultation was held on 12 February 2008 in the Municipality of Lipovljani and on 13 February 2008 in the Town of Sisak. A notice about the public inspection was published in the daily Večernji list on 25 January 2008.
  - In Karlovac County, public inspection was organized in the towns of Karlovac and Ozalj and in the municipality of Lasinja in the period from 4 to 18 February 2008. Public

consultation was held on 15 February 2008 in the Town of Karlovac. A notice about the public inspection was published in the daily Večernji list on 28 January 2008.

- During public inspection and public consultation, the Administrative Department for Physical Planning, Construction and Environmental Protection of Zagreb County, the Administrative Department for Environmental and Nature Protection of Sisak-Moslavina County, and the Administrative Department for Physical Planning, Construction and Environmental Protection of Karlovac County received no comments, suggestions or opinions.
- ❖ At the **second meeting** of the Commission, held on 26 February 2008, the Commission established that no comments, suggestions or opinions were received during the public inspection. Consequently, pursuant to Article 29 of the EPA, the members of the Commission reached a Conclusion suggesting to the MEPPPC to issue a Decision on environmental acceptability of this project with implementation of environmental protection measures and environmental monitoring programme.

The acceptability of the project was justified as follows: "The project is planned in the areas designated for the flood control system and was defined by the 1997 National Physical Planning Strategy, the National Physical Planning Programme (OG 50/99), and the Spatial Plans of Sisak-Moslavina, Zagreb, Karlovac, and Brod-Moslavina Counties and the City of Zagreb. So far, the major part of the Middle Sava basin flood control system has been built (estimated at app. 40%).

The project lies in the central part of Croatia, occupying 303,985 ha or 5.37% of the national territory. Four big towns – the capital Zagreb (779,145 inhabitants), Velika Gorica (63,517), Sisak (52,236) and Karlovac – form a triangle around the western part of the project area. Other towns lie on the edge of the study area: Dugo Selo (14,300), Ivanić Grad (14,723), Vrbovec (14,658), Petrinja (23,413), Kutina (24,597), Novska (14,313), Jastrebarsko (16,689), Glina (9,868) and Ozalj (7,932). Around 1.5 million people live in the immediate vicinity of large floodplains.

The present degree of development of the Middle Sava basin flood control system includes the structures which protect the city of Zagreb and the towns of Sisak and Karlovac, with foreseen protection from a 1,000-year flood. The intention was also to protect numerous smaller settlements with a lower level of protection, i.e. protection from a 100-year flood. The flood storage capacity has increased compared to the natural state and a higher level of water control has been achieved. This phase of construction included partial construction of the Sava-Odra and Lonja-Strug canals, the Prevlaka and Trebež I locks, the Kupa-Kupa canal, formation of the Lonjsko polje retarding basin by building the majority of boundary dikes, and reconstruction and construction of parts of the Sava and Kupa dikes.

In the planned construction phase, the intention is to increase the level of high water control. This would imply full completion of the Lonjsko polje and Kupčina retarding basins, partial intervention in the Opeka-Mokro polje area, and controlled release of water from the Lonjsko polje and Kupčina retarding basins, which hasn't been possible so far. With this phase, Karlovac would be protected against high waters and with full completion of the right dike along the Sava, numerous smaller settlements upstream up Sisak would also be protected and the protection level downstream of Lonjsko polje would be significantly improved. Full completion of the Sava protection system requires the construction of a large number of structures, but this proposal covers those which will have significant effects and which will protect several integrated areas, without putting the remaining parts of the system

at additional risk. It is indeed the critical parts of the system which require improvement or construction that were selected.

In the Sava sub-system, the Lonjsko polje retarding basin is one of the key structures within the Sava flood control system. Its planned capacity to store excess floodwater from the Sava and the surrounding watercourses gravitating to it is 915 million  $m^3$ . In order to have controlled release and retention of water in the retarding basin, boundary dikes are foreseen, which have been completed to a large extent. What still remains to be done is construct part of the southern dike and reconstruct parts of the existing dikes.

# Palanjek and Jezero overflows

In order to have the pressure from the Sava waters efficiently relieved and the town of Sisak protected, Palanjek and Jezero overflows will be constructed, with the high waters of the Sava released behind the left and right riverbanks, i.e. into Lonjsko polje and Odransko polje.

# Sisak-Popovača road

The Lonjsko polje retarding basin is crossed by the Sisak-Popovača road, whose culverts of insufficient height and insufficient capacity present an obstacle to continuous flow through the retarding basin. For that reason, the road will be elevated and new culverts and a new bridge with sufficient capacity made.

#### Facilities within the Trebež node

It is also proposed to build the Trebež-Trebež connecting canal with a gate (where the old channel of the Trebež watercourse intersects with the eastern dike of Lonjsko polje), which will in the system with the already built Trebež I lock facilitate faster and more efficient movement of fish between the waters of Lonjsko polje and the Sava. Within the Trebež node, protective earth dikes are foreseen to be built around the settlements of Trebež and Bukovica, which are currently often affected by the Sava floodwaters.

#### Dikes of Lonjsko polje retarding basin

The Lonjsko polje retarding basin is framed with dikes which have been largely completed. In order for the contours of the retarding basin to be fully defined, it is still necessary to build part of the southern dike and reconstruct parts of the southern dike, the western dike and the eastern dike. The Lonjsko polje dikes are dimensioned for a 100-year flood in the Sava basin, for which a level of 98.44 m above sea level (asl) has been calculated. The dikes have a horizontal level line, and the crown level is defined as having freeboard of app. 1.50 m above the design 100-year water level in the retarding basin, i.e. in accordance with the standards applicable to embankments. In line with the above, the dike crown lies at min. 100.00 m asl.

# Reconstruction of the right Sava dike and rehabilitation of Sava riverbanks

The area behind the right Sava riverbank from Zagreb to Sisak is due to unsatisfactory height and quality of dikes potentially exposed to flooding. As many settlements lie in continuity along this part of the Sava riverbank, the high waters represent a risk to human lives and assets. In addition to not being of satisfactory height, the existing dike is also not stable enough, i.e. its caving-in and landslide can be expected. For that reason, the improvement of this important protective structure is proposed. On the sections where the dike cannot be built for technical reasons, a wall will be built. In particularly damaged parts of the Sava riverbed and banks, where the banks have caved-in, bank rehabilitation is foreseen.

By building the structures in the **Kupa region**, the town of Karlovac will be protected from high waters. The Kupa discharge of 600-700 m³/s can pass through Karlovac without adverse consequences, while 100-year discharges are more than double. According to the flood control solution, these excess volumes would be rerouted upstream of the town and conveyed through a parallel channel, which has already been built (Kupa-Kupa canal), again to the Kupa downstream of Jamnička Kiselica or retained in the Kupčina retarding basin. Whether the floodwaters will be released into the Kupčina retarding basin or not depends on the condition in the downstream courses of the Kupa and Sava Rivers. This release requires the construction of Brodarci dam on the Kupa River.

#### Brodarci dam

The Kupa profile upstream of the settlement of Brodarci has been selected for the location of the Brodarci dam. This location provides favourable technical conditions for developing the structure and favourable hydraulic conditions to dimension a flood relief canal which will transport the released Kupa water flood volumes to the downstream part of the system, at a sufficient distance not to have any impact on the high water regime in the Karlovac area. The works include a rockfill dam (stone material will be obtained from the quarries nearby), the damming of the Kupa channel and a free spillway.

# Dikes along the Kupa, Korana, Mrežnica and Dobra Rivers

Despite all the constructed hydraulic structures which will be used for the management of high waters which cannot be received by the watercourses in the Karlovac area and their release into the area behind the banks or into the downstream Kupa course, the remaining volumes will still represent a risk to the area behind the banks. For that reason, this area needs to be additionally protected by building secondary earth dikes along the Kupa, Korana, Mrežnica and Dobra Rivers. The dikes are dimensioned for a 100-year flood with a 1.20-meter freeboard (Mrežnica, Korana, Dobra) and for a 1000-year flood with a 1-meter freeboard (along the Kupa in the Karlovac area).

# Eastern dike of the Kupčina retarding basin

The settlement of Donja Kupčina and agricultural areas will be protected with an eastern retarding basin dike. The dike route runs parallel with the Znanovit watercourse up to km 1+800, where it turns north-east until intersection with the higher ground. The dike actually surrounds a wide urban zone of the settlement of Donja Kupčina. The eastern retarding basin dike has a horizontal level line design freeboard above the 100-year level in the Kupčina retarding basin.

### Protecting Crna Mlaka fishponds

Fish-farming is traditionally developed in the peripheral northern and eastern parts of the Kupčina retarding basin. By bringing the retarding basin into full function, the water level in the retarding basin during flood will increase, so the fishponds need to be additionally protected by raising the existing dikes to a higher level. The Crna Mlaka fishponds, occupying 540 ha, lie in the northern part of the Kupčina basin. Half of their area lies in the retarding basin floodplain.

### Šišljavić lock

The formation of the Kupčina retarding basin requires the reconstruction of the existing dikes along the Kupa-Kupa canal in the length of 3,755 m. The planned reinforced concrete Šišljavić lock, at a place where the eastern dike connects with the Kupa-Kupa canal, has the function of regulating the high water regime in the downstream Kupa course and of filling and emptying the Kupčina retarding basin. The lock is dimensioned for a discharge of 320 m³/s and has three 7.5x4.5 m outlets controlled by segmental gates.

#### Korana 1 inlet lock and Korana 2 outlet lock

By developing structures in the Korana node, the town of Karlovac is protected from high waters from the east. The planned structures of the eastern Karlovac node are the Korana-Kupa overflow canal with an overflow sill, Korana 1 inlet lock and Korana 2 outlet lock. The inlet and outlet locks are two complementary structures of the system. The main objective of this solution is to divert the high waters of the Korana further downstream from its natural confluence with the Kupa, and consequently further away from the town area. A fully controlled high water regime in the urban area is achieved and internal drainage in the area is improved.

The planned reinforced concrete inlet lock (Korana 1) releases the Korana waters into the existing channel as long as the discharge doesn't exceed 143  $\rm m^3/s$ . When that value is exceeded, the inlet lock is closed and the application of measures for a high water event starts. All the Korana volumes are then evacuated through a new channel – an overflow channel – into the Kupa through a new mouth. The inlet lock lies on the right Korana bank at km 6+230. The planned reinforced concrete outlet lock (Korana 2) is supposed to retain the required level in the Korana during water evacuation and facilitate gravity drainage between the locks. Its capacity is identical to the capacity of the inlet lock, 143  $\rm m^3/s$ . The outlet lock will be built on the right Korana bank at km 0+400.

#### Korana-Kupa overflow canal

The planned Korana-Kupa overflow canal starts on the Kupa at km 127+400 and ends on the Korana at km 6+665. It is dimensioned for a 1000-year discharge of 1,270 m<sup>3</sup>/s. Given appropriate soil mechanics characteristics, the earth material obtained while building the canal can be used for developing dikes along the Kupa, Korana and Mrežnica."

When defining the **environmental protection measures and monitoring programme** to be implemented by the developer, the MEPPPC followed the provision of Article 15 of the EPA which requires that the measures laid down by the laws and other regulations are considered and implemented and if needed that additional measures ensuring a cleaner and more appropriate environment are specified.

- The **landscaping** measures as required by this Decision comply with Article 83 of the Nature Protection Act (OG 70/05), which specifies that "In physical planning and development, and in the planning and use of natural resources, it is necessary to ensure the conservation of significant and distinctive features of a landscape and the maintenance of biological, geological and cultural values that define its importance and aesthetic impression".
- The developer shall make sure that the **noise** protection measure as required by this Decision is implemented pursuant to Article 10 of the Noise Protection Act (OG 20/03). The noise protection measures as specified by this Decision comply with Article 5 of the Ordinance on the maximum permitted noise levels in an environment in which people work and live (OG 145/04), which specifies outdoor noise emission levels.
- The developer shall make sure that the air protection measures as required by this Decision are implemented in accordance with Article 37, paragraph 1, item 3 of the Air Protection Act (OG 178/04).
- According to Article 35 of the Nature Protection Act, the developer shall make sure that damage
  to nature is avoided or minimized and that the state similar to that in place before the measure
  was implemented is established or approached once the construction is completed.

- In order to avoid **water** pollution and protect human lives and health and the environment and enable unharmful and unhindered use of water for different purposes, which the developer is required to do pursuant to Article 68 of the Water Act (OG 107/95, 150/05), water protection measures have been specified. With these measures, the dangerous substances that may pollute water will be partially or fully removed before discharge into a public sewer system or another recipient, as required by Article 73 of the Water Act.
- The required **waste disposal** measures contribute to the achievement of the waste management objectives laid down by Articles 4 and 5 of the Waste Act (OG 178/04, 111/06) in such a way that different waste is collected separately and is handed over to authorised waste collection companies in accordance with Articles 25 through 31 of the same Act.
- In order to comply with Article 17 of the EPA which requires that the public shall have the right to a free access to environmental information, the developer is required to provide simple access to information at the water gauging stations.
- With the measure proposed to prevent and mitigate potential accidents, the precautionary principle as required by Article 11 of the EPA is fulfilled.
- The obligation to implement the **environmental monitoring programme** is established by Article 36, paragraph 2 of the EPA which requires that the developer provides the financial resources for the implementation (in the EIA procedure) of the required environmental monitoring programme. The required environmental monitoring programme complies with the provisions of Article 8 of the Water Framework Directive (2000/60/EC) which requires the monitoring of surface water and groundwater status.

A **representative of the developer**, Ivan Rožić, took part in the Commission's work and is familiar with the proposed measures and monitoring programme which the developer shall implement, as confirmed by Mr Rožić signing the Commission's Conclusions.

In order to assess whether the proposed environmental protection measures for the construction of the Middle Sava basin flood control system stem from the laws, other regulations, standards and measures which minimize the adverse impact and preserve the environment to the highest possible extent, the procedure of environmental impact assessment was conducted prior to issuing a location permit pursuant to Article 25, paragraph 4 of the EPA. In addition to that, pursuant to Article 25, paragraph 2 of the EPA, during the EIA the potential adverse impacts on the landscape, air, water, plant and animal life, and the natural values and the cross-impacts with the planned and existing projects in the area of the potential impact were analysed.

#### **LEGAL REMEDY**

There may be no complaint against this Decision, but an administrative dispute may be initiated. The administrative dispute is initiated by filing a claim before the Administrative Court in person or by post within 30 days from the receipt of this decision.

An administrative fee for this Decision in the form of government stamps in the amount of HRK 50.00 has been paid according to Tariff Class 2 specified in the Administrative Fees Act (OG 8/96, 77/96, 131/97, 68/98, 66/99, 145/99, 116/00, 163/03, 17/04, 110/04, 141/04, 150/05, 153/05).

STATE SECRETARY Nikola Ružinski

# To be delivered to:

- 1. Hrvatske vode, Ulica grada Vukovara 220, Zagreb
- 2. Zagreb County, Administrative Department for Spatial Planning, Construction and Environmental Protection, Ulica grada Vukovara 72/V, Zagreb
- 3. Karlovac County, County Institute for Spatial Planning and Environmental Protection, Križanićeva 11, Karlovac
- 4. Sisak-Moslavina County, Administrative Department for Environmental and Nature Protection, A. i S. Radića 36, Sisak
- 5. Ministry of Environmental Protection, Physical Planning and Construction, Inspection Affairs Directorate
- 6. Ministry of Environmental Protection, Physical Planning and Construction, Spatial Planning Directorate
- 7. Files, here

# MIDDLE SAVA BASIN FLOOD CONTROL SYSTEM ENVIRONMENTAL IMPACT STUDY

# PLANNED PROJECTS AND STRUCTURES

LEGEND: EXISTING HYDRAULIC STRUCTURES

Dike

Dike – wall Dike – road Elevation – road Damaged dike

Partially built dike (elevation required)

Overflow structure

Siphon

Water management lock

Tide gates, small locks for drainage behind the banks

Pumping station

# PLANNED HYDRAULIC STRUCTURES

Dike

Dike - wall

Road

Canal

Overflow canal

Barrier

Overflow structure

Spillway sill

Water management lock

## **FLOODPLAINS**

Floodplains during extreme floods