ENVIRONMENTAL MANAGEMENT PLAN

DISASTER RISK MITIGATION AND ADAPTATION PROJECT

March 1, 2009

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ACRONYMS

PPF	*Project Preparation Facility*
PIU	*Project Implementation Unit*
NPRD	*National Protection and Rescue Directorate*
DHMZ	*Meteorological and Hydrological Service*
DRMAP	*Disaster Risk Mitigation and Adaptation Project*
PCN	*Project Concept Note*
EIA	*Environment Impact Assessment*
OP	*Operation Policy*
BP	*Bank Policy*
EMP	*Environmental Management Plan*

1. INTRODUCTION

The objectives of the proposed Disaster Risk Mitigation and Adaptation Project for Croatia are to reduce the vulnerability of the country to natural hazards and reduce human, economic and financial losses due to catastrophic events. These objectives will be achieved through strengthened capacities to: (i) manage and effectively respond to natural and man-made disasters; (ii) monitor and allow for early warning of weather-related hazards through provision of accurate meteorological and hydrological forecasts and services; and (iii) coordinate wild fires hazard risk reduction and response.

The project would consist of the two major interconnected components and project preparation component:

Component one: **Disaster Preparedness and Emergency Response.** This component is aimed at strengthening the capacities of the Government of the Republic of Croatia to manage natural and man-made disasters, as well as effective response to emergencies through enhancement of 112 system, enhancement of national and regional fire fighting capacities, enhancement of public awareness and emergency preparedness. These goals are to be achieved through the following activities: support to the completion of the integrated emergency call system "112" through financing of software , hardware, GIS, integration of 112 system and mobile communications system , training, integration of 112 system with

professional communication radio system; support to the refurbishment and equipping of SEE Regional Coordination Center for Wildfires in Divulje near Split, development and construction of training site of Fire Fighting School in Ivanić Grad, raising public awareness about disasters and strengthening of Civil Protection capacities though purchase of GIS system, establishment of regional warehouse in Horvati, procurement of equipment for specialized teams and procurement of humanitarian supplies for case of a major disaster.

Component two: **Strengthening Weather Forecasting.** The objective of this component is to strengthen the capacity of the government of Croatia to deliver severe weather forecast in support to risk mitigation. This objective is to be achieved through expanding and enhancing weather radar coverage which will include installation of three additional radars along the Adriatic plus one radar near Zagreb, as a supplement of the existing old one, including precipitation calibration environment as well as maintenance / training follow ups and through facilitating the move by DHMZ to an adequate facility enabling a growth in the agency's capacity and mitigating the risk of DHMZ performance failure particularly reflecting on the forecast process that follows from shortcomings of the current building.

Component three: **Project Management.** The component will provide support to the implementation of the DRMAP. It will consist of the technical assistance and training to the NPRD and DMHZ project staff. In particular, the support will enhance the financial management and procurement functions as well as, if necessary, the technical aspects of project implementation.

The construction and operation activities in SEE Regional Coordination Center for Wildfires, training site in Ivanić Grad, regional warehouse in Horvati will have certain impacts on the environment and therefore trigger the World Bank safeguards policies. In addition to these activities planned under component 1, installation of radars under component 2 will as well trigger the World Bank safeguard policies.

2. THE ENVIRONMENTAL MANAGEMENT PLAN

2.1 Objective

The objectives of this **Environmental Management Plan (EMP)** is to review environmental issues specific to infrastructure investments that will enhance the protection and rescue system and hydromet services, and to **prepare mitigation measures and monitoring plans** to describe actions to mitigate potential environmental impacts. The assessment also reviews issues related to cultural heritage (e.g., assessing the presence of cultural values, cultural land issues or sites previously identified as cultural sites; and a process for "chance finds", or anything unearthed by chance in the digging/construction process) which are usually assessed as part of any EIA. The project investments will trigger the following WB policies: OP/BP 4.01 Environmental Assessment, OP/BP 4.11 Physical Cultural Resources and OP 17.50 Disclosure Policy.

Scope

The report for the preparation of EMP:

(i) gives an overview of current facilities in Divulje, Horvati and Ivanić Grad and proposed construction of new buildings;

(ii) briefly describes the policy, legal and administrative framework, including the role and responsibilities of the NPRD, DHMZ and other agencies in this project related to environmental issues implementation; the environmental and construction permitting process of Croatia applicable to the proposed works; and

(iii) defines mitigation measures, in line with identified potential impacts of the investment, monitoring plan for the construction and operation phase and proposes training to support the implementation of EMP

The report will cover environmental issues related to:

- Rehabilitation / upgrade of buildings in Divulje, to suit the purposes of the SEE Regional Coordination Center for Wildfires ,
- Construction of new Regional Warehouse facility in Horvati new training center in Ivanic Grad and new training polygon for Divulje SEE Regional Coordination Center for Wildfires in Prgomet
- Installation of Radars on three sites in the coastal area.
- Potential adaptation/reconstruction of existent buildings

The environmental assessment of future investments and works related, has been prepared by the PIU and the assessment is based on interviews with the representatives of National Protection and Rescue Directorate and Meteorological and Hydrological Service and World Bank DRMAP team, and through documents provided (Government decision on the use of sites).

3. REVIEW OF PROPOSED WORKS

3.1 Project Current state (baseline information)

SEE Regional Coordination Center for Wildfires in Divulje with the training polygon in Prgomet.

Figure 1 Location of Divulje Center and its training polygon in Prgomet

On September 22, 2008, Government of Croatia issued a Decision based on which NRPD becomes a state user of the ex military site in Divulje. Divulje is situated on the coast in the urban area near the town of Trogir and in the vicinity of Split airport, some 12 km from Split.

Two (plus one) buildings on location Divulje used to be military barracks. The purpose of these two buildings was accommodation of soldiers serving the former Yugoslav National Army in the nearby former military port. They are dilapidated on the inside and on the outside. Installations are destroyed and out of order. It is not possible to make use of the facilities without additional works. The surface of facility no. 4 is 1.372 m^2, and of facility no 5 2.058 m^2.

NRPD decided to dislocate the training polygon from the Divulje site in order not to interfere with the civil airport in the vicinity of the site. The training polygon will be located in Prgomet a small village located 11 km away from Divulje. The chosen location is a government property. NPRD is currently in the process of obtaining the right of use for the site in Prgomet which is designated for a training polygon being part of Divulje SEE RCCFF center, to be transferred from the Ministry of Regional Development, Forestry and Water Management (MRDFWM).

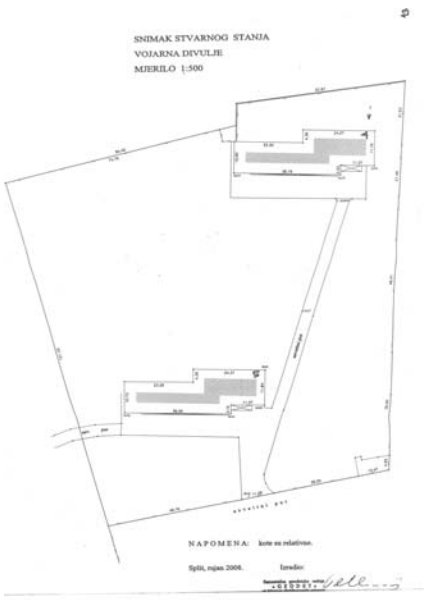

Figure 2 Location of the Divulje buildings and the outline of the barracks

Figure 3 View on the site for future training polygon

Figure 4 Satellite view of the Prgomet site with indicated borders of the site

Horvati regional warehouse.

On September 4, 2008, Government of Croatia issued a Decision based on which NRPD becomes a state user of the ex military site in Horvati. It served as the warehouse for various logistic supplies (food, tents, munitions etc.) for the former Yugoslav National Army. The location of Horvati is some 20 km from Zagreb, in non-urban secluded area. It is a former military warehouse "Mrđanec" – Horvati, with surface of 29.285 m^2. The facilities are dilapidated, without infrastructure (there is no water supply system, sewage nor telecommunications).

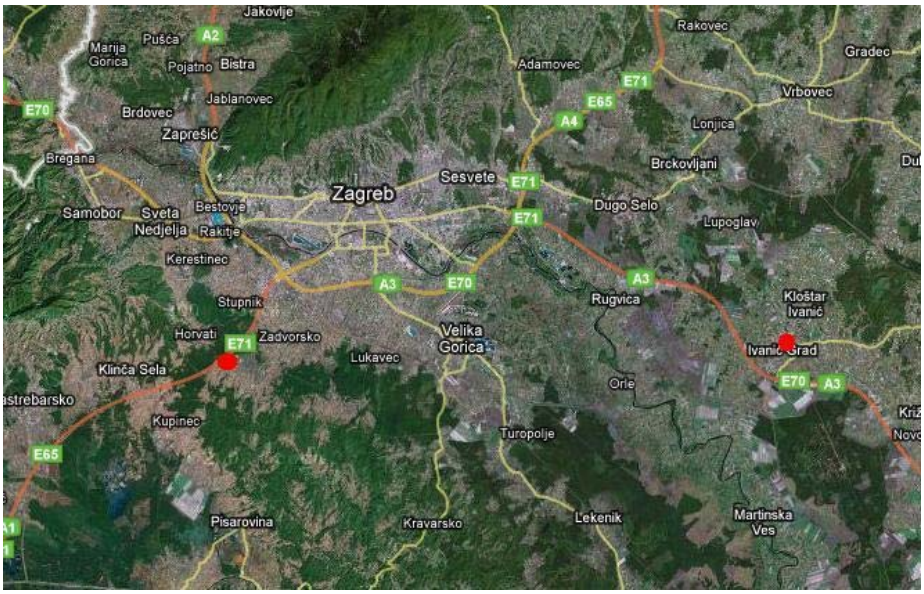

Figure 5 Satellite image on which both Ivanic Grad and Horvati are marked red

Figure 6 One of the warehouses on the Horvati site

Figure 7 Another warehouse on Horvati site

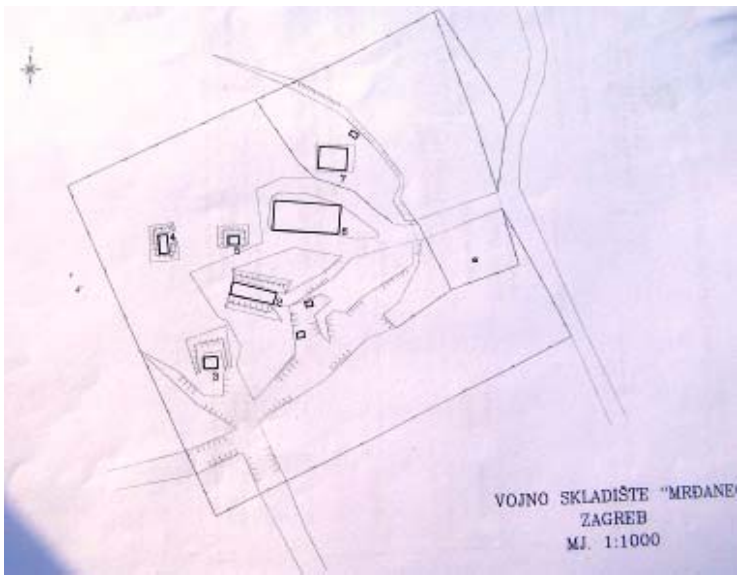

Figure 8 Layout of the buildings on Horvati site

Training facility in Ivanić Grad

On April 19, 2007, Government of Croatia issued a Decision based on which NRPD becomes a state user of the ex military site in Ivanic Grad. As the proposed location was of interest to the City of Ivanic Grad,as it was located in the vicinity of the center and is in the vicinity / trespassed by oil industry infrastructure / network, therefore not suitable for the proposed activities, the City offered another location to the NRPD. The City council of Ivanic Grad has adopted a Conclusion (Official Gazette, City of Ivanic Grad; Klasa: 022-01/08-01/36; Ur.br.: 238/10-02-08-28) on exchange of property transferred from the Ministry of Defense to NPRD on December 5, 2008. The proposed location is an ex cattle fair / pasture ground covering area 40000 m2 owned by the Municipality, which was also sometimes used by Military.

Figure 9 Ivanic Grad site (i)

Figure 10 Ivanic Grad site (ii)

For none of the locations covered by this Environmental Management Plan there will be need for population resettlement. Also, there are no illegal residents or squatters in any of the facilities covered by

this EMP.

As it can be seen, NPRD is not the owner of the sites. All the chosen locations are either owned by central or local governments. If the site is owned by Government, the ownership is not transferred from the institution to institution but just the right to use the site.

The following table shows locations, type of ownership or the right of use of the sites, size, and the decision on suitability of the buildings for the purposes of NPRD, i.e activities planned at those locations (school, warehouses and regional center for wildfires):

Facility	**Ownership**	**Area**	**Suitability**
Divulje – building no. 4	User	1.372 m^2	Not suitable
Divulje - building no. 5	User	2.058 m^2	Not suitable
Horvati	User	29.285 m^2	Not suitable
Prgomet	Municipal ownership / public property under the Ministry of Regional Development, Forestry and Water Management		No buildings
Ivanić Grad	Municipal ownership	40,000 m^2	no buildings

The works at these three sites might include the demolition of the old buildings or parts of the buildings and construction of new buildings.

Locations for the installation of radars. DHMZ is currently negotiating with the Ministry of Defence the sites for the installation of the radars. All five plus one sites are the sites of the Ministry of Defence which were used until recently. The recent use assure that there is sufficient infrastructure for the installation of radars, implying existing power supply, optical cables and access roads. Currently the five sites are proposed as follows:

- northern Adriatic site: Monte Kope near Pula,

- central Adriatic site island Dugi otok (RP Grpascak), island Zirje, Kriz near Zadar

- southern Adriatic site: island Vis (alternate island Lastovo) ,

Proposal for the radar site near Zagreb is foreseen to be finally specified in one package with the tree Adriatic ones.

The negotiations and choice of the sites are expected to be finalized in February, or early March 2009. The works for installation of radars will include an antenna tower, transmitter, possibly the auxiliary power unit (APU), security fence, power line connection to the local electrical grid and a telephone line connection. The radars to be installed are of rather small size. Their height is estimated to be 5 m (however will be decided based on the specificity of locations) and the radius of the radar dish / sphere is approximately 2,5 m.

Figure 11 Map of Croatia with marked site locations where radar installation is planned.

The sites were proposed, while taking following criteria into account to support the planning decision: radar viewing of the priority coverage areas down to low altitudes terrain features and local obstructions, locations of airways of civilian and military airports and electromagnetic interference. A eligibility of the specific site will be based on: a) The site should have a qualitatively acceptable view, without any significant terrain blockage. However, the elevation should not exceed a threshold based on the seasonal oscillation in freezing level, b) The site should be stable from a geological point of view, c) The site should be sufficiently distant from built-up areas in order to comply with good practice concerning electromagnetic pollution. Ideally, an eligible site should lay at least 1 km from any built-up area, d) The site should have a flat operational area of at least 400 m2, without electricity pylons or other electromagnetic sources within a range of 20–50 m, and e) Communications to the site, namely, accessible roads, electrical lines, phone lines enabled for data connections, water supply, etc., should be readily available.

During the process of choosing the sites for the purpose of radar installation, location / environmental conditions will be as well taken into account. If any of the chosen sites will be in the vicinity of protected areas or their chose raise any other environmental concerns, additional environmental assessment for the radar sites will be made.

3.2 Proposed modernization

NPRD plans to carry out complete inner and outer reconstruction of the mentioned locations and facilities. In order to put the buildings no. 4 and 5 in Divulje in function it is necessary to carry our full reconstruction of al inner and outer constructions, installations and surrounding area. Inside the facilities

it is necessary to build accommodation rooms with toilet facilities for approx. 70 persons, lecture rooms, and a restaurant. It is also necessary to build auxiliary facilities for storage of equipment and vehicles.

In Horvati it is also necessary to rearrange the whole location, including demolition of existing facilities, preparation of surface for construction of new warehouse capacities, as well as office and joint facilities (2-3 bedrooms, toilets, small kitchen etc.) It is also necessary to build the missing infrastructure (water supply, sewage, telecommunications).

As regards to training facility in Ivanić Grad, the whole location should be re-arranged. This includes: rearrangement of area, construction of a new inside the site road network – communications at the training site, construction of infrastructure (water, gas, electricity, sewage, technological waters, separation of waste waters, hydrant network, installation for technical gas) and telecommunications network, construction of training pool, construction of artificial well, construction of examination site 20 x 150 m, construction of examination center for firefighting vehicles etc.

4. Policy, legal, and administrative framework

4.1 WB policies related to project investments

The activities envisaged under the DRMAP require environmental assessment (EA) to help ensure that reconstruction /construction of facilities are environmentally sound and sustainable. The Bank undertakes environmental screening of each proposed project to determine the appropriate extent and type of EA. The Bank classifies the proposed project into one of four categories, depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts. In this way risks associated with project actions can be effectively anticipated in advance before project implementation, and addressed by direct mitigation activities in the design, planning and construction supervision process as well as during the operation of the facilities.

Project triggered Environmental Assessment Policy and Physical and Cultural Resources safeguard Policy. Environmental Assessment is one of the 10 environmental, social, and legal Safeguard Policies of the World Bank. Environmental Assessment is used in the World Bank to identify, avoid, and mitigate the potential negative environmental impacts associated with Bank lending operations. The objective of the OP/BP 4.11 on Physical Cultural Resources is to avoid, or mitigate, adverse impacts on cultural resources from development projects that the World Bank finances.

The project has been classified as a category B project since the project might have potential adverse environmental impacts on human populations and/or environmentally important areas. For all Category B projects an Environmental Management Plan needs to be prepared.

4.2. Croatian policies related to project investments

Procedures preceding construction works in Croatian legislative are: **land acquisition, environmental impact assessment (EIA)**, **location permit** procurement and **construction permit** procurement. Through the Government decisions the land acquisition for NRPD sites have been resolved and for the installation of radars on the terrain of the Ministry of Defense by DHMZ is foreseen to be finalized in December. For the type of projects / activities envisaged under DRMAP according to Croatian legislation, the EIA is neither required nor suggested.

After issuance of all relevant permits, completion of construction works, and before utilization of the object, it is necessary to obtain an **Operation Permit**.

4.2.1. Location permit

The Location permit is an administrative document defined by the Law on Physical Planning and Construction (Off. Gazette no. 76/07). It is issued based on Physical Planning document and on special related laws and regulations.

The Location permit defines important characteristics of planned intervention like: form and size of construction lot, purpose, size (height, number of floors) and area of the constructed object, auxiliary objects on construction site (garages, storages, septic tanks, etc.), architectural form of the object (roof, materials and other factors depending on surroundings), site organization, methods and conditions of connection of the object to public traffic surface (including parking lots) and communal infrastructure, mitigation measures related to environment (if intervention notably effect environment by its operation) and other elements important for spatial intervention. Location permit needs to be issued for every spatial intervention, except for cases specially defined under regulations (The Ordinance on Spatial Intervention that do not Require Procurement of Location Permit -Off. Gazette no. 86/04 and 138/04).

According to The Ordinance on Spatial Intervention that do not Require Procurement of Location Permit (Off. Gazette 86/04 and 138/04), following activities do **not require issuance of location permit: a)** adaptation and maintenance without any changes of profile, size and purpose of the project, **b)** construction or installation of connection of the building to low-voltage and telecommunication grid, water supply line, sewerage, gas pipeline, cable TV and heating system. However official approval of service provider with its instructions are required and need to be acquired prior any works, and **c)** site restoration, construction of water cistern and septic tank, alignment of solar plates, construction of underground or ground storage of fuel up to 10 m^3.

If construction works are performed on an object protected as cultural monument, prior to any kind of works (for spatial intervention that do not require location permit) it is necessary to obtain an official approval from the regional authorized body (Regional Office for Monument Protection).

4.2.2. Construction permit

The Construction permit is an administrative document defined by the Law on Physical Planning and Construction (Off. Gazette no. 76/07. After verification and issuance of this permit construction may start. Construction permit confirms that the Main project is in compliance with Location permit and all special conditions issued by authorized bodies and obtained in the Location permit procurement procedure. In addition, Main project conformity to important construction regulations defined in the Law on Construction are evaluated. For instance: mechanical resistance, stability of building, fire protection, sanitary health and environmental conditions, operational safety, energy efficiency, thermal insulation, access and mobility in the object. The ownership and the construction rights on the parcel are as well defined.

Construction permit needs to be issued for every construction, except for cases specially defined in regulations. Related to constructions under DRMAP, **Construction permit is not required** for constructions that fall under following categories: **a)** adaptation and maintenance without any changes of profile, size and purpose of the project, and **b)** cable and air connections of the object to the low-voltage electrical grid, telecommunication grid, and connection to communal installation (water supply line, sewerage, gas pipeline, thermal pipeline)

For attaining Construction permit it is necessary to submit evidence that legal or physical entity submitting the request for permit has a right to build on the parcel in question.

4.2.3. Operational permit

Operation permit is issued after the technical assessment of the constructed object, if proven that the

object has been constructed in compliance with Construction permit requirements and the Main design.

4.3. EMP and administrative procedures preceding construction

The Environmental Management Plan (EMP) comprises procedures and guidelines to recognize and control the quality of environment and to identify and implement measures in the process of realization of investment, aiming at mitigation of negative environmental impacts and environmental protection.

EMP is not a requirement in Croatian laws and acts, i.e. EMP as an obligatory or binding document does not exist in the preparation of any investment projects, however some elements usually found in EMP like site preparation, soil management, waste management are prescribed in permits and documents preceding construction, whose supervision is under the jurisdiction of different Ministries and agencies (annex 2).

5. Environmental aspects related to project investments

5.1 Identification of possible environmental issues

The activities supported by the project comprise as described in the scope of the project, the preparation of the sites, the reconstruction or construction of the new buildings and installation of radars.

The operation of radars or radar measurement per se is not expected to result in any significant impacts, beside power usage. The installation of radars will have similar impacts as one during the construction of a building financed under the project, and as such will not be emphasized specifically in the text.

The civil works are of limited scope, therefore, the impacts are temporary, easily foreseen and mitigated. The environmental impacts during construction or installation phase are related to the typical building construction, such as air pollution, waste generation, noise, soil and water pollution and potential safety hazards. According to Croatian Laws, for the construction of proposed type of facilities, the Environmental Impact Assessment (EIA) is not necessary, which indicates that the impacts on the environment by this type of projects are limited.

Possible environmental issues can be clearly separated in two categories, one related to construction and other related to operation. The main environmental issues that derive from the actions during construction / reconstruction include:

. • Dust and noise due to the demolition and construction
. • Disposal of construction waste

while the one related to operation are related to risks associated with handling wastes during operation, maintaining alternative power supply and chemicals used for training (different fire extinguishers).

All these risks can be effectively dealt with and recognized through this EMP in the pre-design phase. In this project, implementation **of mitigation measures can be advised at the stages of: design, construction/reconstruction and operation**. These measures should be feasible and cost effective aiming at eliminating, offsetting and reducing adverse environmental impacts. The measure should not only deal with recognized risks, but should as well be used as guidance to make facilities more environmentally friendly and sustainable.

5.2 Environmental mitigation measures and guidelines

The Environmental mitigation measures address environmental and ecological/biological aspects, design and planning of new buildings and guideline for construction and renovation of buildings. The guidelines cover the handling of construction debris generated, selection of construction materials and construction

methods with limited impact on the environment, energy saving methods as well as the handling of hazardous and non-hazardous wastes, and storage of hazardous materials under project supported activities. The guidelines are a base for design, training, research, discussions and workshops.

5.2.1. Design phase

In the design phase many important issues related to environmental protection aspects could be approached, investigated and best choices incorporated into design. Designer has a choice on orientation of the building and affiliated rooms within the object, design of object in a manner that are energy efficient, recommendation of types of materials, adaptation of building to exterior landscape and surrounding architecture. Orientation of the object and rooms within, energy efficiency and choice of materials presented in this part of the document are not mandatory by Croatian legislation nor by WB policies, but are just recommended guidelines that should be thought of when designing building and implemented only based on cost benefit assessment.

Design needs to anticipate the entire supporting infrastructure. The potable water needs to be supplied for the water supply network and sewage needs to be connected to the existing waste water system. If this is not applicable, septic tanks should be built on the sites.

Most energy-efficient buildings have four basic elements in common: a) A well-constructed and tightly sealed thermal envelope with appropriate ventilation, b) Proper design and installation of heating and cooling systems (properly sized, high-efficiency, energy source, ventilation and ductwork), c) Energy-efficient doors, windows, and appliances, d) Home orientation and placement of building elements to maximize natural heating and cooling efficiency.

Adapting an old building might imply that materials build in are no longer produced or used and now, in current form may seriously effect ambient air quality. Building material such as particleboard, plywood, urea-formaldehyde foam insulation and various adhesives emit formaldehyde. Chipped and peeling paint containing lead becomes airborne toxic dust. Some pollutants are somewhat unique in indoor environment, such as asbestos used for fireproofing, heating system insulations, floor and ceiling tiles, roofing felts and shingles; radon gas which steps out of soil and collects in the houses and biological pollutants, such as house dust mites, fungi and other microorganisms usually retained in textile based floors which are difficult to maintain. A special attention should be given to these (especially asbestos), which includes prior to rehabilitation examination of the buildings, to be prepared for special mitigation measures.

The design of the buildings should respect the rules of physical planning with its form and fit into surrounding architecture by not blemishing the landscape. Impermeable surfaces are recommended on parking lots and access roads (ways). It is necessary to plan access to the facilities depending on trucks, etc.

A special attention should be made to design of interiors and exteriors to make access for handicap or less mobile persons. Design should be in line with the Ordinance on Securing the Access to the Buildings for People with Disabilities and Reduced Mobility (Official Gazette 89/06)

5.2.2. Construction / reconstruction phase

In the construction phase the emphasis is on possible environmental impacts that accompany construction works. Issues that should be addressed are: construction and other waste management especially asbestos in modernization of the old buildings, minimization of dust and noise, top soil management, procurement of construction material, site restoration, temporary storage of the material, storage of hazardous materials, archeological and monument finds, traffic management plan, working hours and, encroachment into the neighbor territory.

Notification of civil works and workers safety

The local construction and environment inspectorates and communities have to be notified of upcoming activities. The public presentation of the EMP can serve and notification of the public. In addition, few days before beginning of the work it is recommended to inform neighbors either directly or through local bulletins or newspapers on the construction of new objects and reconstruction. Before any works can commence all legally required permits have to be acquired for construction and/or rehabilitation and should be kept on the site.

Workers on the site will be introduced to international good practice related to safety (always hardhats, as needed masks and safety glasses, harnesses and safety boots). These should be done through appropriate signposting of the sites that will inform workers of key rules and regulations to follow. Same will be monitored by supervising engineer.

Noise reduction

The noise should be limited by using good management practice and limiting works on regular daily shift. The equipment and machinery used should be calibrated according to the Ordinance on Highest Permitted Levels of Noise in Working and Living Environment (Off. gazette 145/04) and the Law on Noise Protection (Off. gazette 20/03).

Dust minimization

Temporary technical solutions and measures for dust minimization during construction should be used. For the transportation of earthlike or any other dusty material to the construction site or of the construction site watering or covering of the cargo should be implemented. Reduction of dust on construction / reconstruction site during dry season of the year can be accomplished by watering the ground surface. Water should not be wasted. Reducing speed can be another applicable measure. Workers that perform demolition should be introduced with safety equipment, while dust from the object can be prevented by enclosing of construction site if necessary.

During interior demolition, debris-chutes above the first floor should be used. The demolition debris should be kept in controlled area and sprayed with water mist to reduce debris dust. The dust should be suppressed during pneumatic drilling/wall destruction by ongoing water spraying and/or installing dust screen enclosures at site. The surrounding environment (side walks, roads) should be kept free of debris to minimize dust.

Construction waste

It is mandatory that contractor prior to start of the works to remove all equipment and material that will no longer be used and to dispose it or recycle it in a proper manner. Wastes where ever possible should be minimized, separated and handled accordingly. It is possible to separate these types of wastes during demolition:

1. construction debris: tiles, bricks, concrete and other waste with similar properties from demolition;
2. wood: doors, window frames, floors, etc.;
3. plastics: coating, blinds, etc.;
4. glass: from windows and doors;
5. metals: boilers, kettles, coated tubs, sinks;
6. electrical waste: insulation materials, wires, etc.;
7. sanitary materials: ceramic sinks, toilets
8. asbestos waste.

During the construction mainly construction debris is created, some hazardous waste like pain finishes, hydraulic oils etc., and as well small quantities of municipal waste

Waste generation is expected to have the most important environmental impact. The envisaged works under the project will produce several types of waste. These are classified according to the European waste catalogue and hazardous waste list as the Republic of Croatia harmonized the waste legislation with the EU legislation

08 Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), sealants and printing inks

13 Oil wastes and wastes of liquid fuels

15 Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified

17 Construction and demolition wastes (including excavated soil from contaminated sites)

20 Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions

Hazardous waste is expected in small quantities and it has to be separated from non hazardous municipal waste. For hazardous waste contractor has to follow procedure for hazardous waste management, this implies collection, handing over the waste to authorized company for hazardous waste management and fulfilling accompanying documentation

Different waste types (plastic and glass packaging, electrical waste, spare oils) for which separate collection/ recycling system exist in the country have to be separated from non recyclable waste and taken to appropriate collection points with accompanying documentation. Non recyclable waste has to be taken to an approved landfill.

The building site will be cleaned and all debris and waste materials will be disposed of in accordance with clauses specified in the bills of quantities. Burning or illegal duping of waste is strictly forbidden.

Municipal waste and other waste have to be collected in containers specially designed for that purpose and regularly conveyed away.

All waste has to be collected and handed over to the company authorized for collection and transportation of that type of the waste.

Asbestos waste

If asbestos is located on the project site, it has to be marked clearly as hazardous material. When possible the asbestos will be appropriately contained and sealed to minimize exposure specially during building dismantling. The asbestos prior to removal (if removal is necessary) should be treated with a wetting agent to minimize asbestos dust. Due to the health hazards asbestos will be handled and disposed by skilled & experienced professionals. If asbestos material is being stored temporarily, the wastes should be securely enclosed inside closed containments and marked appropriately. The asbestos waste should be handled to the authorized company.

Top soil management

Stripped top soil should not be thrown, but kept on the site for restoration after completion of works. Any prevailing trees and valuable vegetation should as well be stored and used later for restoration.

Site organization and restoration

Construction sites should be fenced off in order to prevent entry of public, and general safety measures would be imposed. Temporary inconveniences (traffic or other) due to construction works should be minimized through planning and coordination with contractors, neighbors and authorities. After

completion of works the site should be restored as planned in the design. All wastes and machinery should be removed from the location.

In compliance with national regulations the contractor should insure that the construction site is properly secured and construction related traffic regulated. This includes but is not limited to: a) Signposting, warning signs, barriers and traffic diversions: site will be clearly visible and the public warned of all potential hazards, b) Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes, and c) Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours

Temporary storage of material (including hazardous materials)

Stockpiling of construction material should be avoided if possible. If not, construction material should be stored on the construction site, and protected from weathering. Hazardous materials like paints, oils, enamels and others should be kept on impermeable surface, and adsorbents like sand or sawdust should be kept for handling small spillage. Handling with the material should be consistent with the instructions on Material Safety Data Sheets.

Encroachment into neighboring territory

Encroachment into neighboring territory should be avoided if possible. In case where maneuvering surface is too small, approval for the encroachment should be asked. Any accidental damages of the neighboring properties should be recovered and brought in the condition as it was prior to the construction.

Archeological and monuments finds

If encountering archaeological finds during preparation of the site for the construction, the contractor should stop the works, respond immediately and notify the municipal authorities, the Regional Institute for Protection of Cultural and Historical Heritage and the project team in the NPRD/DHMZ.

Working hours

To avoid noise and disturbance of neighbors the works should be conducted in a daily shift, meaning from 7 am to 5 pm. For other working hours special permits are required.

5.2.3. Operation

During the operation the main emphasis in the office building will be on maintenance and waste management including during possible hazard events. A special attention will be put to the management of hazardous materials used for the training and the management of the waste afterword on the training sites.

Maintenance

For the buildings (and spaces for used for training activities) it is recommendable to create a maintenance manual to plan, schedule and track activities. Works like regular ventilation should be carried out on a schedule. Maintenance of ventilation systems, including duct cleaning, filter cleaning and changes, and cleaning positive plate receivers and ionizing tips should be routine. Exterior green surfaces should be attended, watered and fertilized. Access roads regularly cleaned and maintained.

Operation emergency plans

The proposed investments, especially buildings and radar stations will have in their storages more than 5000 kg of crude oil or 500 kg gas as energy source if not connected to the city heating system. The radars station as well might have a diesel generator as auxiliary power unit. Based on the Law on Environmental Protection (Off. gazette no. 2008) and under the Plan of Intervention in Environmental Protection (Off. gazette no. 82/99, 12/01), it is necessary to prepare Operation Emergency Plans for these facilities.

Noise

During the operation of alternative auxiliary power unit (if needed), noise can be an side effect impact The use of APU will be rare, i.e. only when the regular power supply is interrupted. The site will be located far from the inhabited areas and as such will not present a problem. The source of noise disturbance should be located so that the buffer exist between the activities and areas susceptible to noise.

Waste management

It is recommendable that each site (Horvati, Divulje and Ivanic Grad) in the maintenance manual includes section on waste management. If the object is not connected to sewer system on a location, a contract with company for maintaining septic tanks should be made.

The waste (hazardous and non-hazardous) should be separately stored and collected according to Ordinance on Categories, Types and Classification of Waste (off. Gazette no. 50/05). Hazardous waste (which includes toners, electrical equipment, etc.) can be on location stored for maximum one year. The waste should be handed to the hazardous waste authorized company. Documentation regarding waste management should be kept on site.

Standard Operational Procedures dealing with the use of fire extinguishing agents

As regards various agents used for fire extinguishing training courses, as well as other training courses, the producers of all these agents are obliged to obtain the water management permit for their use, which means that it is understood that they have no negative impact on the environment. Without this permit these products are not allowed to be sold and used. The permits are issued by the Water Directorate in the Ministry of Regional Development, Forestry and Water Management
Since the use of these various agents sometimes worries the public, it is intended that a part of this project should also cover drafting of Standard Operational Procedures dealing with the use of fire extinguishing agents. This draft should be done by the representatives of the Fire fighting college of the National Protection and Rescue Directorate in cooperation with the representatives of the Ministry of Environmental Protection, Physical Planning and Construction.

Mitigation measure and monitoring plan are proposed in the following tables.

5.3. Mitigation Plan

PHASE	ISSUE	MITIGATION MEASURES	COSTS	INSTITUTIONAL RESPONSIBILITY	COMMENTS
DESIGN	**Reviewing design plans for construction and adaptation of buildings and installation of radars**	Implementation of measures proposed by EMP. New buildings shall be designed according to local constructing (and cultural) practice (respect of surrounding architecture)	Not significant cost, this should be regular work of consultants hired by PIU Included in cost of issuance of construction permit	Design team, PIU Reviewed by institution issuing construction permit Regional Office for Construction (under MEPPPCP)	This is not a legal requirement, but it is recommended to become a binding requirement for the designer
CONSTRUCTION	**Noise**	Construction is restricted to 5 days a week and only dayshift (7 am to 5 pm). Machinery has to posses attest (needs to be calibrated for certain noise level)	Not significant. This cost is included in regular annual process of technical examination of machinery and equipment, and it is needed to issue a work attest.	Contractor	Will be specified in bidding documents (compliance with EMP)
CONSTRUCTION	**Dust**	Dust from demolition and transportation of construction material and waste will be minimized by use of water and enclosement of cargo If demolition in the object presents high source of dust site can be enclosed The dust should be suppressed during pneumatic drilling/wall destruction by ongoing water spraying and/or installing dust screen enclosures at site	Could be significant if construction is done in the dry period of the year. Cost should be beard by the contractor.	Contractor	Will be specified in bidding documents (compliance with EMP)

PHASE	ISSUE	MITIGATION MEASURES	COSTS	INSTITUTIONAL RESPONSIBILITY	COMMENTS
	Construction waste	Hazardous waste has to be separated from solid waste. For hazardous waste (paints, oils, etc.) contractor has to follow procedure for hazardous waste management, this implies collection, handing over the waste to authorized company for hazardous waste management and fulfilling accompanying documentation All recyclable fractions have to be separated from non recyclable waste and taken to appropriate collection points with accompanying documentation Non recyclable waste has to be take to approved landfill The building site will be cleaned and all debris and waste materials will be disposed of in accordance with clauses specified in the bills of quantities Burning or illegal duping of waste is strictly forbidden Waste management documentation should be kept on site	Significant (depending on quantities of hazardous waste) All costs should be beard by contractor..	Contractor	Will be specified in bidding documents (compliance with EMP)
	Replacement of asbestos containing materials and other hazardous materials	Before the renovation of the building a construction team should examine old insulation and determine the presence of asbestos Replace asbestos and other not environmental friendly material from the building, applying strict safety measures to prevent inhalation of asbestos fibers (like protection masks, enclosement of the space, etc.) Insulation material containing asbestos is defined as hazardous waste and it has to be handled accordingly	Significant cost All costs should be beard by contractor	Contractor	Will be specified in bidding documents (compliance with EMP)

PHASE	ISSUE	MITIGATION MEASURES	COSTS	INSTITUTIONAL RESPONSIBILITY	COMMENTS
	Accidental spills to water and soil	If there will be need for installing fuel storage tanks they will have secondary containment with sufficient volume to contain a spill, or 110% of the largest tank, or double sheeted container will be installed. The site will establish appropriate erosion and sediment control measures such as e.g. hay bales and / or silt fences to prevent sediment from moving off site and causing excessive turbidity in nearby channel.	Not significant All cost should be beard by the contractor	Contractor	Will be specified in bidding documents (compliance with EMP)
	Traffic disturbances	It is important that traffic management is prescribed and performed in accordance with the local laws with appropriate measures and signaling systems (e.g., appropriate lighting, traffic safety signs, barriers and flag persons) that are easily seen or easy to follow Road speed should be clearly posted	All cost should be beard by the contractor	Contractor	Will be specified in bidding documents (compliance with EMP)
	Degradation of historical or culturally important sites	If encountering archaeological finds during preparation of the site, the contractor should stop the works and follow the procedure to notify authorized bodies If works are on historical monument, the construction workers should follow the special condition of construction	Not significant cost All costs should be beard by contractor.	Contractor	Notify: Municipal Authorities, Regional Institute for Protection of Cultural and Historical Heritage Project Team in NRPD/DHMZ.

OPERATION	**Heating system and storage tanks for crude oil, diesel generator for radar site or gas and possibly storage for chlorine if used in "pool" on the on the Ivanic Grad site**	Fire protection measures have to be implemented; Emergency Operation Plan has to be done if fuel storage exceeds mass of 5000 kg (crude oil) and / or 500 kg of gas	Relevant costs, should be paid by Operator and not from the loan	Operator (Under supervision of MEPPPC)	
	Waste management	Organized solid waste separation Collection of recyclables and organized collection of non recyclable solid waste Introduction of measures for minimization of waste production, Coordination with local waste management plan Collect and separate waste within facility Hand over waste to authorized company for hazardous waste management Follow binding reporting procedure on hazardous waste	Not significant through period of years, should be paid by Operator and not from the loan	Operator	
	Use of fire extinguishing agents	A special procedure manual i.e. Standard Operational Procedures dealing with the use of fire extinguishing agents will be prepared at the beginning of the project to deal with fire extinguishing agents. All the fire fighting facilities should follow the procedure when prepared	20000 euro	NRPD	

	Noise	The use of diesel generators (if installed) on radar site should be minimized. The source of noise disturbance should be located so that the buffer exists between the activities and areas susceptible to noise.	Not significant through period of years, should be paid by Operator	DHMZ / Operator	
	Storing	Hazardous waste should be stored according to Material Safety Data Sheets.	Initially relevant (one time cost) should be paid by Operator and not from the loan	Operator	Facility designs should address the need for storage

5.4. Monitoring Plan and Supervision

Monitoring of construction is a part of procedure for obtaining Operation permit.

PHASE	**WHAT** Parameter is to be monitored?	**WHERE** Is the parameter to be monitored?	**HOW** Is the parameter to be monitored?	**WHEN** Is the parameter to be monitored (frequency)?	**WHY** Is the parameter to be monitored?	COST	RESPONSIBILITY
Design	Implementation of EMP guidelines (RECOMMENDATION)	Design project for construction, reconstruction and adaptation	Review of elaborates and adaptation designs	Prior approval for construction as part of project monitoring program	It is recommended for the reason that adaptation by Croatian law do not need construction permit.	Should be part of the project	NRPD/DHMZ, designer
Construction	Parameters given in construction / location permit -all special conditions of construction issued by different bodies (up to 19 bodies like water company, electrical company, etc.)	Main design documentation	Part of regular inspection of MEPPPC (regional offices)	During the construction, and before Operation permit is issued	Regular review stipulated in the Law, and if any public complaint is sent to the Ministry (MEPPPC)	Included in the process of construction, cost of the contractor Cost of MEPPPC and small cost for contractor	Supervising engineer and Regional Construction Inspectorate (under MEPPPC)
	Waste management procedures?	Waste accompanying documentation that is submitted to MEPPPC	Review of waste accompanying documentation	After reporting on waste management in MEPPPC	Required by series of regulation on waste	Cost of MEPPPC and small cost for contractor	Supervising engineer MEPPPC
	Site organization	On site	Visual inspection, By checking proper fencing, installation of temporary sanitary facilities, sign posting	Prior construction works commence and on a weekly basis afterwards	Required by Law on construction	Contractor bears full cost, usually is not identified as separate category	Primary responsibility of :Supervising site engineer Supported by: NPRD / DHMZ Inspection

PHASE	**WHAT** Parameter is to be monitored?	**WHERE** Is the parameter to be monitored?	**HOW** Is the parameter to be monitored?	**WHEN** Is the parameter to be monitored (frequency)?	**WHY** Is the parameter to be monitored?	**COST**	**RESPONSIBILITY**
	Air quality (dust)	On the site	Visual observation	Continuous, however special attention should be put during tracking of material, excavation works and demolition	Good construction practices	Contractor bears full cost, usually is not identified as separate category	Primary responsibility of :Supervising site engineer Supported by: NPRD / DHMZ Inspection
	Source of construction materials (asphalt, stone quarry, borrow pits, sand/gravel)	On site	Checking that quarries, etc. have valid operating permit Copies should be kept on site	At the start of the contract	To assure that the borrowing sites comply with the current legislation	Contractor	Primary responsibility of :Supervising site engineer Supported by: NPRD / DHMZ Inspection
	Noise level (dB)	On the site and neighborhood	Sound level detector	After any complaint from local population	To assure that construction activities are in line with the Law on noise	800 Euros / measurement Contractor should bear the cost	Primary responsibility of :Supervising site engineer Supported by: NPRD / DHMZ Inspection
	Water and soil pollution due to spills improper storage, management and use of materials	On the construction site	Visual observation	Continuously (on a weekly basis)	To possibly prevent the spills	Part of the supervising engineer contract Contractor	Primary responsibility of :Supervising site engineer Supported by: NPRD / DHMZ Inspection

PHASE	**WHAT** Parameter is to be monitored?	**WHERE** Is the parameter to be monitored?	**HOW** Is the parameter to be monitored?	**WHEN** Is the parameter to be monitored (frequency)?	**WHY** Is the parameter to be monitored?	**COST**	**RESPONSIBILITY**
	Chance finds	On site	Full supervision by site inspector during excavation works	During excavation works for foundations	To prevent damage to cultural heritage	Part of the supervising engineer and contractor cost Contractor	Primary responsibility of :Supervising site engineer Supported by: NPRD / DHMZ Inspection
	Toxic / Hazardous material	On site	Proper handling and storage is checked according to MSDS material sheets	Continuously (on a monthly basis, and on random site visits)	Good management practices	Part of the regular contractor cost	Primary responsibility of :Supervising site engineer Supported by: NPRD / DHMZ Inspection
	Workers safety	On site, checking weather protective gear is worn, checking the fencing and warning signs.	Visual observation	Continuously (daily) checking that appropriate protective equipment is used		Part of the regular contractor costs	Primary responsibility of :Supervising site engineer Supported by: NPRD / DHMZ Inspection
Operation	Toxic / Hazardous material management	In buildings, warehouses and training facilities	Proper handling and storage is checked according to MSDS material sheets	Continuously, on a weekly basis	Part of the operating costs		Operator NPRD / DHMZ
	Waste management	Thru waste accompanying documentation that is submitted to	Reports to MEPPPC	After reporting on waste management in MEPPPC,	Required by series of regulations on waste	Cost of MEPPPC and operator	NRPD /DHMZ and MEPPPC

PHASE	**WHAT** Parameter is to be monitored?	**WHERE** Is the parameter to be monitored?	**HOW** Is the parameter to be monitored?	**WHEN** Is the parameter to be monitored (frequency)?	**WHY** Is the parameter to be monitored?	COST	RESPONSIBILITY
		MEPPPC,					

5.5. EMP Implementation Responsibilities

The MoF as a borrower will make sure that PIU at DUZS/DHMZ is qualitatively staffed to carry on jobs of supervision of mitigation measures and monitoring as described in EMP. The PIU will make sure that all the necessary licenses and/or permits are obtained from related environmental agencies prior to and during construction phase. The DUZS/DHMZ is responsible for proper implementation of the EMP that covers both the construction and operational phase. During the construction phase, with assistance from consultants, PIU will carry out the supervision of the works carried out by the contractor and ensure that the EMP is followed properly.

The environmental coordinator will be nominated in PIU and will make sure that the EMP is part of the bidding documents for contractor who will implement the measures and as well part of the bidding document for supervising engineer who will be in charge for the monitoring of the implementation of the measures. The supervising engineer will be required to submit biannual reports to PIU on the implementation of mitigation measures and monitoring plan of the EMP.

During the operational phase, the DUZS/DHMZ will be responsible to follow the EMP in a satisfactory manner. During the operation phase the maintenance staff of the facilities will be required to follow up and monitor implementation of the EMP as this will be part of the regular good maintenance practice. The PIU will report to the Bank and MoF about the condition of compliance with the environment within the scope of project at regular intervals on biannual basis. The compliance with EMP will be described in regular Progress reports as it will be requested by Project/Loan Agreement. The monitoring prescribed in EMP comes from the Croatian environmental legislation and therefore will also be supervised by the inspection of Ministry of Environmental Protection, Physical Planning and Construction. DUZS/DHMZ will implement the overall project, and oversee environmental compliance of the project during design phase, construction and operation phase and ensure that monitoring and mitigation plan of EMPs is being implemented. Environmental Inspectors within the Ministry of Environmental Protection, Physical Planning and Construction, together with environmental coordinator from the PIU and the Bank (during the missions) will provide supervision based on unannounced site visits during construction and operation of related to construction conditions and environmental protection.

Responsibilities for mitigation and monitoring	***Environmental information flow (reporting)***	***Decision making chain of command for environmental management (to take action, to authorize expenditures, to shut down, etc.)***	
		Activities	***Responsibility Institution or person***
During Construction:			
Environmental coordinator within the PIU Contractor	Site Supervisory Engineer to environmental coordinator to PIU manager to MoF	Monitoring of the Implementation of the EMP	Site Supervisory Engineer, Environmental Inspectorate
During Operation:			
Environmental coordinator within the PIU Operator	Operator to environmental coordinator to PIU manager to MoF	Monitoring of the Implementation of the EMP	Appointed person from maintenance Environmental Inspectorate

5.6. Capacity development, training and proposed project organization

In order to implement EMP in a successful way it is important it is necessary to arrange activities in accordance to jurisdiction of state and regional bodies, but as well arrange some new activities for which organization has to be set up.

- One of the most important issues in the phase of design is related to waste management as well as to waste-related accidents, therefore special attention should be paid to that issue, which should also be carefully supervised.

  - A team of representatives of DUZS/DHMZ and designer should be formed and measures recommended in EMP should be incorporated.

  - submit EMP in as part of the bidding document for Constructor and make it binding. Same should be done with the Supervising engineer.

The environmental specialist at PIU will receive World Bank training on the safeguards. In addition through Project management component PIU members could receive additional training on environmental compliance.

The contractor should be obliged to present the mitigation measures to his workers at the beginning of the works. The operator of each facility needs to post signs on the good management practice.

Trainings that are intended to be organized and held in Divulje are focused on fire fighting activities related to wildfires. Training curricula would be based on utilization of various types of equipment and strategies in fighting against wild fires, as well as on coordination of fire fighting activities, chain of command, and international assistance in fire-fighting. Other types of training, such as USAR (Urban Search and Rescue), urban fire fighting etc would also be held.

The stress on training courses in Ivanić Grad would be on urban fire fighting trainings, as well as on testing and examination of fire fighting equipment.

6. PUBLIC DISCLOSURE

According to the World Bank policy on Environmental Assessment, for all Category B projects, during the EA process, the borrower consults project-affected groups and local nongovernmental organizations (NGOs) about the project's environmental aspects and takes their views into account at least once. The borrower initiates such consultations as early as possible in project preparation phase. In addition, the borrower consults with such groups throughout project implementation as necessary to address EMP-related issues that affect them.

The EMP will be disclosed in Croatian and English on the website of the NRPD and website of the DHMZ. At the same time the hard copies will be disclosed in the municipalities' announcement boards as the main stakeholders can have an access to it. At the same time the hard copies will be disclosed in the municipalities' announcement boards as the main stakeholders can have an access to it. After a week of disclosure (which will include announcement of public consultation) a public consultation will be held in Zagreb on the EMP. The public will be able also to send the comments by email or regular mail for the period of minimum 20 days. The Implementation Team will respond to all comments and update the draft version accordingly. Minutes of the meeting will be attached to the final version of the EMP.

1.3 Remarks added after Public consultation in January 2009

Public consultation minutes of the meeting held on January 28, 2009 are attached in annex 4.

During the negotiation process between DHMZ and the Ministry of Defense additional sites for locating radars were proposed. The revised version of EMP (February) includes new locations. As this amends the scope of the EMP, additional public disclosure of the document will be carried out. The updated EMP will be disclosed on the website of the NRPD as well as on the website of the DHMZ, and both email addresses and hard copies addresses will be provided. In addition the document will be send to the State Directorate for Nature Protection for commenting as some of the islands where the sites are proposed (and not proposed locations) have nature protected sites.

APPENDICES

7.1. THE LIST OF THE NATIONAL LEGISLATIVE AND SUB -LEGISLATIVE ACTS REGULATING ENVIRONMENTAL PROTECTION

Environmental and Nature Protection

- The Law on Environmental Protection -Off. Gazette No. 110/07
- The Law on Physical Planning (Zoning) – Off. Gazette No. 32/02, 35/99, 68/98, 30/94
- Regulation on Environmental Impact Assessment – Off. Gazette No. 64/08
- By–Law on Environmental Information System -Off. Gazette No. 74/99 and 79/99
- Environmental Protection Emergency Plan -Off. Gazette No. 82/99, 86/99, 12/01, 14/01
- Ordinance on Environmental Emission Inventory - Off. Gazette No. 36/96
- The Law on Nature Protection -Off. Gazette No. 70/05
- The law on Cultural Monuments Protection - Off. Gazette No. 52/94
- The Law on Environmental Protection and Energy Efficiency Funds - Off. Gazette No. 107/03
- The Law on Hunting -Off. Gazette No. 10/94, 5/95, 25/96, 33/97,44/98,29/99
- The Law on Protection and Preservation of Cultural Values -Off. Gazette No. 69/99
- Ordinance on Mammal Protection (Mammalia) - Off. Gazette No. 31/95
- Ordinance on Birds Protection (Aves) -Off. Gazette No. 43/95
- The Law on Acceptance of Convention on the Conservation of European Wildlife and Natural Habitats (Bern convention) -Off. Gazette No. 6/00

Air protection

- The Law on Air Quality Protection- Off. Gazette No. 48/95
- By-law on Recommended and Limit Values of Air Quality - Off. Gazette No. 101/96, 2/97

Water Protection

- The Law on Water -Off. Gazette No. 107/95
- The Ordinance on Issuance of Water Management Documents - Off. Gazette No. 28/96
- By-law on Hazardous Substances in Water - Off. Gazette No. 78/98
- Regulation on Limit Values of Indices, Hazardous and Other Substances in Waste Water - Off. Gazette No. 40/99; 6/01
- Instructions for Keeping Records on The Frequency of Discharging of Hazardous and Harmful Substances into Water, of Quantities and Composition of Such Substances, and on the Procedures of Submitting Such Data to Public Water Management Enterprises -Off. Gazette No. 9/90
- Decision on Water Use Charge -Off. Gazette No. 15/91, 19/92, 79/92, 84/92,1/94
- Decision on Water Protection Fee -Off. Gazette No. 15/91, 19/92, 79/92, 84/92, 1/94
- Decision on Determining Catchments Areas –Off. Gazette No. 20/96, 98/98, 5/99
- Regulations On The Establishment Of Sanitary Water Source Protection Zones – Off. Gazette No. 55/02.
- The List of Authorized Laboratories – Off. Gazette No. 107/00
- National Water Protection Plan – Off. Gazette No. 8/99

Noise Protection

- The Law on Noise Protection - Off. Gazette No. 20/03
- The Ordinance on the Highest Permitted Levels of Noise In Working and Living Environment-Off. Gazette No. 145/04

. • The Ordinance on Conditions to be Fulfilled by Companies which Measure and Forecast Noise In Working and Living Environment -Off. Gazette No. 37/90

Waste Management

. • The Law on Waste -Off. Gazette No. 178/04
. • Ordinance on Waste Types - Off. Gazette No. 27/96
. • List of Authorized Institutions for Publishing Reports on Testing Physical and Chemical Properties of Waste -Off. Gazette No. 51/96,93/96
. • Ordinance on Waste Management Requirements -Off. Gazette No. 123/97
. • By-law on Hazardous Waste Management -Off. Gazette No. 32/98
. • Ordinance on Packaging Waste -Off. Gazette No. 32/98
. • By-law on unit fees, corrective coefficients, approximate criteria and measures for setting charges on burdening the environment with waste - Off. Gazette No. 71/04

7.2. ROLES AND RESPONSIBILITIES OF THE AUTHORITIES

MINISTRY OF FINANCE

The Ministry of Finance is accountable for the preparation and implementation of the Government's fiscal policy. Its goals are to contribute to stable economic growth and to the increase in prosperity, in quality of life and in employment for all Croatian citizens.

One of the most important tasks of the Ministry is the preparation of the State Budget, as well as the management of budget revenues and expenditures, that is, of taxpayers' money.

Some tasks of the Ministry, among others, are: public debt portfolio management, cooperation with international financial institutions, development, improvement and coordination of concession policy systems, undertaking measurements for the prevention of money laundering and terrorism financing, supervision and inspection tasks in the area of taxes, customs and other public revenues, foreign exchange and foreign trade operations, establishment and development of Public Internal Financial Control (PIFC) systems, at the state and local level, financial management within the framework of the Decentralised Implementation System (DIS) of the EU aid programmes for Croatia

MINISTRY OF ENVIRONMENTAL PROTECTION, PHYSICAL PLANNING AND CONSTRUCTION

The Ministry carries out administrative and other works related to general environmental protection with a high regard toward sustainable development goals. The scope of activities of this Ministry covers all activities related to physical planning and development, location, construction and operation permits, and zoning and building inspection.

MINISTRY OF HEALTH AND SOCIAL WELFARE

Ministry of Health and Social Welfare administers sanitary inspection on activities, building structures, premises, facilities and equipment that may have negative influence on human health.

MINISTRY OF CULTURE

The Ministry of Culture performs administrative and other activities related to: research, examination (analysis), updating, noting, documentation and promotion of cultural heritage; central information service; designation of protected cultural values; publishing special conditions of construction with the aim of Cultural heritage protection; cultural heritage inspection works.

MINISTRY OF THE INTERIOR

Besides basic activities of MoI such as police affairs, issuing of personal documents, it also carries fire inspection tasks. Inspectorate of the Ministry f INtertior takes part in the process of pasing the documents related to physical planning and defines special construction requirements in the procesre of issuing the location permit;, as well as in the process of technical inspection or newly built and reconstructed buildings in the process of issuing the operational permit.

MINISTRY OF AGRICULTURE, FISHERIES AND RURAL DEVELOPMENT

Ministry of agriculture, fisheries and rural development administers among others activities related to: protection of agricultural land, transformation of agricultural land to building land, forest and forestland protection. Water protection is entirely under the jurisdictions of the Water Management Directorate, which performs administrative, and other works related to water management, water resources and

usage. Under its authority are as well all inspection works on water protection, pollution prevention and water usage. The Directorate is administered through four units among which are: Unit for water management and Inspection Unit.

MINISTRY OF REGIONAL DEVELOPMENT, FORESTRY AND WATER MANAGEMENT

Water protection is entirely under the jurisdictions of the Water Management Directorate, which performs administrative, and other activities related to water management, water resources and usage. Under its authority are as well all inspection activities dealing with on water protection, pollution prevention and water usage.

CROATIAN WATERS

Among other things, the activities of the Croatian Waters include: water protection – control and monitoring of water conditions, enforcement of State Plan for Water Protection, general water management, record keeping, maintenance of integrated water information system, supervision of water related construction works.

CROATIAN FORESTS

Croatian Forests is a state-owned company in charge with activities dealing with forest protection, exploitation etc. Department of Ecology within the Croatian Forests is dealing with organization of continuing monitoring of various diseases and pests, it drafts fire-protection plans and proposes special conditions for construction of facilities in the woods and in the forest areas. This Department also performs other activities related to forest protection.

1.4 GOVERNEMNT DECISION ON TRANSFER OF LAND FOR USE TO NRDP

1.5 PUBLIC CONSULTATION MINUTES

MINUTES

Of public consultation on Environmental Management Plan which proposes environmental mitigation measures and monitoring plan for construction and operation phases of the Disaster Risk Mitigation and Adaptation Project to be financed by the World Bank

Environmental Management Plan (hereinafter EMP) of the Croatian Disaster Risk Mitigation and Adaptation Project (hereinafter DRMAP), as well as the invitation to a public consultation have been published on January 15 on the webpage of the National Rescue and Protection Directorate (www.nrpd.hr) and the State Meteorological and hydrological service (http://meteo.hr/) in both English and Croatian language. In addition the hardcopies were disclosed on the municipal boards in Novi Zagreb, Trogir, and Ivanić Grad. Both email address international@duzs.hr and regular mail address of National Rescue and Protection Directorate, Nehajska 5, Zagreb were provided for the commenting of the EMP. Until the February 5, 2009 no comments were received.

Public consultations were held on January 28, 2009 in the meeting room of National Rescue and Protection Directorate from 12 to 1 pm.

Following persons were present:

- Ms Vesna Stajčić, DRMAP coordinator
- Ms Nataša Briški, DRMAP assistant coordinator
- Ms Nataša Vetma, Operations Officer, World Bank, Zagreb office
- Mr Marinko Metličić, Croatian Red Cross
- Mr Željko Basta, City Office of emergency management, City of Zagreb
- Mr Zorislav Šubarić, State Meteorological and hydrological service
- Mr Robert Mikac, Head of the national 112 center
- Mr Viliboj Babić, DC 112

Ms Stajcic in the introductionary part of the pubic consultation presented the Croatian Disaster Risk Mitigation and Adaptation Project, and Ms Briški u introduced the Environmental Management Plan par.

After the introduction, present audience expressed their interest which was mainly related to the project itself than on the EMP. Mr Basta expressed his support to the investments in the development of emergency services and especially firefighting. Mr. Metlicic focused on the Public Awareness and Education sub component which Is focusing on multimedia activities in public awareness raising. He has

emphasized how important are the efforts in this area and mentioned that the Croatian Red Cross is trying to strengthen that segment in their own work. Mr Šubarić emphasized the importance of cooperation between Meteorological and hydrological service, and 112 system and has porposed an update of the Standard Operational Procedures.

Minutes prepared on February 5, 2009 by Natasa Briski

Nataša Briški