

# THE GOVERNMENT OF THE REPUBLIC OF CROATIA

3893

Pursuant to Article 150 paragraph 4 of the Environmental Protection Act (Official Gazette 110/07), the Government of the Republic of Croatia, at its session on 27 November 2008, adopted the following

## REGULATION

### ON THE MANNER OF ESTABLISHING ENVIRONMENTAL DAMAGE

#### I GENERAL PROVISIONS

##### Article 1

This Regulation lays down activities which are considered as dangerous for the environment and/or human lives and health, criteria according to which environmental damages and imminent threat of environmental damage are assessed and established, guidelines for choosing measures for remedying and preventing environmental damage and methods for determining expenses related to the establishment and remediation of environmental damages and imminent threat of environmental damage.

##### Definition of terms

##### Article 2

For the purposes of this Regulation the following definitions apply:

1. Occupational activities which are dangerous for the environment and/or human life and health (hereinafter referred to as: dangerous activities) are activities carried out in the course of a certain economic activity, irrespectively of its private or public, profit or non-profit character; and which present a risk for the environment and/or human life and health;
2. Services and natural resources services mean the functions performed by a natural resource for the benefit of another natural resource or the public;
3. Baseline condition means the condition of natural resources at the time of environmental damage occurrence that would have existed had the environmental damage not occurred, estimated on the basis of available information and data;
4. Recovery, including natural recovery means, in the case of water, protected species and natural habitats the return of damaged natural resources and/or impaired services to baseline condition. In the case of land damage it means the elimination of any significant risk of adversely affecting human life and health;
5. Ministry is the ministry competent for environmental protection activities;
6. Competent public administration body is the Ministry and other central state administration bodies competent for activities related to the protection of specific environmental components

or protection from specific burdens, and for activities related to the protection of human health, protection from fire and protection and rescue, as well as the county prefect, mayor of the City of Zagreb and the municipality mayor;

7. Minister is the minister competent for the field of environmental protection;

8. The Act is the Environmental Protection Act;

### Scope Article 3

(1) The provisions of this Regulation shall apply to companies which perform dangerous activities within the meaning of this Regulation.

(2) The provisions of this Regulation shall also apply to companies which perform other activities which are not considered dangerous within the meaning of this Regulation if the performance of those activities does not include remedying of damage and preventing damage to plant and animal species and/or natural habitats protected in line with a special regulation (hereinafter referred to as: protected species and habitats).

Dangerous activities

### Article 4

Dangerous activities within the meaning of this Regulation are:

1. activities established by the regulation which lays down the procedure for the establishment of integrated environmental protection requirements,
2. activities established in Annex I of this Regulation.

## II CRITERIA FOR THE ESTABLISHMENT AND ASSESSMENT OF ENVIRONMENTAL DAMAGE AND IMMINENT THREATS OF DAMAGE

Criteria for the establishment and assessment of environmental damage and imminent threats of damage

### Article 5

Criteria for the establishment and assessment of environmental damage caused by the performance of a dangerous activity, or imminent threats of damage are:

- type of installation and characteristics of dangerous activity,
- characteristics of the installation site and of the site of the environmental damage, or characteristics of the site of the imminent threat of damage,
- area of adverse effects and potential adverse effects on the environment and likelihood that domino effects will occur,
- impact of environmental damage on human lives and health,

- impact of environmental damage on protected species and habitats,
- impact of environmental damage on a specific environmental component, and landscape structure,
- quality and extent of activities and measures required to remedy environmental damage, or imminent threat of damage,

Significant environmental damage

#### Article 6

(1) Any environmental damage with a proven adverse effect on human lives and health which occurred as the consequence of performing a dangerous activity shall be classified as a significant environmental damage (hereinafter referred to as: significant environmental damage).

(2) The following shall not be classified as significant damage:

- negative variations on protected species and/or habitats occurred as a consequence of natural fluctuations regarded as normal for the species or habitat in question,
- negative variations in the environment due to natural causes or resulting from intervention relating to the normal management of sites, as defined in the site management plan or variations resulting from former methods of performing the company's activity or use of the installation,
- damage to species or habitats for which it is established that they will recover, within a short time and without special human intervention, either to the baseline condition or to a condition which leads, solely by virtue of the dynamics of the species or habitat, to a condition deemed equivalent or superior to the baseline condition.

Criteria for the establishment and assessment of damage on protected species and/or habitats resulting from company activities

#### Article 7

The significance of any damage which has adverse effects on reaching or maintaining the favourable status of protected species and/or habitats is assessed on the basis of the conservation status of protected species and/or habitats in the moment the damage occurred, environmental services which are provided by protected species and/or habitats, as well their natural recovery capacity in accordance with regulations governing nature protection.

Determining significant adverse change on protected species and/or habitats

#### Article 8

Significant adverse changes to the baseline condition of protected species and/or habitats shall be determined by means of measurable data such as:

- the number of individuals, their density or the area covered,
- the role of the particular individuals or of the damaged area in relation to the species and/or to the habitat conservation assessed at the local, regional, national and EU level,
- the protected species' capacity for propagation (according to the dynamics specific to that species or to that population), its viability and/or the habitat's capacity for natural regeneration (according to the dynamics specific to characteristic type of habitat or dynamics of the populations of that species),
- the species' or habitat's capacity, after damage has occurred, to recover within a short time, without any intervention other than increased protection measures, to a condition which leads, solely by virtue of the dynamics of the species or habitat, to a condition deemed equivalent or superior to the baseline condition.

### III MEASURES FOR REMEDIATION AND PREVENTION– SELECTION GUIDELINES

Most appropriate measures for remedying environmental damage and imminent threat of damage

#### Article 9

(1) Most appropriate measures for remedying environmental damage and imminent threat of damage are those measures by means of which the environment may return to a condition equivalent to the one prior to the occurrence of damage, or measures used to permanently remedy damage or imminent threat of damage at its source.

(2) Guidelines for selecting the most appropriate measures for remedying and preventing environmental damage, or remedying threat of damage are set out in Annex II of this Regulation.

#### Article 10

(1) The competent public administration body, that is, the minister and other head of central state administration body, depending on competence in accordance with special regulations, shall select the remediation or prevention measures which must be performed in the specific case of environmental damage and imminent threat of damage in accordance with Annex II of this Regulation, all depending on the significance, characteristics and extent of the occurred environmental damage, or imminent threat of damage, as well as depending on the site of the company's installation in which the activity causing environmental damage or imminent threat of damage is performed. In the process of establishing remediation and prevention measures, the Minister or other head of central state administration body shall, where appropriate, cooperate with the operator of the company whose activity has caused environmental damage or imminent threat of damage.

(2) In case of environmental damage which affects several environmental components –that is at least two, the Ministry shall coordinate the selection of remediation and prevention measures within the meaning of paragraph 1 of this Article if remediation measures have not been prescribed for an individual environmental component by a regulation laying down protection of that environmental component.

## Article 11

(1) If several instances of environmental damage or imminent threat of damage occur at the same time, and those damages affect protected species and/or habitats within the meaning of this Regulation, and competent public administration bodies cannot ensure that the necessary remedial measures are undertaken at the same time, the Ministry shall, in coordination with other public administration bodies, decide on priorities in relation to undertaking the remediation and/or prevention measures.

(2) When making the decision referred to in paragraph 1 of this Article it is necessary to take into consideration the risk that the damage poses for human lives and health, as well as the characteristics of the site on which the environmental damage or imminent threat of damage has occurred, nature and extent as well as gravity of various instances of environmental damage concerned, and possibility of domino effect occurrence as well as the possibility of natural recovery.

## Article 12

When deciding on remediation and/or prevention measures, the competent public administration body, that is the Minister and other head of central state administration, depending on the competence pursuant to a special regulation, shall invite the persons on whose land those measures would be carried and the representatives of the public concerned in accordance with the Act to submit their opinions on the planned measures and shall take them into account when selecting and undertaking the measures.

## IV DETERMINING COSTS FOR ESTABLISHING AND REMEDYING ENVIRONMENTAL DAMAGE AND IMMINENT THREAT OF DAMAGE

## Article 13

(1) Costs for establishing and remedying environmental damage and imminent threat of damage shall be determined by establishing the economic value of the environment. These values may also be established individually in relation to specific environmental components.

(2) Establishing of the economic value of the environment is prescribed in Annex III of this Regulation.

## Article 14

Annexes I, II and III present an integral part of this Regulation.

## Article 15

This Regulation shall be published in the Official Gazette, and shall enter into force on 31 March 2009.

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Zagreb, 27 November 2008

Prime Minister  
Ivo Sanader, m.p.

## ANNEX I

### LIST OF DANGEROUS ACTIVITIES

Dangerous activities for the purpose of this Regulation are:

1. Waste management operations, including the collection, transport, recovery and disposal of waste, including the supervision of such operations and after-care of disposal sites, which requires a permit, management of disposal sites as well as thermal treatment of waste in accordance with waste management regulations;
2. All discharges into surface water,
3. All discharges into groundwater;
4. The discharge or injection of pollutants into surface water or groundwater which require a permit pursuant to water protection regulations;
5. Water abstraction and impoundment of water subject to prior authorisation pursuant to water protection regulations;
6. Manufacture, use, storage, processing, filling, release into the environment and onsite transport of:
  - dangerous substances pursuant to the regulation governing prevention of major accidents which involve dangerous substances,
  - chemicals pursuant to the Chemicals Act and implementing regulations thereof,
  - plant protection products pursuant to regulations governing plant protection,
  - biocidal products pursuant to regulations laying down placement biocidal products on the market.
7. Transport by road, rail, inland waterways, sea, or air of dangerous goods or polluting substances pursuant to regulations on the transport of dangerous substances;
8. Placement on the market of genetically modified organisms pursuant to regulations on placement of GMOs on the market.
9. Any release into the environment, transport of genetically modified organisms;
10. Transboundary shipment of waste;
11. Management of waste generated by research and exploitation of mineral raw materials.

## ANNEX II

## GUIDELINES FOR SELECTING MEASURES FOR REMEDYING AND PREVENTING ENVIRONMENTAL DAMAGE

### 1. REMEDIATION OF DAMAGE TO WATER OR PROTECTED SPECIES OR NATURAL HABITATS

Remedying of environmental damage, in relation to water, sea, protected species or natural habitats, is achieved through the restoration of the environment to its baseline condition by way of primary, complementary and compensatory remediation, where:

- a) »primary« remediation is any remedial measure which returns the damaged natural resources and/or impaired services to, or towards, baseline condition;
- b) »complementary« remediation is any remedial measure taken in relation to natural resources and/or services to compensate for the fact that primary remediation does not result in fully restoring the damaged natural resources and/or services;
- c) »compensatory« remediation is any action taken to compensate for interim losses of natural resources and/or services that occur from the date of damage occurring until primary remediation has achieved its full effect;
- (d) »interim losses« means losses which result from the fact that the damaged natural resources and/or services are not able to perform their ecological functions or provide services to other natural resources or to the public until the primary or complementary measures have taken effect. It does not include financial compensation to the public concerned affected by adverse effects of environmental damage.

Where primary remediation does not result in the restoration of the environment to its baseline condition, then complementary remediation will be undertaken. In addition, compensatory remediation will be undertaken to compensate for the interim losses.

Remedying of environmental damage, in terms of damage to water or protected species or natural habitats, also implies that any significant risk of human health being adversely affected be removed.

#### 1.1. Remediation objectives

##### Purpose of primary remediation

1.1.1. The purpose of primary remediation is to restore the damaged natural resources and/or services to, or towards, baseline condition.

##### Purpose of complementary remediation

1.1.2. Where the damaged natural resources and/or services do not return to their baseline condition, then complementary remediation will be undertaken. The purpose of complementary remediation is to provide a similar level of natural resources and/or services. If appropriate, the possibility of establishing the condition which would have been provided if the damaged site had been returned to its baseline condition shall also be considered at an alternative site. Where possible and appropriate the alternative site should be geographically linked to the damaged site, taking into account the interests of the affected population.

## Purpose of compensatory remediation

1.1.3. Compensatory remediation shall be undertaken to compensate for the interim loss of natural resources and services pending recovery. This compensation consists of additional improvements to protected natural habitats and species or water at either the damaged site or at an alternative site. It does not consist of financial compensation to the public concerned which has been affected by environmental damage.

## 1.2. Identification of remedial measures

### Identification of primary remedial measures

1.2.1. Options comprised of actions to directly restore the natural resources and services towards baseline condition on an accelerated time frame, or through natural recovery, shall be considered.

### Identification of complementary and compensatory remedial measures

1.2.2. When determining the scale of complementary and compensatory remedial measures, the use of resource-to-resource or service-to-service equivalence approaches shall be considered first. Under these approaches, actions that provide natural resources and/or services of the same type, quality and quantity as those damaged shall be considered first. Where this is not possible, then alternative natural resources and/or services shall be provided. For example, a reduction in quality could be offset by an increase in the quantity of remedial measures.

1.2.3. If it is not possible to use the first choice resource-to-resource or service-to-service equivalence approaches, then alternative valuation techniques shall be used. The competent authority may prescribe the method, for example monetary valuation, to determine the extent of the necessary complementary and compensatory remedial measures. If valuation of the lost resources and/or services is practicable, but valuation of the replacement natural resources and/or services cannot be performed within a reasonable time-frame or at a reasonable cost, then the competent authority may choose remedial measures whose cost is equivalent to the estimated monetary value of the lost natural resources and/or services.

The complementary and compensatory remedial measures should be so designed that they provide for additional natural resources and/or services to reflect time preferences and the time profile of the remedial measures. For example, the longer the period of time before the baseline condition is reached, the greater the amount of compensatory remedial measures that will be undertaken (other things being equal).

## 1.3. Choice of the remedial options

1.3.1. The reasonable remedial options should be evaluated, using best available technologies, based on the following criteria:

- the effect of each option on public health and safety,
- the cost of implementing the option,



- the likelihood of success of each option,
- the extent to which each option will prevent future damage, and avoid collateral damage as a result of implementing the option,
- the extent to which each option benefits to each component of the natural resource and/or service,
- the extent to which each option takes account of relevant social, economic and cultural concerns and other relevant factors specific to the locality,
- the length of time it will take for the restoration of the environmental damage to be effective,
- the extent to which each option achieves the restoration of the site of environmental damage,
- the geographical linkage to the damaged site.

1.3.2. When evaluating the different identified remedial options, primary remedial measures that do not fully restore the damaged water, sea, and protected species and/or natural habitats to baseline or that restore it more slowly can be chosen. This decision can be taken only if the natural resources and/or services foregone at the primary site as a result of the decision are compensated for by increasing complementary or compensatory actions to provide a similar level of natural resources and/or services as were foregone. This will be the case, for example, when the equivalent natural resources and/or services could be provided elsewhere at a lower cost. These additional remedial measures shall be determined in accordance with the rules set out in section 1.2.2.

1.3.3. Notwithstanding the rules set out in section 1.3.2. and in accordance with Article 6 paragraph 1 of this Regulation, the competent public authority is entitled to decide that no further remedial measures should be taken if:

- (a) the remedial measures already taken secure that there is no longer any significant risk of adversely affecting human health, water, sea or protected species and natural habitats, and
- (b) the cost of the remedial measures that should be taken to reach baseline condition or a similar level would be disproportionate to the environmental benefits to be obtained.

## 2. REMEDIATION OF LAND DAMAGE

The necessary measures shall be taken to ensure, as a minimum, that the relevant contaminants are removed, controlled, contained or diminished so that the contaminated/damaged land, taking account of its current use or approved future use at the time of the damage, no longer poses any significant risk of adversely affecting human health. The presence of such risks shall be assessed through risk-assessment procedures taking into account the characteristic and function of the soil, the type and concentration of the harmful substances, preparations, organisms or micro-organisms, their risk and the possibility of their

dispersion. Use shall be ascertained on the basis of the land use regulations, or other relevant regulations, in force, if any, when the damage occurred.

If the use of the land is changed, all necessary measures shall be taken to prevent any adverse effects on human health.

If land use regulations, or other relevant regulations, are lacking, the nature of the relevant area where the damage occurred, taking into account its expected development, shall determine the use of the specific area.

A natural recovery option, that is to say an option in which no direct human intervention in the recovery process would be taken, shall be considered.

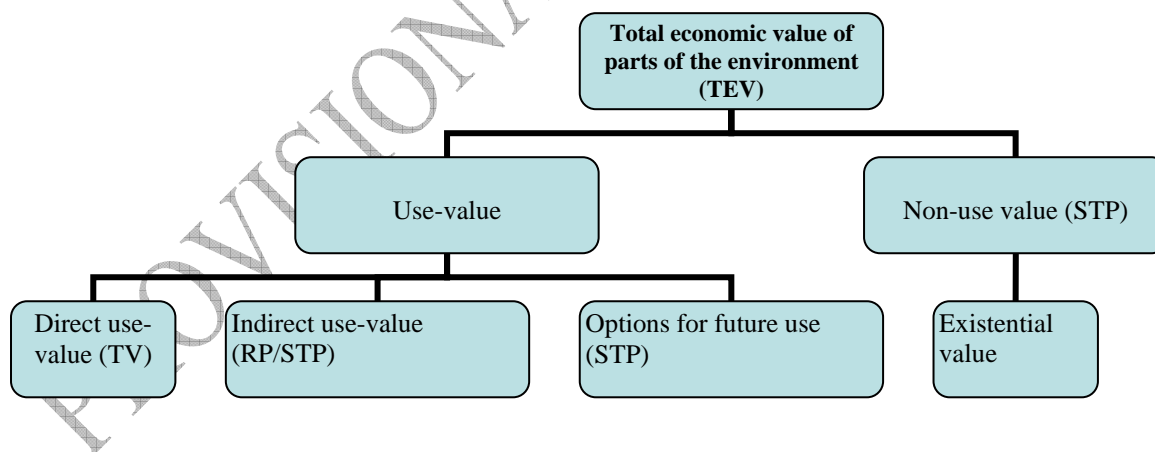
#### INSTRUCTION:

Guidelines for remedial measures set out in this Annex shall apply taking into account measures prescribed by a special regulation for the protection of a specific environmental component or protection from a specific environmental burden.

Guidelines for remedial measures set out in this Annex shall also appropriately apply as the Guidelines for prevention measures if it is possible to implement them in an actual case of environmental damage and imminent threat of damage.

#### ANNEX III

##### ESTABLISHING THE ECONOMIC VALUE OF THE ENVIRONMENT



Scheme 1 Components of total economic values of the environment with basic methods for their determination/TV, RP, STP)

Table 1 MEANING OF SPECIFIC COMPONENTS OF THE TOTAL ECONOMIC VALUE OF THE ENVIRONMENT

Component	Meaning
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Direct use-value	Use-value which has market evaluation (potential direct market evaluation)
Indirect use-value	Use-value which cannot be directly evaluated on the market
Options for future use	Future use of resource (direct and indirect value )
Existential value	Pure existence value of a resource, or passive value

INSTRUCTION for determining methods for choosing economic evaluation of parts of the environment:

Common division contains three basic groups of methods for the economic evaluation of the environment. The first is connected with the possibility of establishing the value of parts of the environment as market values (MV) and is frequently applied to cases in which it is possible to establish the relation between the impact and response (damage) in the environment which can be easily expressed on the market. The implementation of these methods is frequent and possible in the area of waste management, through various, market based prices in relation to handling and treatment of waste or restoration of damaged environment, when it is obvious that restoration operations may completely restore all impaired environmental services.

The second group of economic evaluation are methods for revealing or determining revealed preferences (RP), which connect a specific market evaluation to parts of the environment which otherwise do not have market value, most frequently through indirect use-values of the environment which can be appropriately expressed.

Most frequently used methods are stated preference techniques (STP), which are based on questionnaires and surveys. The most popular among them are willingness to pay (WTP) and willingness to accept compensation (WTA), which may be jointly marked as WTP (A). Those methods for establishing environmental value are based on willingness to pay in various, mostly hypothetical, situations.

The methods for value transfer from other countries (BT) are applicable to all methods prescribed in this Annex (TV, RP, STP) for similar or same costs (damages) if they have not been defined in the Republic of Croatia.