

# EXAM OF ENVIRONMENTAL IMPACT ASSESSMENT

## I SEMESTER 2012-2013 (70 pts)

Name:

Date:

### 1. Fill the spaces with the right answer. (2 e/o)

The \_\_\_\_\_ indicate the scope of the study and how deep it might be, telling how detailed the EIA studies should be.

The \_\_\_\_\_ refers to the original environmental conditions existing at a given moment before a change

The \_\_\_\_\_ is the natural or juridic person interested in the development of a project

The \_\_\_\_\_ is one of the most important tools in order to incorporate an environmental point of view into the decisions to be taken by the project from the investment perspective

The \_\_\_\_\_ is the relative knowledge or ignorance common to every EIA process and critical for the impact prediction

### 2. Answer the questions (5 pts e/o)

2.1. Mention the steps (in order) needed to get the environmental license. Briefly explain each of them (5 pts)

2.2. Mention the categories for the environmental project classification according to the World Bank. Give a brief description of each one of them. (5 pts)

If a project will be executed in Galapagos related to the construction of a hotel which category do you think it will be and explain why.

2.3. Which are the main elements that affect the impact evaluation and the significance.

2.4. What is an indicator and how you must choose them. Give an example.

### 3. Choose the right answer. There is only one correct answer. (2 pts e/o)

The impact prediction is a

- a. difficult exercise
- b. technical exercise
- c. very long exercise
- d. easy exercise

What are the characteristics of the EIA team:

- a. Experience going to conferences
- b. Must be able to work in very hostile conditions
- c. Listen to others point of view
- d. Must have good relationships with the authorities

The purpose of mitigation is

- a. Find a way to do things in a better way
- b. Restore social and environmental benefits
- c. Prevent, minimize and remediate the negative impacts
- d. To warrantee that residual impacts are under the acceptable limits
- e. All of the above

Is a way to minimize impacts

- a. Scale reduction or re-location of the proposal
- b. Change the EIA team
- c. Talk with the authorities
- d. To obtain a construction permit to start

The methodoloty used to predict impacts depends on:

- a. The type and size of the EIA team
- b. Nature of the potential impact
- c. The experience of the authorities
- d. Time to do the EIA and EMP

### Read the following cases and answer the questions (10 pt e/o)

#### CASE 1

An important mining company has been operating for about 4 yrs in a coastal region. The mining activity of this company is very intense. This company has effectively implemented its EMP with great success, mitigating the environmental impacts caused by this activity. Up to date the results of the environmental auditory show up that this company completely fulfil all the legal requirements, laws and environmental standards established by the authorities. Since 1 yr this company is part of a trial against the community, which argues that after the company has started its mining activity in the zone, the quality of the water has been significantly deteriorated and that this company is operating in a protected area. The Company argues that it has relevant proofs in order to demonstrate that they have not polluted

the environment but the others industries located in the zone. The mining company emphasizes that when they began the activities the environment was already polluted specially the water and that the quality standards of the water were not good at all.

- What document the mining company must present in the trial in order to demonstrate its argument that the environmental quality was already deteriorate before their activities began in the zone. Why is this document so important?
- What document the mining company should have obtained in order to get its environmental license demonstrating that they are not located in a protected area. What is the name of the institution that emit this document in Ecuador.
- Mention 2 environmental impacts this company might cause into the environment and 2 ways to mitigate this impacts that should be included in its EMP.

## CASE 2

Read the following article and answer the following questions

- Which are the main impacts caused by the oil company Texaco in the Amazonian Territory. Mention 2 environmental and 2 social impacts.
- Classify those impacts according to the main categories of impacts (positive, etc, etc, etc)
- Are there any accumulative impacts present in the area due to the oil extraction activity. If the answer is yes, identify which ones are accumulative impacts
- According to the framework of mitigation of impacts, in which level will be this case located: mitigation or compensation. Briefly explain why?
- If your answer is compensation indicate how this can be done (three possible ways).

**DRILLING IN ECUADOR**

*The pollution is worse every day. Everyone has a cough or other sickness.  
-- Gabriel Alatorre, Petroecuador mechanic in Shushufindi, Ecuador (Althaus, 1996)*

The Ecuadorean Amazon, known as the Oriente, was once one of the richest ecological and sparsely populated sites in the world. When oil was discovered there in 1967, the situation changed dramatically. Extremely high levels of water pollution of drinking, bathing, and fishing waters in the Oriente have been attributed to contamination from unlined waste pits (Brooke, 1994). More than 600 of these toxic waste pits were created during Texaco's involvement in Ecuador between 1972 and 1990 (Kane, 1996). Texaco used such pits set into the ground to store toxic byproducts from oil production and separation. The lack of barriers allowed waste to leak into the surrounding soil. Ecuador's Undersecretary for the Environment, Jorge Alban, reports that Texaco, while having cleaned 268 waste pits, has not cleaned at least 400 pits and these are not included in the cleanup plan signed by Texaco, Petroecuador and the Ecuadorean government (Schemo, 1998).

Oil pollution in local water supplies vastly exceeds international standards. According to the EPA, the level of polycyclic aromatic hydrocarbons (PAHs) deemed acceptable in water is zero, as they are strong carcinogens. The EPA standard in the U.S. is for a maximum PAH concentration of 28 nanograms per liter of water, corresponding to a one in 100,000 lifetime risk of cancer. Samples of drinking water collected near oil production facilities in the Oriente ranged from 33 to 2,793 nanograms of PAHs per liter of water -- counts up to one hundred times the EPA's safety guidelines. Bathing and fishing waters had concentrations ranging from 40 to 1,486 nanograms per liter, and water from waste pits ranged from 46,500 to 405,634 nanograms per liter (Brooke, 1994).

Ecuador's debt has created a dependency upon oil that has pressured the government into two compromising policies: to accept substandard operational practices by oil companies and to open ecologically-sensitive areas to exploration and production, disregarding the effects on indigenous populations. Neither action involved consideration of indigenous groups that have lived in the Oriente for centuries, and rarely were indigenous groups informed of oil production or settlement plans. The Ecuadorean government has estimated the cost of environmental damage to be \$5 billion and has asked Texaco for reparations for cleanup costs in the region (Parrish and Long, 1994).

## CASE 3

A car washing and lubricating company has been operating for several years (more than 10 yr) in a terrain with the following characteristics: porous, filterable with a freatic level near to the surface (1.5 m depth). The company is located close by to an estuary branch which is quite useful for them since they discharge all the disposals and waste generated by this activity directly into the estuary. These disposals contains a high level of oils and greases. All the dumping from the car maintenance goes directly into the soil since there are not palettes or gutters. The lubricating company operates for 20hrs for seven days per week. The Municipality since the local people has complained has arranged the execution of an EIA and you are part of it.

- What type of environmental evaluation has to be performed by the Municipality according to this case
- What type of professionals will be part of the consultancy group performing the EIA. What will be the minimum that you can propose.
- Mention three environmental impacts of this activity
- Mention three mitigation measures you will propose as part of your EMP to mitigate the impacts identified