RISK ISSUES IN PERFORMANCE PROJECTS OF ENVIRONMENT

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Abstract

The processes of industrialization have increased in the last part of the twentieth century and continued even stronger in this century, leading, unless the beneficial effects on quality of life not covered by this article, at emergence of pollutants and risk factors. Environmental risk in project involves identifying all activities affecting the environment, determining the most significant activities, prioritizing risk factors to mitigate or eliminate them. In this context, tracking environmental performance of projects is useful and necessary from the processes of an organization, continuing with the organizational entities and all its components. We present a matrix of priority environmental risk issues while the activities of an organization involved in the projects can generate some forms of environmental modification, thus inducing potential.

Key words: risk, environment, project, matrix, impact factors

INTRODUCTION

Article has as objectives: identification of environmental aspects, their hierarchy and estimate the environmental consequences of environmental projects. It started with the definition in the draft environmental risk, then continuing with the need to identify, hierarchical and accurate estimate of environmental risks in the project.

The concept risk in project of environment

The Economist Books gives a definition of risk as "risk of a loss. Against the risk, investors get a win. In general, the risk is greater, the greater will be substantial gains. Of those that remain on the safety line (only by buying government bonds for example) are said to have risk aversion. (The Economist Books, 2001)

In his" Managerial Finance" Paul Halpern, J. Fred Weston, Eugene F. Brigham defines risk "as the likely variability of future profitability of the asset" (Weston, Brigham, 2001)

Nita Dobrotă, in "Dictionary of Economics", provides risk as "an event or process is uncertain and probably cause a loss, a loss in activity, operation or economic activity" (Dobrotă, 2000)

Constantin Rosca, in "Ergonomics Dictionary" defines risk "as the possibility that an act or conduct activities appear less known or unknown circumstances, with possible adverse effects on outcomes (favorable and

unfavorable) and a planned future action subject to influence casual factors "(Rosca, 1999)

In the Explanatory Dictionary of Romanian language universal encyclopedic, it gives a definition much broader concept of risk as "being able to get into danger, to be facing trouble or bear a loss, potential risk " (Explanatory Dictionary of Romanian Academy, 1990)

Also, Investopedia The dictionary defines risk as "the possibility that current investment not realize expected return" (The Investopedia Dictionary, 1993)

O. Renn, in his Three decades of risk research. Accomplishments and Challenges provides four new models of risk:

1. Imminent hazard (Sword of Damocles) - risk is considered a threat that can strike at any time. There is a sense of insecurity among human subjects.
2. Pandora's Box - the risk is an invisible threat to health and wellbeing. It is always bad.
3. Balance of Athens - the risk is perceived as a possible financial loss as a result of decisions taken.
4. Myth of Hercules - the risk is desired, sought, taken in other words actively exploited. "(McGraw Hill, 2000)

In an article in the paper Investements, W. Sharpe gives a concise definition of risk concept as a "probability of loss or damage" (Sharpe, 1985)

Dictionary full market economy since 1998 defines risk as "an event or process unreliable and likely to cause a loss, a loss in activity, operation or economic action" (Dictionary full market economy, 1998)

For Bîrsan Piu risk "is likely not to get some return on the investment" (Cişmaşu, 2003).

The project manager understands the risks associated with the whole project. Planning, however thorough, "cannot avoid risk, while the project manager has the ability to exert control over random events" (Barsan-Piu, Popescu, 2003). In the context of a project, "the risk is a condition or an event more or less predictable, which may have positive or negative effects on its objectives" (Cişmaşu, 2003). Risk has a cause and it is materialized through a consequence, such as: the overall purpose or project team composition. Presents risks sometimes can be anticipated, for example some programs delay or cost overruns.

Risk analysis aims at finding and answering the question: Is the risk acceptable? If so, environmental project manager will seek to ensure residual risk or a negative response, risk reduction.

Risk management systems are designed to do more than identify risk. "They need to quantify the risk and to estimate the impact on the project in case of event. The project manager decides if the risk is acceptable or not " The

project manager searches to identify risks on which the organization is exposed such as to establish and implement appropriate preventive measures when put into practice a process. "Risk management determines the largest possible number of risks, mitigate their impact, develop response strategies when certain events materialize and provides funds for contingencies"

Identification of environmental aspects

Environmental issues from different perspectives can be seen that negative and positive environmental pollution and materials that cost savings etc., Also, certain environmental issues, which is already happening, and potential environmental issues, issues of direct and indirect aspects. In this context, the identification of environmental aspects related to the project activities in relation to risk should consider the following:

- Emissions to air;
- Discharges in water:
- Waste management;
- Land pollution;
- Impact on communities;
- Use of raw materials and natural resources;
- Other local environmental issues.

The examples of environmental aspects and impacts could be introduced in a prior environmental assessment are given as follows in the table below:

Table 1

Environmental aspects / impacts the environment

No. crt.	Activity	Environmental aspect	Impact
1	Performing civil and industrial works	Consumption of resources	Consumption of energy, water and construction materials.
		Discharges into waters	Pollution of surface or groundwater with sewage, manure, leaking oil (fuel oil), other hazardous materials.
		Production of waste	Contamination of land with household waste, hazardous waste (oil), landscape degradation.
		Atmospheric emissions	Noise effects on communities, fauna: exhaust local and global effects (greenhouse. Climate change).
		Posibile incendii	Incendierea vegetației sau a pădurii cu efecte locale (efecte asupra faunei, florei, personalului sau comunităților locale): costuri de remediere a daunelor.
2	Transport of heavy motor vehicles (Heavy)	Noise emissions	Community noise, and stressing fauna of the region, negative impact of tourism
		Contamination and degradation of land	Compaction and soil texture modification, destruction of vegetation: contamination by waste ammunition exploded and / or unexploded.
3	The management of waste household	Collection, recycling.	Cost reduction activities, reducing acquisitions: prevention of pollution.
		elimination of waste	Air, soil or water that is not according to law, disposal costs (travel, contracts with specialized companies) or to pay penalties
4	The management of substances and hazardous materials	Discharges and accidental spills Leaks from storage improper waste abandoned	Environmental pollution, human accidents; need for contingency plans, equipment and trained personnel action: use of financial resources, time, energy Pollution of factors of the environmental rehabilitation. Cost of the environmental rehabilitation

The hierarchy of environmental aspects

In the context that they have identified the environment aspects and risks preponderantly, they must be ranked according to their environmental importance and influence. Thus, their hierarchy, organization issues involved in the project choice is to control or reduce them and the first of which will deal later. The main criteria for ranking are:
- Significant frequency and / or severity;
- Provisions in legislation and regulations;
- Internal company requirements;
- The potential to affect health / environment;
- If connected to the community;
- Negative or beneficial effect on the beauty of nature;
- Possibility to affect the climate;
- That the depletion of natural resources;
- Coverage of the organization's environmental policy.

If an organization has a list of activities, risk aspects and impacts, it must prioritize them, causing significant ones. To this end take into account several factors are essential: the frequency and severity of impact, the ability to control the degree of impact or influence on the impact of a business organization.

The higher the frequency and severity of the impact of an activity, greater importance must be given. However, the degree of influence on a particular impact, the organization can easily reduce the impact on you foot control. In the same context, other factors may be considered for ranking of environmental aspects of risk are:

-The limits imposed by specific standards and legislation;
- The organization's environmental policy priorities;
- Financial implications (costs and savings of resources);
- Effects on the public image of the organization;
- Ongoing impact. "

Procedure of the classification

The classification procedure is composed of four stages namely:

- the environment manager or SMM team decide on the criteria they will use to classify the work impacts: implications for human health and / or the environment, the number of violations of law, non-compliance with the organization's environmental policy or higher level management, the ease with which can be resolved, costs to resolve / mitigate the impact;
- Call all impacts classified using the classification system (criteria);
- Collect information on other criteria (legislative conflicts, financial position, easy solutions EIC);

- All information is presented in an accessible form - ISO 14001. The hierarchy should be made in writing in a logical, justified, taking into account all priorities set at higher levels (policy, regulations).

In the context expressed on the hierarchy and estimating the impacts and consequences for the environment, health, safety, bear in mind that the risk of damage / impact will depend on the risk / impact type and impact exposure.

It is very difficult to determine the risk to be very objective, are considered priority issues that cause incurable diseases compared to those that cause damage or injury remediable global (greenhouse effect, ozone depletion) are more important than regional or local. However, it is imperative to achieve a matrix of priorities by which environmental issues are classified.

Estimating the effects of the environment

The hierarchy of environmental aspects as a matrix is shown below:

Table 2

The hierarchy of environmental aspects based on the average score, the size and operational costs including the organization's goals

Appearance of environment	Score environment	operational costs	environment of external work	complaints	Condor legislation	Easy of solution	Include in organization targets	Parliament decision on priority manage
consumption of energy	20	200000	NO	NO	NO	YES	YES	1
warmth	12	70000	YES	NO	NO	NO	YES	2
noise	12	0	YES	YES	NO	NO	NO	3
Chemical waste	8	70000	NO	NO	NO	YES	YES	4

"The classification of environmental issues using as criteria for environmental impact by quantity and type dispersion effect - it can be used throughout the organization, after the first audit, and environmental issues are classified for each relationship assessing the environment in terms of:

- Quantity / size - score A:
- Scale dispersion (global, regional, local) - D score;
- Effect (reversible, irreversible) - the score is;

Each parameter is given a score of 1-3, depending on the size problem: multiplying the score for quantity, dispersion and effect, to obtain total score representing the extent of the problem size - the higher the score, the problems are greater (severe impact). There may be 10 possible levels: 1, 2, 3, 4, 6, 8, 9, 12, 18, 27, but it should be noted that the score is not objective or scientific value (such amount not given); score only the size of the problem and how it would be relevant if it press for that.

However, scores in value from 1-2, not only determines the action of the environment considerations, from an the environment perspective, scores of

3-8 require firm action, scores from 9-18 indicate that it is essential undertaking an action, and a score of 27 is alarming and requires immediate action be taken. "

Table 3

Classification system of environmental issues-version

Score			The level of the problem X xZxZ	The class of the problem	The need for effort
X	Y	Z			
3	3	3	27	IV	ALARMING
3	3	2	18	III	CRITIQUALLY
3	2	?	18		
2	3	3	18		
3	2	2	12		
2	3	2	12		
2	2	3	12		
3	1	3	9	II	RELEVANT
3	3	1	9		
1	3	3	9		
2	2	2	8		
3	2	1	6		
3	1	2	6		
2	1	3	6		
2	3	1	6		
1	2	3	6		
1	3	2	6		
2	2	**1**	4		
2	1	2	4		
1	2	2	4		
3	1	1	3	I	SMALL
1	3	1	3		
1	1	3	3		
2	1	1	2		
1	2	1	2		
1	1	2	2		

Table 4

Criteria for score A – version

(A)				
Environmental Issues	3 points	2 points	1 point	Observations
Water consumption m^3 /year	>300000	<300000 and >60000	<60000	
Energy consumption CO2 S02 and No t/x / year	>10	<10 şi >1	<1	The value will be calculated table for each energy source
waste l/year	>l0	< 10 şi >l	< l	It will differentiate between conventional and hazardous waste
Pollutants in water waste t/year	>10	< 10 and >l	< l	Categories of pollutants
Pollutants in emissions of air t / year	>10	< 10 and >l	< l	Categories of pollutants
Odors, noise, vibration	Impact constant	Long impact more 2 hours / day	short period impact	Any legal limit, exceeding 1%. will be considered
Risk	>50% from value	< 50% and >1% From value	< l% from value	Perceptible meaning Directive ties, faced with the EU Seveso

Table 5

Criteria for score D– version

(D)				
Environmental Issues	3 points	2 points	1 point	Observations
Water consumption m^3 /year	supplying with drinking water	Private network supply for more companies	own sewage water	
Energy consumption CO2, S02 and No t/x / year	Always 3 points			Tax on the global dispersion
waste l/year	storage is not in accordance with the legislation		storage is in accordance with the legislation	classification of normal waste / dangerous waste - according to different types of waste
Pollutants in water waste t/year	discharging in the emissaries, lakes, sea	Filtration, diffusion in the ground	For stations of complex treatment	Varies from company to another
Pollutants in emissions of air t / year	Always 3 points			Tax on the global dispersion
Odors, noise, vibration	Perceptible > 500 m source	Perceptible to> 50 housing in the area 500 m from source	Perceptible to <50 housing / range 500 m from the source	
Risk	Always 3 points			To be used with Seveso European Union

Table 6

Criteria for score E– version

(E)				
Environmental Issues	3 points	2 points	1 point	Observations
Water consumption m^3 /year	The regeneration last longer than 20 year	The regeneration takes between 5 and 20 years	The regeneration takes less than 5 years	
Energy consumption CO2 S02 and No t/x / year		S02 and NOx always 2 points	CO2 always 1 point	each type will be established
waste l/year	Poisoned, carcinogenic substances, etc..	dangerous substances with (N or P) or consumption oxygen environment aquatic	All fractions cleaned of other materials: soil, precipitation sand.	determined to different components of of waste
Pollutants in water waste t/year	Poisoned, carcinogenic substances, etc..	substances dangerous with (N or P) or consumption oxygen environment aquatic	Other substances.	determined to different components of water waste
Pollutants in emissions of air t / year	poisoned, carcinogenic substances, destructive of the ozone stratum etc.	Dust inorganic. S02 No x Smoke and gas from substances dangerous organic and inorganic.	Co2 and other substances	A sliding scale may be developed in the preparation time audit.
Odors, noise, vibration		Always 2 points	short period impact	Any legal limit, exceeding 1%. will be considered
Risk	More or equal to value notifiable	More or less than value notificable		To be used with Seveso

CONCLUSIONS

The environmental risk issues are significant in the development projects environment. In carrying out environmental projects, the organization should identify aspects of environmental risk and to select those with significant impact.

Accordingly, the researcher concludes that the organization must establish at least one procedure to:

- Identify the environment issues of activities, products and services;
- Retain only those aspects which the organization can influence or control them;
- Select only those aspects which have or can have a significant impact on the environment.

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