EVALUATING THE COMPATIBILITY BETWEEN THE ACTIVITY OF S.C. ARPECHIM AND THE ECOLOGICAL RESTRICTIONS

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Abstract: *The environmental policy is the moving element for the implementation and improvement of a S.M.M. by which the companies can keep and improve the environmental performance. Therefore it is recommended that the environmental policy reflects at the highest degree the management commitment of the economic agent, to comply with legislation in force and seek the continuous improvement of the environmental performance. The environmental policy represents the foundation on which the organization lays in order to establish its general and specific environmental objectives. It is recommended for the environmental policy to be clear enough in order to be understood by the interested parties, both within the company and outside and to be analysed and revised periodically, so it reflects the modification of the conditions and information. Evaluating the compatibility between the activity of S.C. Arpechim and the ecological restrictions requires a global diagnostic based on 6 analysis grills. The purpose of the present work is of formulating that diagnostic.*

Keywords*: hierarchic level, environmental expenses, environmental policies, representation level*

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1. INTRODUCTION

Each type of organization has its organizational and functioning characteristics and from this point of view, it is difficult to recommend a common methodology, applicable wherever and at and whose success it's always guaranteed. Although consultants usually have their own methodologies, sometimes very advanced, based on a wide professional experience, nevertheless one cannot say that it's only one successful way.

From the category of the obstacles encountered in the way of making an ecological organization we can enumerate: (Oprean C., Suciu O., 2003):

- Opposition towards new ideas and approaches, for which the personnel has no formal training. Demonstration projects are vital to show that clean productions can function also in our country or in our company;
- Lack of financial resources, awareness and training, experience, information and access to existent knowledge;

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- Uncertainties regarding adequate information, technologies or legal regulations;
- Policies or governmental regulations based on reducing a single type of pollutant that does not encourage innovative solutions to reduce pollution and the ones offering incentives for investments in technologies to eliminate pollution at the end the pipe;
- Lack of familiarization of engineers and consultants with the practices and techniques of clean productions. Usually, they do not pay enough attention to the improvement of self-management, of the small modifications necessary to the existent equipment, or to other less technical problems, that can be very economically efficient;
- The fear to occupy a disadvantageous position from a competitive point of view due to high costs.

An organisation that adopts a clean production process, can achieve one or more of the following benefits, on the same time with pollution reduction:

- raw materials and energy savings;
- waste management lower costs;
- improved quality of the products;
- high productivity;
- reducing the risks of diseases of the workers and of the dangers upon environment;
- improvement of the public image of the company (Popescu E., 2006).

2. RESEARCH METHODOLOGY

In order to achieve the purpose of the research an analysis of the literature has been made (see Paul de Backer, *Le Management Vert,* Paris, Dunod.) that proposes the 6 analysis grills structured in 5 levels of representation of the phenomenon and environment processes at S.C. Arpechim.

Evaluation of the compatibility between the activities of the industrial ecological S.C. ARPECHIM restrictions means, in the end, expressing a global diagnosis, within the meaning mentioned, which can be based on six analysis grids:

a) the importance of the environmental problems in the general strategy of the organization;
b) the reflection of the environmental problems in communication and marketing strategy;
c) the reflection of the environmental problems in the production strategy;
d) the reflection of environmental problems in the ensuring strategy with human resources;
e) the reflection of the environmental problems in the legal and financial strategy;
f) the reflection of the environmental problems in the research – development strategy.

I propose the following content of the analysis grids, structured on five levels for representing the phenomena and environmental processes, in the general effort and, on fields, at ecological organization level.

3. EXPRESSING A GLOBAL DIAGNOSIS BASED ON ANALYSIS GRIDS

a) The place of the environmental conservation in the general strategy of S.C. ARPECHIM:

Table 1. The importance of the evaluation given to environmental conservation in the general strategy of S.C. ARPECHIM.

Presentation level (elements)	1	2	3	4	5
1. Hierarchic level for taking the environmental responsibilities			*		
2. Environment expenses (besides investments) in the budget of the organisation				*	
3.Investments for the conservation of the environment			*		
4. The importance given to in communication policy in the environ. management					*

5.The importance of the external communication policy within the environmental					*
6. The importance given to increasing the number of sustainers of the ecological activity					*
7.Efficient distribution (efficient and economical) of the environmental responsibilities				*	
8. Perceiving the need to ecologies the activity for internal environment of the organisation				*	
9. Perceiving the need to ecologies the activity for external environment of the organisation				*	
10.The share of environmental problems in the research - development activity.				*	
Presentation level (elements)	Msg = (Σ Ei/50)*100 Ei = representation level of the element i				

Msg = (41/50)*100=82%

The evaluation of the global importance in environmental conservation, the general strategy (Msg) of the organisation, has as starting point the hierarchic level for taking environmental responsibility, the practice, having in this respect several situations:

1. taking on responsibilities by the general manager;
2. taking on responsibilities by a compartment;
   - public relations;
   - supervise and verify the production quality
   - ensuring safety in the development of the technical – productive processes
3. taking on responsibilities by more compartments
4. taking on responsibilities by a specialised compartment

b) Communication and marketing strategy

Table 2. Evaluation of the importance given to communication and marketing in the general strategy of the organisation S.C. ARPECHIM

Representation level (elements)	**1**	**2**	**3**	**4**	**5**
1. Are the objectives of the ecologisation of the activity clearly expressed?					*
2. Do you intend to increase the number of an ecological activity supporters?				*	
3. Do you request from your partners behaviour and an efficiency according with the objectives of the ecologisation?				*	
4. Can the present obtained products (services) benefit of a “green label”?			*		
5. Do you take into account to obtain products with “green label”?					*
6. Do you budget resources for the external communication with the clients, in connection to the ecological characteristics of the products (services?)				*	
7. Do you have a green card in the relationships with the supplies?				*	
8. Do you intend to modify the structure of the product s(services) in a favourable aspect for the environment taking into account: - the public?					*
- the clients?					*
- the suppliers ?					*
- the insurers?		*			
- the shareholders?		*			
- the collaborators ?			*		
9. How big is the effort of the “green” external communication?			*		

10. Do you have means for the prognoses of the ecological parameters of the products (services) realized?		*			
Reflection of the environmental problems in the communication and marketing strategy (Mcm)	Mcm=(ΣEi/75)*100 Ei=representation level of the element i				

Mcm = (56/65)*100 = 74.66 ≈ 75%

As the communication in the environmental management is a continuous process, is considered that the most aimed institution is the one of the organisation, for which the projection of the concept of environmental protection in the image plan presents various advantages. Separated, in point of the reference system, the internal and external communication in the environmental management, are in feed-back relation, because the internal communication give consistency to the mechanism of sending the image, increasing the efficiency of the external communication. The most important share must be held by the internal communication as it is necessary to transmit any information, first in the internal social environment, than in the external one as a condition to give value to the institution in question, of the experience achieved in time.

c) Reflection of the environmental problems in the production strategy

Table 3. Reflection of the problems in the strategy of S.C. ARPECHIM.

Presentation level (elements)	**1**	**2**	**3**	**4**	**5**
1. Is the safety of the activity one of the prior objectives?					*
2.Do you have organisational structures and means to promote the total quality?					*
3. Are the technological processes conceived according the ecological restrictions?				*	
4. Are the collaborators formed and informed for taking on the environmental responsibilities?					*
5. Does the organisation have an investment plan according to the adequate environmental legislation for its activity?					*
6. Do you take into account the position of the organisation on the competitive market of the transformation technologies used?					*
7. What place does the organisation occupy in the field of clean using technologies?				*	
8. What place do the impact studies have in the integration process of the environmental policy in the general policy of the organisation?				*	
9. Is there an analyse system even for the less severe ecology. crisis situations?			*		
10. Do you have a manual explicitly comprising maintenance and safety measures for the area where the activity is carried out?					*
11. Are they put into practice the safety and maintenance measures and instructions of the impact area?					*
12. Does the internal safety service regarding the activity realize an objective evidence of the impact of the technical – productive system on the environment?				*	
13. Do the structures of the organisation with responsibilities in the field of quality take into account the quality of life generally speaking?				*	
14. Are the “weak” and “strong” points regarding the observance of the ecological restrictions periodically analysed?					*
15. Does the decision to invest reflect a possible evolution of the public opinion and the regulations regarding environmental conservation?					*
Reflection of the environmental problems in the production strategy (Mp)	Mp=(ΣEi/75)*100 Ei=representation level of the element l				

Mp=(68/75)*100 = 90,66 ≈ 91%

d) Reflection of the environmental problems in ensuring strategy with human resources:

Each organisation should have in the organisation a person responsible for environmental problems and complying aspects depending on the size of the company and the type of business, disposition may not be a permanent responsibility. The environmental leaders should be selected taking into account the abilities proved and not appointed in the position because they were available. The management of the organisation should understand that this person will represent the organisation in the relations with the authorities and will be responsible for obtaining information for different internal and external reports. As the management has to take the final legal responsibility for these reports, it needs a person on which it can count. The candidate should be selected for his integrity and proved ability in solving different situations accurately.

Table 4. Reflection of the environmental problems in the insurance with human resources at S.C. ARPECHIM

Representation level (elements)	1	2	3	4	5
1 .Does the environmental policy reflects in the insurance policy with human resources at organisational level?			*		
2. Do the collaborators take the initiative by themselves to promote the objectives of the environmental policy?			*		
3. Is the ecological criterion part of the criteria system for choosing subordinates?	*				
4. Does the forming, informing of the collaborators in point of environmental object represent a consequent material and financial effort?			*		
5. Is the importance for environmental conservation a concern that is reflected in the establishment of the hierarchic structures?			*		
6. Can we talk about a generalized responsibility about the environmental problems at organisational level?				*	
7. Is it made responsible the perceiving of the ecological risks generated by the activity of the organisation at the level of the management structures?					*
8.Is there an action plan to involve all the collaborators in case of a technical accident?					*
9. Is there an action plan for the assembly of collaborators for the purpose of environmental safeguarding?				*	
10. Does the job description of the collaborators reflect the experience of some accidents and the results of the research in the environmental field?			*		
The reflection of the environmental problems in the insurance strategy with human resources (Mru)	Mru=(ΣEi/50)*100 Ei=representation level of the element i				

Mru = (34/50)*100 = 68%

e) The reflection of the environmental problems in the legal and financial strategy:

The main regulations in force regarding environmental protection are:

- Law 73/2000 – Environmental fund law
- Order 340/2000, for the approval of the works and services Classification, that are provided by the environmental protection authorities in tax regime and the amount of related prices ;
- Law 107/1996 – Water Law;
- Order125/1996 – The regulation procedure of the economical- social activities with impact on the environment;
- Order 756/1997, for the approval "of the regulation regarding environmental pollution assessment";

- Order 278/1996, for the approval of the certifying Regulation for the elaboration of the impact study on the environment and of the environmental balances;
- Order 699/1999, for the approval of the Procedures and competences for issuing the water management permits and authorisations ;
- Law 8/1991, for the ratification of the Convention regarding trans boundary air pollution at long distances, concluded at Geneva, the 13th of November 1979;
- Law 84/1993, Romania's adherence to the Convention on the Protection of the Ozone Layer, adopted in Vienna on 22nd of March 1985, and to the Protocol regarding Substances that deplete the ozone layer, adopted in Montreal on 16th of September 1987, and for the acceptance of the amendment to the Montreal Protocol on Substances that deplete the ozone layer, adopted at the Second Meeting of the Parties in London, 27-29th of June 1990;
- Law 24/1994, ratifying the United Nations Frame Convention on climate changes signed in Rio de Janeiro on the 5th of June 1992.

According to Law 137/1995 – The Environmental Protection Law, the strategic principles and elements to ensure sustainable development are:

1. Precautionary principle in decision making;
2. The principle of prevention of environmental risks and damage occurrence;
3. The principle of conservation of biodiversity and natural ecosystems specific to the natural bio geographic frame;
4. The polluter pays principle;
5. Maintaining, improving environmental quality and reconstruction of damaged areas;
6. Creating a national system of integrated environmental monitoring.
7. Surface and underground water protection, and improvement and maintaining their quality and natural productivity in order to avoid certain negative effects on environment, human health and material goods.

Natural and legal persons should:

- to ask the environmental permit and/or authorisation for the activities foreseen. Do not make the object of authorisation the wells drilled at depths up to 50 m, at the established deadline, water samples to be analysed.
- to ensure, at the request of the environmental protection authorities, the reduction, modification or ceasing of the activity generating pollution, to ensure measures and special equipment for the insulation and phonic protection of the sources generating noise an vibrations, to verify their efficiency and to exploit only those that do not exceed the allowed phonic threshold.
- to ensure their own monitoring systems of the installations and technological processes for the analysis and pollutant control on the range of incidence where the activities are carried out and the evidence of their results, in order to prevent and avoid technological risks and accidental losses of pollutants in the environment, to monthly report the results of the environmental monitoring to the competent authority for environmental protection.

Shall be punished with imprisonment from 2 to 7 years:

- to issue the environmental permit and \ or authorisation without the complete mandatorily documentation required;
- to present in the impact studies and analyses, false studies and analysis
- to introduce in the country wastes or hazardous substances for storage and \ or destruction;
- disobedience for testing any new substances from the country or from abroad;
- failure to report promptly any major accident;

- misapplication or failure in taking intervention measures in case of a nuclear accident;
- to knowingly provoke pollution by discharger or direct sinking in natural waters;
- refusal to intervene in case of accidental water pollution.

Table 5. The reflection of the environmental problems in the legal and financial strategy at S.C. ARPECHIM

Representation level (elements)	1	2	3	4	5
1. Is the observance of the environmental regulations at organisational level a responsibility at the highest hierarchic level?					*
2.Is there at organisational level an own system of legal audit on environmental problems?				*	
3. Are the responsibilities: moral, penal, civil, administrative in case of ecological crisis expressed?			*		
4.Is there an action plan in case of ecological crisis?				*	
5. Does the organisation have the capacity to finance at any time an expertise in the legal field and in the field of environmental problems regulations?				*	
6. Does it exist concern for updating the ecological objectives of the organisation in financial terns?				*	
7. Are the objectives of the environmental management decided at the highest hierarchic level in the organisation?					*
8. Does it exist a medium and long term plan of the actions to maintain the environmental quality?					*
9.Does the functional relations diagram contain also the ones from environmental accountancy?					*
10.Does the annual report regarding the company's activity foresee also a medium capital?					*
Reflection of the environmental problems in the legal and financial strategy (Mjf)	Mjf=(ΣEi/50)*100 Ei=representation level of the element i				

Mjf=(44/50)x100=88%

f) The reflection of the environmental problems in the research – development strategy.

In the case of S.C. ARPECHIM, the research-development department does not function at the highest parameters. Each month it is performed the monitoring of the emissions in the case of the air – this is done by a specialized company in this respect.

For waters, the monitoring is done by a specialized company, but water is daily checked in the own laboratory**.**

Table 6. The reflection of environmental problems in the research – development strategy at S.C. ARPECHIM

Representation level (elements)	1	2	3	4	5
1. Are the techniques and technologies used now harmless for the environment?			*		
2. Does it exist at organizational level technological resources for improving the ecological performance?				*	
3.Is the concern for the environment the main object of the research – development activity?				*	
4. Are the restrictions for obtaining the licences / certificate a reduced margin of manoeuvre in favour of environment?		*			
5. Is the balance price / technology favourable for an environmental policy?					*
6. Does it exist a plan to develop the "green" techniques and technologies?					*

7.Do you know the impact of technologies used in a normal exploitation conditions?				*	
8. In crisis conditions?				*	
9.Are you concern about the most advanced technologies/ techniques in point environment?					*
10. Can we understand that the technological structure is influenced by the external requirements (to the organisation) in point of environmental management?				*	
The reflection of the environmental problems in the research – development strategy (Mcd)	Mcd=(ΣEi/50)*100 Ei=representation level of the element i				

Mcd=(40/50)x100=80%

Within the S.C. ARPECHIM, we present a global diagnosis regarding the importance given to the environmental policy in the strategy of the organisation- Table 7 and the normal curve for reflecting the environmental policy Figure 1.

Table 7. Global diagnosis regarding the importance given to environmental policy in the organisation strategy la S.C. ARPECHIM

The field	Representation level
1. General strategy	82 a = 0.17
2. Communication strategy	79 a = 0.16
3. Production strategy	91 a = 0.19
4.The insurance with human resources strategy	68 a = 0.14
5. Legal and financial strategy	88 a = 0.18
6. Research – development strategy	80 a = 0.16
Global diagnosis (Mg)	Mg = Σajmj/6 Mj = the importance given to the environmental policy Aj = the importance of field j in report with environmental problems

Mg = 13.6%

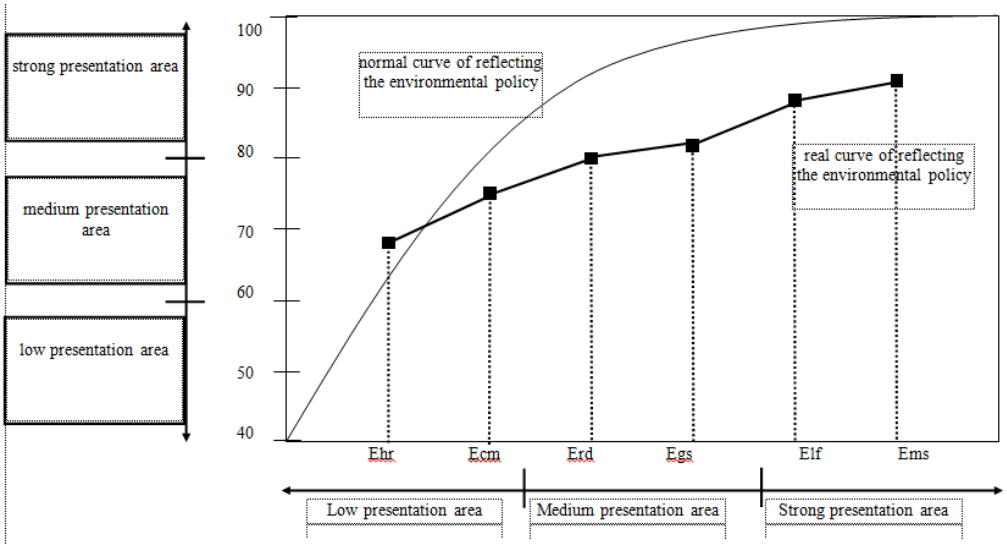

Figure 1 Normal curve of reflecting the environmental policy (Rojanschi V., Bran F., 2003)

3. CONCLUSIONS

Following the grids solved within S.C. ARPECHIM, one can notice that: the higher score was obtained by the production strategy – this thing is very important, because in any organisation it is necessary to have a production as high as possible so that the company obtains the expected profits.

The second place was occupied by the legal and financial strategy with a representation level of 88, this reflects the fact that the society observes the laws of the state having a particular care in this respect.

On the third place it is the general strategy with a representation level of 82, followed in the fourth place by the communication strategy- pointing out an increased interest towards communication, with implications both in the internal communication and in the external communication, because the internal communication gives consistency to the mechanism of sending the image, increasing the efficiency of the external communication.

The last place it's occupied by the strategy of insuring with the human resources, this is due to employments.

From the figure presented above, one can notice the following aspect: the real curve of reflecting the environmental policy comes very close to the normal curve of reflecting the environmental policy.

The low importance and representative area was obtained by the strategy of insuring with human resources. The communication strategy fell under the medium representative area and in the low importance area.

The production strategy fell under the major importance area and under the strong representative area.

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