THE WORLD AND EUROPEAN EXPERIENCE IN THE DOMAIN OF SUSTAINABLE MANAGEMENT DEVELOPEMENT

Author*:
Ion PETRESCU

Abstract. *In the analysis and the generalisation of the world and European experience achieved in the field of sustainable management development we start with the belief that the direct experience of those who have passed over all the stages of construction, implementation, function and certification of a sustainable management development system in their organization represent, for all those who are being interested, a highly valuable source of practical information. To this, we add the fact that in numerous countries, the implementation of the sustainable management development system has been proved successfully, not only due to the already gained financial benefits[1]but also because of the credibility increases in obtaining bank loans, attracting investments and new beneficiaries. Therefore, at present, at the world level, we can see a companies preoccupations orrientation towards the implementation of the sustainable management developement systems.*

Keywords*:* sustainable developement, sustainable developement management, systemic and processual approach, environment protection, ecology.

JEL Clasification: *Q01, Q5, Q57*

---

* *Ion PETRESCU, Ph.D.,HC.Prof., University „Spiru Haret".*

[1] *We have in mind the identification of the areas that can bring economies, the increasement of the production efficiency, the find of new markets and many others.*

1. Placing the sustainable management developement problem on a world plane

1.1. Brief presentation of the situation

We start with the finding that everywhere in the world, the great progresses in the health, social and economic developement domain were suddenly stopped by natural or human related causes and had devastating effects on the comunities, countries or regions. We add another finding: the continous deterioration of the environment and the increase of the cities have grown the disaster vulnerability.

As the field specialist emphasyze[2], at the international level, the disasters represent the cause of an average 25.000 death and more than 3.000 milion US dollars annual distruction. Related to the victims number, the least developed countries were most affected, which have suffered 97% of all the 825 major world's natural disasters between 1970 and 1985, more than 99% of all the national disasters.

Approached at a causative plan, among the disasters due to human activities, the biggest weight is due to the energetic industry, which between the years 1979 and 1986 happened in the coal mining domain as fires, natural gases and petrol, as explosions, hydroelectric power station dams distruction or middle distruction in a nuclear power station.

One of the most unwanted dimension of the problem is given by the fact that between the years 1944 and 1987 were, in the entire world, 284 nuclear accidents, many of them were caused by an unsufficient isolation of the izotopes or to an accidental expose to the X ray action.

The continous registrations made by the scientists emphasize the conclusion that an extreme naturalm event becoms a natural disaster, when it has a significant impact an the human activities and locations. Also, the natural disasters can lead indirectly to environmental distructions[3].

The last years have seen a great diversity of disasters, with milions deaths, numberous deseases and unforgivable social-economic distructions:

---

[2] *Rojanschi, Vl., Bran, Fl., Politics and environmental strategies, Ed. Economică, Bucureşti, 2002, p. 223.*

[3] *There can be mentioned a flood which has distroyed a barage containing toxic mud or a chemical factory distroyed by an earth quaqe.*

- Distructive earth quaqes in America, Iran, Egipt, India and recently in South-east Asia, Sri Lanka, Thailand;
- Great floods in Bangladesh, Pakistan and the Mississippi region, United States;
- Volcanic eruption in the Pacific perimeter, exactly in the Philippine islands;
- Technologic disasters, as the explosions in the Guadajara city, Mexic sewerage system.

A similar state is being presented as follows:

- Due to a calcareos slop fall (over 240 milions m^3) in the Vaiant (Italy) river basin, there has been formed a water wave of over 100 m (over the crowning) which have distroied completely, in 7 minutes, the Lonharanne city, 2.117 persons losing their life;
- the Malpasset barrage (France) has instantly crushed down, with no simptomatic phenomenons, the flood ditroing the Frejus city and all the vilages from down stream, registring 4.200 victims and 30 bilions francs in damage (the investition costed 2% of the damage value);
- of all the 17.000 important hydroenergetic barrages in the world, 6% were damaged and completely destroyed 2%.

The picture becomes allarming if we consider the number of those affected by the disasters between the years 1966 - 1990, keeping in mind it nature.

The number of persons affected by the world catastrophas
(after Rojanschi, Vl., Bran, Fl., 2002)

The catastrophas nature	Affected persons		Deceased persons	
	Number	Percentage %	Number	Percentage %
Floods	753.334.055	77,2	116.714	8,6
Earth quaqes	42.186.559	4,3	579.689	42,9
Volcanic erruptions	1.129.544	0,1	27.065	2,0
Winds	179.447.613	18,4	627.211	46,4

We must add the finding that in the last years the calamities and catastrophas have become more often. Facing this dangers, some states have adopted the following meeasures:

- they have started the periodical instruction of the civil defence forces, in the line of participation to the limitation and elimination of these phenomenons, while cooperating with the specialised formations in these interventions;
- annualy, at the N.A.T.O. school from Oberanmergau – Germany are being organised seminars on civil protection, lead by the instructors from the Federal Agency for organization in case of disasters (catastrophas);
- in countries like Turkey, Greece, England, USA, every year or semester, they unfurl great aplications, in order to train the civil defence units and formations, as well as the bringing up to date and cheking the population information and alarmation plans in case of catastrophas (disasters);
- also there unfurl cooperation applications with the neighbour states, in case of necessity in the border line area;
- during the instruction, there are measures of supplying the civil defence formations and the populations with the necessary means;
- to acknowledge the population over the danger in case of calamity or catastrophas, there are being made efforts to achieve modern systems, centred on acknowledgement and alarmation;
- to acknowledge the population and train the civil defence organs, to check out the functioning manner of the technical alarming means in every country, there take place periodically exercices at the administrative regions and some important economic objectives level;
- at the same time with the modernization and creation of some central networks for the population ackowledgement and alarmation, the foreign specialists continue their searches for creating an optical and sound alarmation system, to be installed in the working environments and in the living houses.

Some time ago, the domestic wastes have become a highly important problem for human kind. The "strong"[4] environment generates in the present time a considerable „heritage" of hard distructible wastes which continue to grow. Their degradation, when it happens, generates a strong polution – for exemple, the lead, mercury, zync batteries – which spead in all the environmental factors[5].

---

[4] It comprises products made out of different materials plastic, azbociment, glas fibres or other nonbiodegradable materials.

[5] Rojanschi, Vl., Bran, Fl., Op. cit., p. 183

In the past, but also in the present time, the USA is the main domestic wastes producer, with over 700 kg/pers./year[6], Europe, Czech Republic and Greece have the lowest level, and Finland, the greatest. Romania, with 400 kg/pers./year, has a medium level. Germany it self stores a quarter of the entire annual waste quantity in the European Union. The countries from the north of Europe, environmentaly preoccupated, which apply a complexe technological strategy is in the top countries which values the wastes. Here, we have to emphasize the difference: while in the United Kingdom the domestic wastes are considered to be different from the industrial ones, and in France there is being ensured a minimum strorage wwhich helps the valueation and the energetic transformation, in the Sothern Europe countries there is being applied the rule of „all in the storage".

In Japan, we observe a stagnation of the process, in the condition of reduced available land, they practice the valuation troughout incineration.

In India, China, the Middle East, Africa, the ex soviet countries, the South America, the wastes correct storage problem is a major problem, the insufficient preoccupation caused by the economic difficulties and by the lack of education in this domain.

At such disasters, we must add the fires and the chemical accidents.

At typology plan, the disaster producing fires refer to:

- the great harbour, industrial and urban ensembles fires;
- the forrest fires;
- the great buildings fire.

By definition, the fire is a complexe phenomenon, with an undeterminated evolution, which includes different phenomenons of phisycal or chemical nature; in a fire evolution there intervene numberous factors: form and dimension of the room, the existing load, the exterior openings, the nature and position of the burning materials, the place and manner of starting the fire, the rooms position in the building, etc.

The chemical accidents produce disasters troughout the drain of dangerous substances.

---

[6] *It been mentioned that in USA, the wastes storage placements are very well closed and the strorage norms are highly rigouros.*

By a chemical accident we understand the sudden introduction of a quantity of dangerous substance which is high enough to endanger the health or wellbeing of people, economic activities or other forms of life.

Such incidents, called technological accidents or disasters, comprise:

- chemical substances leaks in the environment (inclusively petrochemical), toxic (inclusively wastes) due to local industrial and storage accidents, which produce, transform or consume such substances or wastes;
- sea transport accidents (especialy near the sea shore) on interior rivers or on land (auto, train or aviatic transportation);
- petrol and gase overflow especialy at the sea shore, interior rivers or on land (from pipes or reservoirs);
- nuclear accidents or incidents that produce radioactive substances leaks into the environment, from nuclear instalation or wastes storage places or during the transportation of such substances on dry land, by sea or by air.

Under a cause aspect, such incidents can be produced by: human errors, negligence, other accident forms, natural phenomenons (earth quaqes), wars, civil conflicts or sabotages.

We have presented so far few events which have been the death cause for milion people, numberous deseases and unforgiveble socio-economic disasters. As we early have emphasized, the main problem for the human kind is the limitation of the continous degradation of the environment and the increase of the urban settlements, that favours the disaster vulnerability. As follows, we will present the steps made by the man kind on this road, which is also hard and necessary.

1.2. Managerial elements in the measures adopted by the international organisms for the prevention and intervention in case of emurgency

1.2.1. The United States involvement

Fundamental elements of the human kind, air, water, flora and fauna developement are being treatened at national, binational, multinational and global scale. The countries turn their hopes towards the United Nations Organization, which is considered to be a unique and competent leader.

We try to emphasize the manner inn which the United Nations have assumed the leadership of the prevention and intervention process in case of global emurgencies[7]:

- the first international ecological treaty dates since 1946 in the form of the International Convention for the Whales Golf Regulation;
- in the second hals of the XIX-th century, UNO played a fundamental role in the negociation of 240 international ecological treaties, starting with the conservation of the migration birds and the protection of the stratospheric ozone layer;
- the negociation of the Montreal protocol and it's application has set the bases of the use elimination for substances like carbide fluorine chlorines and represents one of the greatest moments of the United Nations Organization[8];
- an important moment is the International Commerce Convention with the Endangered Speces from the Wild Flora and Fauna, negociated in 1973, which has determined the sturgeons salvation from the Caspian Sea[9];
- The Sea Treaty Law, setting the teritorial waters limits at 200 miles, gives to the national governments the authority to protect the fishing areas along the shores;
- The United Nations place at the base of the international negociations on climatis stabilization problems, the researches and predictions of the Intergovernment Committee for climatic changes[10];
- in 1972, in Stockholm unfuls the first Conference on the Environment, which entitles the international ecological movement, which is still born;
- in 1992, between 3 and 4 june, has been called the Earth Forum from Rio de Janeiro, which adopted the Rio Declaration regarding the environment and the developement. About the semnification, we emphasize the fact that the international leading principles in the environment field, is constituting as

---

[7] On the UNO and other institutions in the field preoccupation dimension, there can be consulted the paper of Brown, R.L., Eco-economia. Crearea unei economii pentru planeta noastră, Ed. Tehnică, Bucureşti, 2004, p. 287 – 309.

[8] Farman, J. C., Gardêner, B. G., ShanKhin, J.D., Large Losses of total Oyone in antartica Reveal Seasonal CIOJNO Interaction, În: Nature 16 May 1985, p. 207-208.

[9] Frost, Gr., Caviar Clampdown Eyed to Help Stugeron Burgeon, în: Reuters, 20 June 2001.

[10] Mikelsen, R., US Abandons Kyoto Climate Pact – A Blow to Europe, în: Reuters, 20 March 2004.

official declarations expressing the basics for a sustainable developement policy ensuring an action platform:

Principle 1. The human beings is in the center of the sustainable developement preoccupations. They have the right to a healthy and productive life in harmony with the nature.

Principle 3. The right to developement must be exercised, so there will be equitable satisfied the developement and environmental needs of the present and future generations.

Principle 4. To achieve a sustainable developement, the environmental protection nust constitute a part of the developement process and can't be considered separately.

Principle 8. To achieve a sustainable developement and a superior life quality for all people, the states must reduce and eliminate the unsustainable developement and consume manners and promote proper demographic policies.

Principle 9. The states must cooperate to stregthen the inner capacity for sustainable developement, improving the scientific cooperation troughout scientific and technological knowledges and by stimulating the developement, adaptation, technology issue and transfer, including the new, novation technologies.

Principle 24. The war distroys the sustainable developement. Therefor the states must respect the international laws, ensuring the environment protection during the armed conflicts and to cooperate to it's improvement in case of need.

Principle 25. Peace, environmental developement and protection are interdependent and inseparate.

Principle 27. States and peoples will cooperate with good will and in partnership to respect the principles of the present Declaration and to improve the international law in the sustainable developement domain.

After the Rio Conference, there are being fundamented also the great principles of the international environment law.

1.2.2. The new Role of mass-media

In the world management process for sustainable developement, un important role is the one of the information. This helps the people to understand the need of change in the ecological domain, by presenting the achievements in the eco-economy evolution. Building this depends on human behaviour, who's global effort must be directed on the ecological education problem. A special

contribution in this sense is the one of the news chanels like Associated Press and Reuters in english, Deutsche Press Agency in german, Agence France Presse in french, Kyoto News Service in japanese, Press Trust from India in english and in local languages, Tass in russian, E.F.E. in spanish and Xinhua in chinese. The world electronic news organizations, like B.B.C. (British Broadcasting Corporation), America's Voice and C.N.N. (Cable News Network) have also a central role. At national level, the television networks, the news bradcast and the papers are key-players.

1.2.3. The NGOs and the personalities

The ecologist movement is strongly dominated by the NGOs[11]. They develop to fullfill the voids left by the governments and the bussiness sector.

Numberous groups make researches in ecological groups, by delivering informations for the environment activities orrientation. Due to the communication developement, the NGO role has extended and consolodated at the international level.

There exist situations when a govern or a govern group joins the NGOs in ecological problems. In 1997, aproximately 400 NGOs, together with the canadian govrnment have lounched the effort to intrdict the land mines use.

In the world ecological movement, an important role is the one of the personalities. There for, Rachel Carson wrote Silent Spring, credited with the merit of being the creator of the modern ecologic movement. Ted Turner, the founder of CNN, announced in 1997 he's present of a billion dollars for the United Nations to support the work in people stabilization, environment protection and medical care ensurance. Being affected by this initiative, Bill Gates from Microsoft has set the bases of the greatest world foundation, giving out great amounts for the improvement of the medical care and peoples stabilisation in the developing countries[12].

A model for the ecologists from everywhere is Wengari Maathai, who has organised the women in Kenia for planting the trees and recreating the environment health.

And the exemples are numberous, especially that in the present time the ecologic groups are being preoccupated with the enlargement of the agenda in order to promote a comon vision of an eco-economy and concentratate it's efforts to apply it.

---

[11] Most NGOs are public interest groups, in opposition with the special interest groups.

[12] Rhode, D., Ted turner Plans a Billion gift for U.N. Agencies, In: New York Times, 19 September, 1997.

2. The sustainable developement at the European Union level

As definition, by environment protection orriented towards sustainable developement, we understand the total actions ment to ensure the preservation of the natural resources and the protection of the quality components of the nvironment.

2.1. Legislative concerns in the European Union for the sustainable developement and it's management

We live in an Europe, where the European Union sets various policies, objectives, activities, standards which represents reference levels to be achieved and mantained by all the state memebers, refering to: achieving a socio-economic union, *permanent promovation of a sustainable developement policy,* encouraging the techno scientific reserach, comon interest education and training programs, unit levels of customer protection, transportation systems and networks development at the same standards, improving actions for health protection and cultural colaboration, cooperation developement between states[13].

Characteristicaly, *the comunity acquis* is being constituted of the constitutional treaties, normative acts, decisions and principles of the Comunity Court of Justice ensemble. Being integrated in this aquis, inside the European Union, there exists an environment and sustainable developement extremly vaste legislation, which comprise 300 legislative acts (treaties, regulations, decisions and recomandations).

Another important term, *the comunity treaties* which refers to the sustainable developement, generaly define the comunity principles on the environment protection, there existing reference documents for the laws issue and policies and objectives settelment in the field, as well as the harmonization of the legal reglementations of the state members.

The community norms set the legal demands in the European Union, refering to the environment and the sustainable developement, with an obligatory character for all the state members, but sufficiently flexible to allow manifesting the traditional spirit in every country legislation.

---

[13] *On the specific elements and principles of sustainable developement and environment comunity law, see Ionescu, C.,* Cum să construim şi să implementăm un sistem de management de mediu, în conformitate cu ISO 14001, *Ed. Economicã, Bucureşti, 2000, p. 153 - 156*

The comunity regulations are also obligatory for all the state members of the European Union, and are usually called for precise purposes in relating to the sustainable developement and environmental protection (ex.: the administration of the chemical wastes, labeling the toxic chemical substances etc.).

And finally, *the comunity decisions* comprise, very often, necesary data for applyingthe directions and regulations, having an extremly specific character and always being obligatory.

The comprising scale is vaste, in the sense that all these regulations refer to vaste aspects: environment quality protection, proceses, services and economic activities, especialy production, products from the European Union or sold on this markets, environment and sustainable developement working procedures and methodologies.

The main pillars of legislative-organizatoric nature were set at the first Conference of the United Nation regarding the environment, from Stockholm, june 1972, when the European Comunity adopted it's first program of Actions for the environment protection on a five years period (1973 - 1977).

Both in the first and in the second procram of Action (1978 - 1982), have been set detailed lists of measures to be done for the polution problems control.

There have been set few general principles which have remained valid in the next programs and which can be found in the adopted legislation.

The third program of action (adopted in 1983) is different from the others by trying to achieve a vaste strategy of sustainable developement troughout the environment protection and natural resources inside the comunity. As we have mentioned, the accent passed from the polution prevention to the protection concept and the land use manner for integrating the environment problems in the other policies of C.E.E. there have been alocated funds for agrariculture, regional developement and support activities for states from Africa, Carabean and Pacific, according to the Lomé Convention.

The fourth program of action (1987 - 1992) has tried to respond to the integration obligations, environment problems in other Comunity problems, having in ming four significant directions:

- implementing the existing Comunity legislation on the environment protection;
- reglementation of the environment impact problems refering to "substances" and "sources" of polution;
- improvement of the unlimited access of public to environment informations;
- creating new working places.

Legislatively speaking, the Seul European Act which amends the CEE Treaty, valid since 1 july 1987, confirms the comunity competence in issueing the sustainable developement legislation and sets the purpose and necessary procedures.

The most important statement of the Seul European Act is the integrity principle. The environment protection is the only politics domain demanding this and the Comunity must adopt the applying procedures.

As a sinthesys, we must mention the fact that: in the last 30 years in the European Comunity have been issued for the environment aprox 300 reglementation act (decisions, recomandations).

We can say that there are some main lines of the sustainable developement management which are being promoted all the time in the developement policies of the state members:

- prezervation, protection and conservation of the environment quality, in the sense of focusing on actions of preventing the environment polution;
- supporting the investments for the environment improvement;
- supporting the damages caused by the polution;
- assuming the responsabilities for the policy and it's consequences in the environment domain by every state member;
- global approach of the environment problems;
- setting some standards and ecological norms for the comunity space;
- supporting the ecological programs troughout ficancial techniques and instruments;
- the convergence and compatibility of norms and regulations in the state members.

2.2. The ecological impact evaluation management on the sustainable developement in the European Union countries

In the western european countries, the evaluations and it's management have been issued since many years ago[14]. A common reference point is the European Community Council Norm from 27 june 1985. This norm treats the ecological effects evaluation of public and private investitions.

---

[14] *Regarding the ecological impact evaluation experience in some of the European Union countries, see Rojanschi, Vl., Bran, Fl., Op. cit., p. 325 - 326*

We condider that one of the good exemples of applying the ecological impact evaluation could be the danish experience. This exemple can be usefull for the countries which want to develop their own system of ecological impact evaluation management strictly related to the space planification. This type of panification is well developed in the transition countries. Denmark, having an advance in the ecological impact evaluation system, is also related to the European Community Norm.

The ecological impact evaluation procedure in Denmark follows the next steps:

- proposing the project to the investor;
- the administration decides if the project needs the implementation of an ecological impact evaluation procedure;
- the administration decides the area and the content of the evaluation, which obliges the investorul to deliver informations on the projects impact, in the form of ecological impact evaluation;
- the regional administration or the Ministry of the Environment Protection evaluates the impact and drawns the changes framework;
- the propositions are being issued and will follow 8 weeks of public debates, during which can arise the necessity of preparing an alternative ecologic impact evaluation;
- the result of the social debates is being considered by the authorities, which can operate or nor changes;
- the materials are being sent to the National Agency for the land Use Planification;
- the local authorities make amendments on local plan, then type the permits and licences, and until they become valid the investorul can start implementing the dutties.

Next to the European Community Council Norm, another important international document is the Convention on the Ecologic Impact Evaluation in an interstatal context, signed at Espoo (Finland) in 25 february 1991. It's purpose is to connect the bussiness activities to the environment protection problems.

We pass now to Poland, where the ecological impact evaluation procedures is based on two laws: The law of Land Use Planification and the Environment Protection Law. The project placing process needs two stages. First, there are being recomended different placement options, second, there is given the placement permit. The ecological impact evaluation procedures can be applied, by formal reasons, only in the stage of placement point recomendation. Anyway,

it is posible, that the responsable person for handing the permits demands that the ecological impact evaluation should be done.

The transition acceleration towards a sustainable future in based in Germany on wastes management planification[15], an experience to be generalised as follows.
It starts with planing the wastes management, reason to call the wastes quantity prognosis, which represents a necesary base. The prognosis allows the before estimation of a future evolution, with the help from an understandeble model, using historical informations. Only based on an information related to the wastes quantity to be handeled in the future, there can be created a base for making the decisions regarding the creation and use of the wates eliminations placements.

In many german wastes management concepts, the best results are being obtained by applying the acenarios techniques. Using them, there can be used in the process both the cuantity and the quality knowledges.

The conclusion we can draw at the end of this chapter is that the theory and the practice of sustainable developement management exists. The environment law, in it's current form, has it's spring in numberous papers. We add the fact that on romanian land, the initiatives for protecting the nature are old and rich. We can only concentrate our efforts to get close to the spirit of the European Union field regulations.

Bibliography

Albert, E. (2005), *Le manager durable,* Editions d'organisation, Paris.

Albu, L.-L. (2007), *Analiza interdependențelor dintre dezvoltarea durabilă a României şi a țărilor membre în perioada postaderare,* Ed. Expert.

Bran, F. (2001), *Probleme ecologice şi riscuri economice,* ASE.

Negrei, C. (1995), *Economia mondială,* Ed. ASE, Bucureşti.

Oprean, C., Suciu, O. (2003), *Managementul calității mediului,* Ed. Academiei Române, Bucureşti.

Petrescu, I. (2009), *Managementul dezvoltării durabile,* Ed. Expert, Bucureşti.

Rojanski, Vl., Bran, Fl. (2002), *Politici şi strategii de mediu,* Ed. Economică, Bucureşti.

Vivien, F.D. (1994), *Économie et écology,* Ed. La Defonverte, Paris

[15] *A case study on this metter in Rojanschi, Vl., Bran, Fl., Diaconu, S., Grigore, Fl., op. cit., p. 141-145*