SUSTAINABLE DEVELOPMENT IN ECONOMIC AREAS ABANDONED

DEZVOLTAREA DURABILĂ ÎN ZONELE ABANDONATE ECONOMIC

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Abstract: *Worldwide radical transformations taking place, influenced by global finance, but also environmental issues. These changes are accelerated and more like, more violent. Industrial development dictated by the consumer was made to the detriment of environmental protection. It seems that we arrived at maturity. In Romania, began to speak, more and more about sustainable development and environmental protection. In Vermont in the USA in 1996 were established for the first time globally, the rules of sustainable development. In Romania we have established in 2008 the same thing. But in a case in most other points which should be regarded as binding, are set on the engineering environment must provide special protection of the population. In our country, these problems have occurred with a speed much higher than in other countries and not give us time experiences or expectations. Therefore be operated as better and faster. In paper I propose to explain how to implement development standards in areas abandoned economic that were not industrialized where financial resources are limited, the population is affected in social and medical follow old occupations and where highly qualified specialists in the area are very few useful to new changes.*

Rezumat: *În toată lumea au loc transformări radicale, influenţate de finanţele mondiale , dar şi de problemele de mediu. Aceste schimbări sunt tot mai accelerate şi parcă, tot mai violente. Dezvoltarea industrială dictată de societatea de consum, a fost făcută în detrimentul protecţiei mediului. Se pare că noi am ajuns la ora scadenţei. În România a început să se vorbească , tot mai mult despre dezvoltarea durabilă şi despre protecţia mediului. La Vermont, în SUA, în anul 1996 s-au stabilit, pentru prima dată, la nivel global, regulile de dezvoltare durabilă. În România am stabilit în anul 2008 acelaşi lucru. Dar şi într-un caz şi în celălalt majoritatea punctelor care trebuie, în mod obligatoriu, stabilite sunt cele referitoare la ingineria mediului care trebuie să asigure o protecţie deosebită a populaţiei. La noi în ţară, aceste probleme au intervenit cu o viteză mult mai mare decît în alte ţări şi nu ne dă timp de experienţe sau de aşteptări. De aceea trebuie acţionat cît mai bine şi rapid. În lucrare îmi propun să explic modul cum se pot implementa normativele de dezvoltare, în zonele abandonate economic, care nu au fost industrializate, unde resursele financiare sunt limitate, populaţia este afectată social şi medical în urma vechilor ocupaţii şi unde specialiştii de înaltă calificare din zonă sunt foarte puţini utili la noile schimbări.*

Key words: *the components of sustainable development, financial resources, environmental protection*
Cuvinte cheie: *componentele dezvoltării durabile, resurse financiare, protecţia mediului*

INTRODUCTION

In the last ten-year periods, big changing affected the humanity. The world finances had absolute priority. Nobody was interested how much the environment was affected. Even some signs appeared those were only political. Some examples:

- Freon was changed form the sprays and from the refrigerators.
- The exposure levels to the radiation of the civilian persons which was not involved in the military experiences or in the mining activities
- The levels of the professional exposure were raised more and more.

The best example is that of China which realized that trough the big industrialization the environment was damaged – the drinking waters from the big rivers are not good anymore and the vegetation suffers because of the pollution. In Europe, around the 1970 years an alarm

signal was dragged concerning the forests drooping because of the hydro and mining activities or because of the acid rains.

On the world, trough the wrong ideas for the agriculture development reached to a real poisoned of the population. Were found and used (AMELIORATORI) which were as a poison for the humanity. The trophy chain (soil, vegetal kingdom, animal kingdom, human) finalize in the human body. It's true, many times the quantity of the toxic produces refers to the food quantity are under the stated Norms, but there are not clear studies about the added of the toxic produces in the human body.

Studying the polluting atrophic factors in Romania which have a big contribution to the heath decreasing of the population, the authors start to study the pollutions phenomena caused by the abandoned mining activities. The studies refer to the influence of:

- Mining tailings – the direct or resulted influence caused by the underground or rain water which wash the tailings.
- Mining damps – them stability, the chemical substances dipping, in the underground or surfaces waters.
- Mining installations which even were abandoned still have a major risk to contaminate.
- Mining galleries – the open galleries let the contaminate water to flow in the rivers waters. The closed galleries troughs the hydrostatic force contaminate the underground waters to uncontrolled distances from the mining exploitation.

Tanks to some wrong actions for cleaning the area, where not render evident were the heavy metals or the radionuclide migration in the nature, the conclusion was that in the area nothing positive happened, so the cleaning had no effects.

In our Country, the mining companies were closed the firsts because were considered the most pollutants. Those areas are isolated, with difficult access and were difficult to make a real evaluation. Nobody thought to the future of the inhabitants more that those localities could not be moved in other places. The monitoring of the area did not allow the application of the alternative activities. About the ecological equilibration nobody talked, only give some hopes for the implementation of the agro and eco tourism. If on study careful the re-conversion conditions, the conclusions are:

- The agro tourism is difficult to be applied because the area doesn't allow the animal raising or to cultivate the land in the necessary conditions. Is difficult to do the professional grounded in short time of the population. The financial situation is a decisive factor and so the population couldn't broach this variant.
- The eco-tourism is almost impossible to be practice in the mining mountainous areas. O viable variant can be the industrial professional tourism implementation. In this area can be seen some old mining installations, metallurgical and iron processing old from a few ten-year periods in a good conserving situation.
- We had big chances to develop the railway tourism using the narrow gauge trough virgin forests. But all infrastructures were destroyed.

Thinking at all those aspects, the authors tried to re-estimate the development way of those areas, and to apply the indications from Vermont concerning the Durable Development, 1996:

- *Ecological integrity*
- *To respect the basic human requests concerning the purity of the water and air, and a nutritive and un-contaminated food.*
- *The local and regional ecosystems protection and development and the biodiversity.*

- *To conserve the water, the soil, the energy and un-adjustable resources including the reduction recycling and re-utilizing at maximum possible of the wastes,*
- *To use preventing strategies and adequate technologies to minimize the pollutant emissions. Economical security,*
- Diversify economical base and financial viable.
- Re-using of the resources in the local economy,
- To maximize the local possibilities for business,
- Significant work opportunity for all citizens,
- To be insured the training and education to prevent the adaptation of the work forces with the futures requests,
- Mandating and responsibility,
- Equal opportunities for all persons to participate and influence the decisions which affect them live.
- *Adequate access of the public to the information,*
- *A viable NGO's sector,*
- An atmosphere of respect and tolerance for the different point of view, believes and values,
- To encourage the personas in different age, sex, religions and physic abilities to assume themselves the responsibility
- Political stability
- Un-compromise the durability of others communities,
- Social goodness,
- *Security in the food ensuring which optimize the local production,*
- *Adequate health services, Health and Emergency institutes, and a strong knowledge of all community members,*
- Kipping a place guard by crime and aggressions,
- The maintenance of a community spirit which create an affiliation meaning, a meaning of the place and a meaning of the own value,
- The stimulation of the creative expression trough art,
- Protection and development of the public spaces and the historical resources,
- *Insurance of a health work average,*
- Adapt to all circumstances and conditions changes.

In 2008 in our Country appeared a Durable Development Frame. In both situations are necessary very complex and interdisciplinary studies. First of all, we had study the social modifications of the population from the respective areas. We found big transformations. From 1996, the authors start an interdisciplinary study involving specialists from Countries which solved the pollution situations in the mounting mining activities. The results were used for a data base, editing brochures with "Useful Advices for the population", and as base for cleaning activities. Each site is study using a plan:

MATERIAL AND METHODS

Information about the site: Topography, History, Geology and soils, Climatology, Hydrology, Earthly habitat, Vegetation, Anthropic and entropic modifications, Social and economic study, the exposure to risk of the population, Radionuclide and heavy metals circuit in the nature (the studied exposure ways), Stages in the process of the metal extraction, the site for the sterile material, Abandoned sites, problems and solutions.

Objectives: The kind of pollutants, them concentration and localization

- Analyses: soil, surface and underground water, air
- Acid drainage

➢ The kind of contamination identification: (primary, secondary, tertiary), the site structure investigation which require specific measures to remediate, and to make the site sure for future utilizations, Identification of the pollutants effects over the flora and fauna earthly and aquatic and over the population from the area (medicine, toxicology), aesthetic aspects with negative implications over the tourism; to establish the request and objectives related to the environment quality, the stabilization and cleaning criteria, the cleaning of the surfaces and dipping mines (active ecological system); Criteria for the evaluation of the un-contamination quality of the site, establishment of the price of the stabilization and cleaning, planning the stabilization and cleaning and the process implementation, according to the International Norms.

Methodology: Collecting samples, analyses, mechanic and biologic stabilization of the site: goal, methods, species selection, planting techniques, management of wastes.

RESULTS AND DISCUSSIONS

Monitoring and audit

➢ Monitoring program of the effects over the environment (principles, systems, steps)

➢ Monitoring: general and specific objectives, the ecosystem components evaluation specific questions, ecological indicators, implementation and periodicity, monitor audit – objectives.

The next step is to compress and catalogue the observations after the Norms. The result is a synthesis Card. We worked after the next Norms: The new Metal Mining Effluent Regulation 2002, CEE Norms, ONU Directive.

Figure 1. Former homes during communism which belong to anyone

Figure 2: Ruşchița village in decade after Revolution of 1989

CONCLUSIONS

The work collective used the NGO HCJV infrastructure for the contaminated areas, with difficult access. The conclusions are:

1. The generators of the pollutant factors (mine galleries, damps, tailings) are hardly to be studied. The industrial routes are destroyed by the torrents, the mine opening were dynamited or crush down;
2. The mining specialists, (engineers, doctors), left the area or died;
3. The miners have information about the mine but those have to be processed.

All those area are not ecological bombs. They can be cleaned and equilibrate to have a sustainable development. The principal conditions are to remediate the actual and

futures environment problems: to inform the population and the tourists about the actual risks from the respective areas and the monitoring of the areas to be made according the International Norms and to use specialists with good knowledge in this domain.

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