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A STUDY ON ISSUES AND SOLUTIONS FOR SUSTAINABLE DEVELOPMENT

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Abstract

Problems with complex characters Facing Sustainable Development of Various Interests, and International Cooperation Agreements, the listing of economic globalization and harmonization, both with the object and the issue of Sustainable Development by seeking compatibility with the world economy. The paper presents a brief literature review in complex terms related to the sustainable development as a concept, its problems, and the solutions to solve them. Issues Paper aims to identify seen in terms of Sustainable Development of Protecting the environment and provide year overview of the concept.

Key words: Environmental Protection, Sustainable Development, global warming, pollution, depletion of natural resources

1. News basis investigated and the current state of knowledge

Sustainable development has now become a global goal. Based on its commitment to Rio (1992), the European Union in recent years adopted an integrated strategy to take an active role in efforts to adopt sustainability in economic policies[10]. Union intends, thus enabling an evolution to a "prosperous and fair society, ensuring a cleaner environment, safer and providing a better quality of life".

"To meet current needs without compromising future generations the chance to meet their own needs" is the 1987 definition of the concept of sustainable development concept has been endorsed by environmentalists, economists, sociologists in a different, specific, without an effort to integrate the principles and objectives. Including the institutional aspects of sustainable development are most often confined to environmental issues, a unilateral approach[23].

Efforts of this new concept, is aimed at radically changing the current way, destructive and discriminatory, production and distribution of wealth and natural resources by establishing fair rules for international trade: vigorous combat inequality, repression, discrimination and corruption, fighting for peace and disarmament, population involvement in decision making and future employers in this world.[7]

2. Materials and Methods

The paper is part of a complex project which is to be carried out with several partners, the most important of which is the administrative one. Thus, the paper makes a synthesis of the most important studies and articles that deepen the complex issues of sustainable development. The research methodology is based on prior studies in very diverse fields. Sustainable development is a notion that besides being in constant change, addresses extremely different but interdependent themes. The project, which is part of this work, wants to implement solutions related to adaptation to climate change, so recent and important issue of the world we live in. However, in order to avoid the general hysteria caused by this problem, education in the field of sustainable development is needed. We need to understand what issues we are dealing with, which have been and are still the sources of these problems, what their effects are, and what measures against diminishing their effects have been identified.

Thus, the purpose of this article is to synthesize the most important issues of the concept of sustainable development, the basis in the next communication with the involved partners, in order to disseminate as easily as possible the importance of identifying measures to prevent the climate change we are witnessing.

Thus, for this, we identified the most important and recent studies related to sustainable development issues. I believe that the complexity of the data contained in bibliographic references can be extremely overwhelming because, in order to understand and identify structurally sustainable

development, information is needed from many areas of activity. The research methodology was one of the syntheses of the extremely generous information provided by these totally different sources.

The paper concludes, however, the most important aspects of each field under consideration. One important help at least visually were the data provided by the World Bank Group has launched TCdata360, a free, open and easy-to-use online platform that collects, analyzes and visualizes data on trade and competitiveness. The website is designed to support decision-makers, development professionals, academics and citizens in gaining a better understanding of critical issues in order to formulate policies based on concrete information.

3. The first definition of the concept - 1987

UN Commission on Environment and Development (WCED), led by Mrs. Gro Harlem Brundtland, then Foreign Minister of Norway, published in 1987, a report known as "Our Common Future", or "Brundtland Report". The report includes the usual definition of sustainable development "to meet current needs without compromising the chance of future generations to meet their own needs". The concept of sustainability, however, was endorsed by environmentalists, economists, sociologists in a manner different states, without an effort to integrate the principles and objectives. Including the institutional aspects of sustainable development are most often confined to environmental issues, a unilateral approach.

By Article 2 of the Treaty on European Union signed the European Council on February 7, 1992[6], Maastricht, Netherlands, countries generally aim to integration, "promoting a harmonious and balanced development of economic activities throughout the community, sustainable compliance and non-inflationary environment, a high degree of convergence of economic performance, high employment and social protection, and increase quality of life, economic and social cohesion and solidarity among Member States " .

Therefore, countries pursue the integration process both traditional goals - growth, employment, price stability, balance, and specific objectives of sustainable development model [17]:

- high level of social protection
- convergence of economic performance
- environmental protection
- economic and social cohesion,
- solidarity.

4. Types of sustainability

The term "sustainability" not only refers to a type of development tolerated by the environment, but from a development to ensure a longer period as the continuity and cyclical environmental quality [21],[24].

United Nations University has proposed since 1989, three basic principles of sustainable development:

- each generation must preserve natural and cultural diversity as to not unduly restrict the options of future generations;
- each generation is entitled to diversity comparable to that of past generations;
- each generation should provide its members fair access rights to inheritance from past generations.

Environmental sustainability is based on limiting the use of natural resources, respecting ecosystems, pollution reduction, recycling, use of clean technologies, environmental compliance, protection of natural reserves.

Sustainable development is the result of good will and civic responsibility, based on economic performance, social issues and environmental protection in order [6]:

- to foster a fair share;
- preservation and future interests of future generations.

A sustainable development presupposes that a number of conditions [12],[16]:

- duty to learn to live within view of raw materials and recycling as the current environmental degradation while not yet threatening our own existence, it can close the quality and the safety of current and future life.
- responsibility to future generations
- reservation need biological diversity and environmental quality.

Modern society has difficulty in meeting one or other of these conditions and their simultaneous compliance is actually even worse. Sustainable development, as we have already noted, has three main goals: environmental integrity, equity between nations, individuals and generations, and economic efficiency [16].

Maintaining environmental integrity in all actions performed by human communities, continuing human diversity, all species and natural terrestrial and aquatic ecosystem by measures of environmental quality through restoration, development and maintenance of species' habitats, and a management exploited the use of animal and plant populations.

5. Sustainable Development Issues

The Global warming is actually a temperature rise of the oceans and atmosphere. Global warming is harmful in terms of melting ice caps, raising ocean climate change, and therefore can influence the lives of all habitats on the terraces [8],[14].

Grounds are volcanic eruptions and global warming greenhouse effect. Experts argue that the main cause of global warming is increasing greenhouse gas concentrations due to human activities in the era of industrialization. "The common feature of all greenhouse gases is that it allows sunlight to penetrate the atmosphere, but captures a portion of which emitting infrared radiation, and thus

heat the air."

In 80%, your CO2 leads the list of greenhouse gases [9]. It is produced especially by burning fossil fuels (oil, gas, coal). In second place we find dioxide, methane, which is generated when people talk about the influence of combustion of fossil burial of waste, treatment of waste water is discharged. Nitric oxide is produced by industries producing fertilizers, fuels, or the burning of forests.

Effects of global warming are [4],[11],[15],[20],[23],[28]:

- the atmosphere (increased precipitation and the number of storms);
- the hydrosphere (snowmelt has polar caps, the disappearance of glaciers, rising sea levels);
- the lithosphere (dry soil);
- the biosphere (climate destabilization and disruption of local seasons);

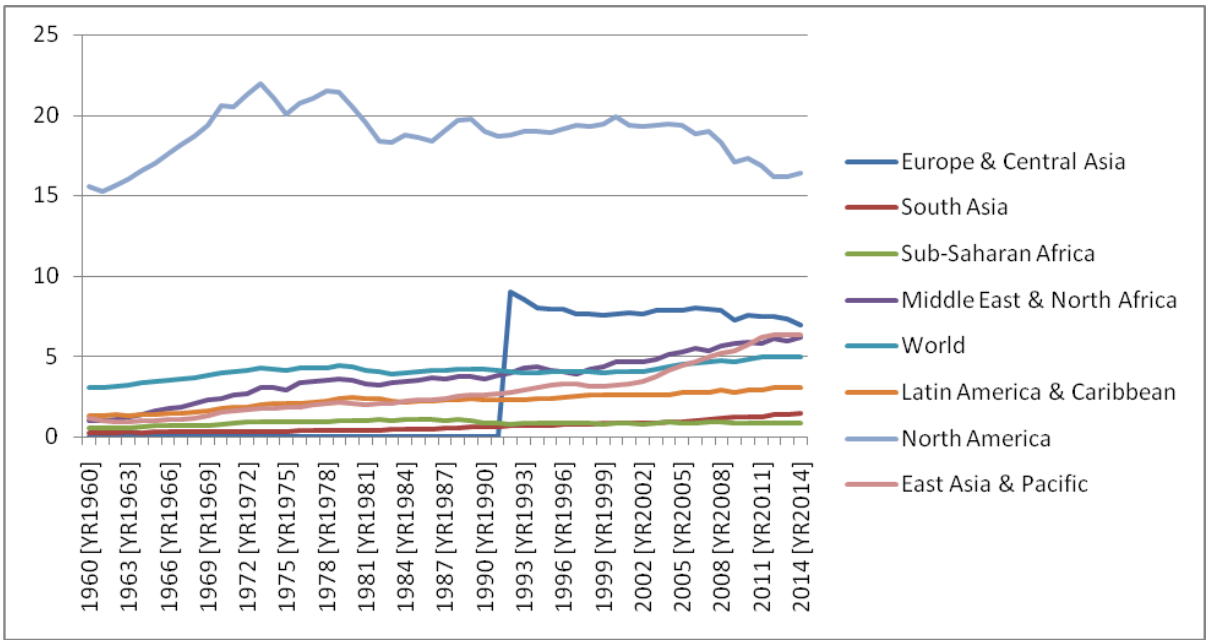

Fig. 1: CO2 emissions per capita (in metric tons)

Figure 1 above is taken from TCdata360 [27] and represents CO2 emissions per capita (in metric tons) and shows the world region by region of emissions. Without going into details of the delicate political consequences of global warming may be economic, environmental, health, social, political, defense.

As I looked, internationally, there were two major international conferences in which it was decided to stabilize greenhouse gas emissions. It's 1992 Conference in Rio de Janeiro and Kyoto meeting in 1997. Participating countries have pledged to reduce their emissions 5.2% of greenhouse gases, except Europe, which is committed to an 8 percent reduction [8],[18],[26],[29].

Ozone depletion has attracted attention especially after the discovery in 1980 of "ozone hole" in Antarctica.

Stratosphere contains about 90% of the total ozone in the atmosphere. Since the ozone layer protects Terra effects of ultraviolet radiation from the sun, its preservation is essential. Ozone molecule is broken by absorbing UVB radiation and various chemical reactions between different compounds of nitrogen, chlorine, hydrogen, leading to the same result. The problem occurs when there are outcomes from industrial activities. In other words, the very man destroys its protective blanket, altering the delicate balance of ozone. Harmful effects of thinning of the ozone layer and therefore UV-B, an impact on health.Ozone depletion became an issue long debated, after 1985 when the British Antarctic Survey found a hole in the ozone layer above Antarctica.

Reducing ozone levels will lead to a higher amount of UVB rays that reach the earth's surface. The amount of UVB radiation emitted by the sun is constant, but less ozone means less protection and therefore more UVB radiation reaching Earth's surface. Studies have shown that UVB radiation level measured in the Antarctic can double the surface because the ozone hole.

Biodiversity loss is a problem encountered in many areas on Earth. It's really a matter of local nature, produced also by regional factors. Biodiversity conservation often intertwines with human activities, with devastating effects for our problem. Desertification, habitat destruction, deforestation or forest land, all can affect the ability of sustainable use of land areas.

We all inspire air **pollution**. Components of air, breathing oxygen is essential. Normal composition of air include nitrogen 78.09%, 20.95% oxygen, 0.92% argon, carbon dioxide 0.03%. This gas mixture is normally over 99.99% of air composition. But the makers have managed to progress as the air is

polluted by other substances: carbon monoxide (GO), ozone (O 3), nitrogen oxides (NOx), sulfur dioxides, hydrocarbons. The sources of pollution most hazardous industry, transport, electricity production.

In industry, to prevent accidents that can result in release of polluting gases into the atmosphere should be making regular checks of emissions, setting maximum allowable concentrations, therefore a strict accountability.

Detoxification of gases, and replacing traditional forms of electricity generation by replacing the non-conventional energy sources can be solutions to reduce air pollution, and that because the effects are particularly disastrous in the vicinity of these polluters. Sometimes these gases back to earth as acid rain or snow. Acid rain is formed from the mixture of water vapor and sulfur dioxides and nitrogen oxides. PH effects are felt even in remote areas, therefore the main source of pollution. The effects are felt in the flora, especially at the fauna. Therefore determined to acid rain pollution.

Except for acid rains and snows, the water is contaminated with other solutions mainly from industrial waste waters under the influence of household pesticides. Water pollution can cause eutrophication, a process by which algae fall into decay and deplete oxygen in the water, killing aquatic fauna. Nuclear waste, tanker ship accidents, however true cause imbalances in the seas and oceans, contributing greatly to increased loss of biodiversity.[2]

Resource base in agricultural activity, accumulation of soil polluted by chemicals or radioactive materials that can affect plant and animal life. Also, logging of any kind are clear cases of soil pollution.

Waste are substances, materials, objects or scrap materials produced by human activity in particular through production or household consumption.[3] waste deposited on the soil surface are sources of pollution that can lead to anaerobic microorganisms.

Types of waste:

- Domestic (packaging, paper, plastics);
- industrial (metals, oil);
- livestock (organic waste).

Another concern is that people generally consume more than they produce, thus using more resources than they need. I am convinced that each of us throwing food expired because of non use. Why? Buy more than we need and what is also automatically become waste. The amount of waste exceeds the capacity of the environment than recycling, and thus produce the phenomenon unknown to irresponsible development of human made pollution.

Depletion of natural resources

Natural resources are naturally occurring substances, but are considered valuable for their use by humans. Thus, mineral them ore them land for cultivation, forests and water are all used by humans through activities such as mining, oil extraction, fishing, forestry. In recent years, depletion of natural capital and attempts to pass the rational development were the main problems of development agencies.[3] Nature is irreplaceable, so that by actions to protect its conservation is becoming increasingly insistent. Conflicts between countries, social unrest, or the lack of drinking water, either because of oil, however hearing frightens us. Figure 2 below shows total natural resources rents in different regions of the world and points out once again if these elements are combined with population growth in some disadvantaged areas or too extensive witness suddenly produce a major social and economic chaos.

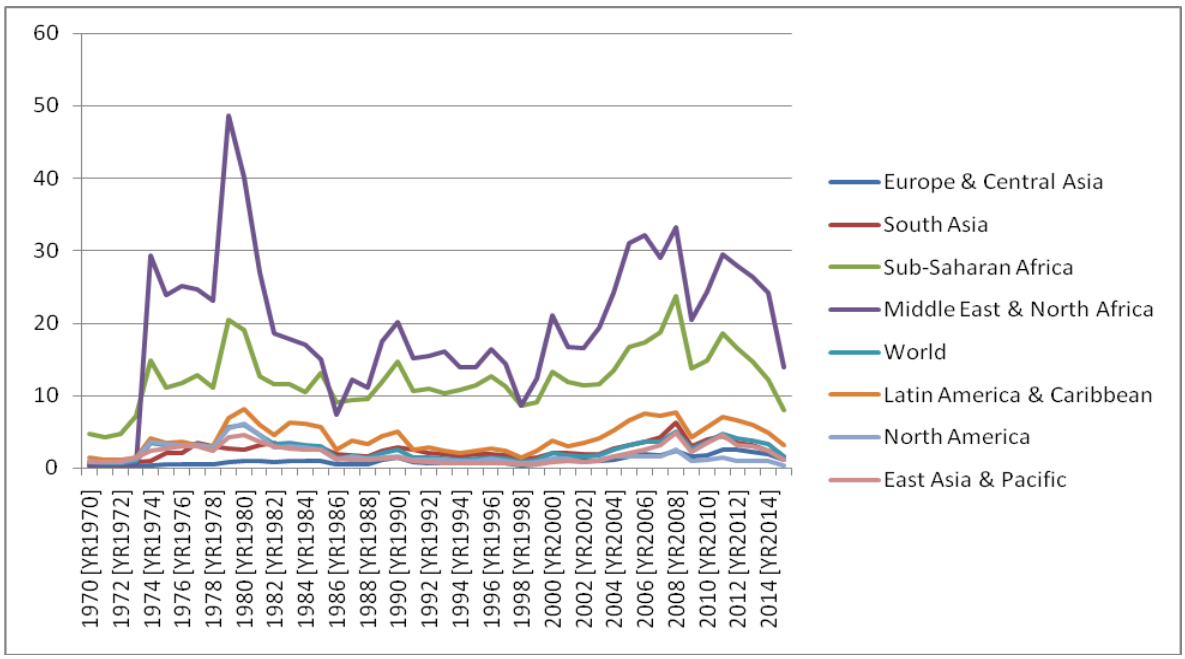

Fig. 2: Total natural resources rents (% of GDP)

Non-renewable resources are limited reserves because the relationship between biological production rate and rate of recovery is very high. Tests on this report shows that the current technical conditions, renewable resources represented by deposits of fuel would be enough for about 100 years if it is in the current annual consumption. Forecasts based on other, more optimistic, supported by improving extraction technology, energy could meet the needs for a period of 400 years. Most oil reserves are limited, considered that could cover consumption needs for 30-40 years, the gas could go for 40-50 years. Are the richest coal reserves will be sufficient for about 200 years.

Analysis of the relationship between reserves and production of oil and natural gas highlights the large contrasts in its distribution by region. These differences are explained by the size of reserves, technological capabilities and consumer needs. Total natural resources rents, represented in Figure 3, are the sum of oil rents, natural gas rents, coal rents (hard and soft), mineral rents, and forest rents. The estimates of natural resources rents are calculated as the difference between the price of a commodity and the average cost of producing it. This is done by estimating the world price of units of specific commodities and subtracting estimates of average unit costs of extraction or harvesting costs (including a normal return on capital). These unit rents are then multiplied by the physical quantities countries extract or harvest to determine the rents for each commodity as a share of gross domestic product (GDP). Based on this report in perspective there will be favored regions, with the largest reserves of oil and natural gas consumption and engaged in a limited, but deprived areas with low or deficient reserves, but high consumption. In the second category may include countries in North America, Western Europe, Central Europe and Japan [19].

Overcrowding human habitats

Latest issue of sustainable development is actually one that, from an ethical standpoint, should not we consider in this category. Terms relating to population beset us daily: the population crisis, the population bomb, the explosion population. As Christians, we all rejoice when the family is a new member, but are documentary in which people are compared with rats that are multiplying rapidly.

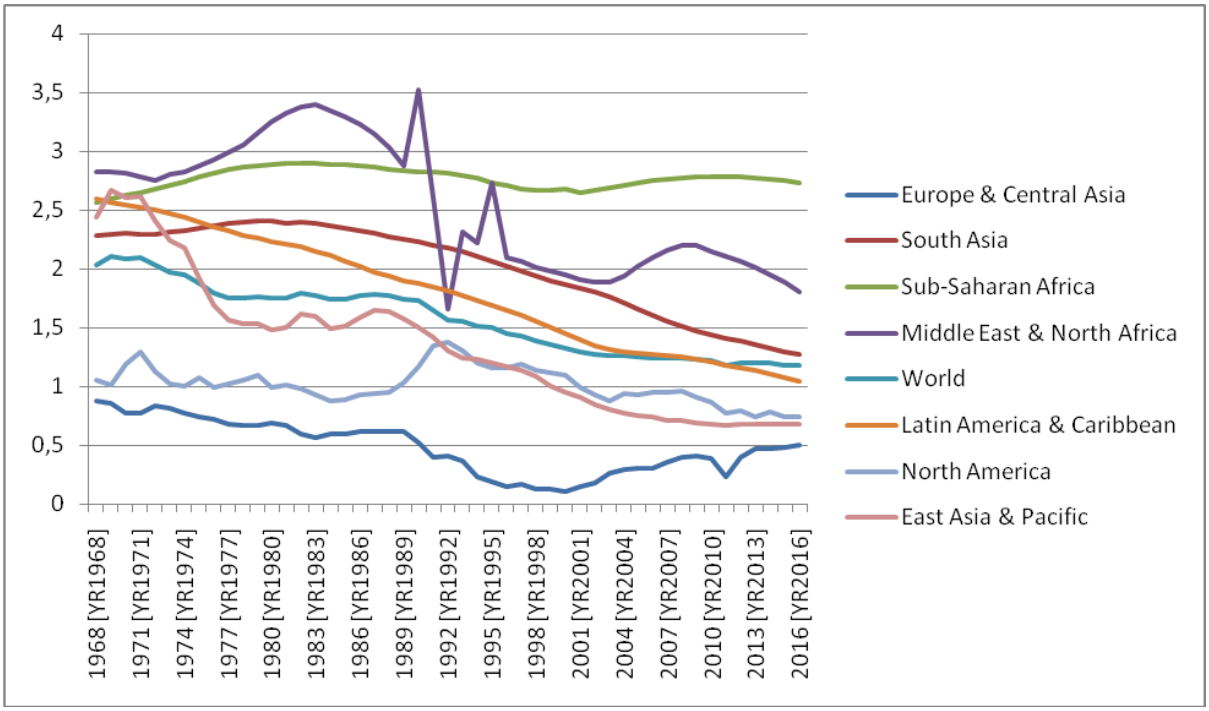

Fig. 3: Population growth rate

Hong Kong, the population in urban agglomerations can create true sources of disease, increases in unemployment, problems of accommodation, traffic jam. Also, Third World population growth increases water depletion care. People, their way of living, and in particular their number, directly affecting the environment, economic and social relationships [25],[27].

6. Solutions for Sustainable Development issues

In a brief analysis of profitable investment opportunities, we conclude that facilitate both economically and environmentally smooth conduct of business. Whether it concerns investments recycling, whether it concerns the production of new energy sources are all business future business from home

contribute to the benefit of the issue studied. Using alternative energy sources like solar or wind power can reduce pollution.

Environmental education, introducing courses on Sustainable Development since banks can secondary schools the benefit of society [5]. If the mentality is difficult to change after a certain age, then why not we start with young people can be more responsible future [1] Employees of government, leaders of community projects, farmers, managers, everyone should have access to information clearer. I doubt many have time self training, but to lifelong learning are certainly determined to use all if they are to keep pace with the general trend [22].

Risk management applied to enterprise level can prevent serious environmental incidents, or even bankruptcy. Any decision whether to invest, increase production, new product design should be taken with a sense of responsibility which means ecological, social and business ethics.

To identify the future strategy, it realized the situation. There you can make plans and act strategically, if there is a clear highlight the impact that these pollutants have on air, water or soil. Then, must be identified priority areas for action, of course after careful study of major issues and decisions. And the last stage, a great deal, of course refers to the action, control and monitoring.

Article 2 the Framework Convention on Climate Change, says that "when there is a risk of serious or irreversible disturbance, lack of full scientific certainty should not serve as a pretext for inaction" and that he "incumbent parties to take precautions to stop, prevent or mitigate causes of climate change and limit its adverse effects."

Solutions identified so far are almost independent of Sustainable Development issues, studied above. But the real challenge is to act exactly in those hot spots.

Regarding pollution emissions quantity restrictions, fines, specific duties, however they may alert the big polluters. Be convinced that investment and gradual transition to non-conventional energy, nuclear power plants to adopt policy, reduction of soil pollution due to ash discharged from thermal power through its use in the manufacture of cement, road building, it can be saved.

And if you convince large companies to reduce their environmental damage, it might be better to convince us to give ourselves even to transport by car for personal transport. If most of us have done this, can the current infrastructure and transport should thank us. Another alternative could be to use catalytic converter, a device attached to car engine exhaust system that actually converts nitrogen oxides into nitrogen easy.

Using aerosols sprays is used only in Central and Eastern Europe. Let us refuse the purchase of such products and be one step ahead of the law.

Perhaps the most circulated pollution prevention method is to recycle. We can save endangered resources, and so do savings in energy needed to produce or processing them. Recycling also reduces waste requiring storage can save capital and create jobs.

National economic growth assumptions should be made as poverty preclude such solutions. And overcrowding in urban areas in developed countries must be stopped, while in others, have taken steps to reduce population growth.

Of new resources, alternative and innovative systems and methods remember [13]:

- Solar bioconversion method
- Solar tracking and focusing solar collectors
- Photoelectrolysis of water (for hydrogen production, considered as an ideal fuel because it has a calorific value 2.5 times higher than gasoline and not polluting)
- Ocean water through the temperature difference between surface and deep states)
- Wave
- Tide
- Ocean currents
- Subocean riffs
- Movements of air masses

Rather than ignore these major problems of mankind, than to give the shoulders and do nothing, perhaps it would be better if we adopt one of the solutions identified by Al Gore (2006): economic lighting, maintenance of appliances, efficient heating systems, insulation housing , water-saving household appliances to reduce energy consumption in standby, use public transport, clean means of transport, hybrid vehicles, alternative fuels, reduction of air transport, rational consumption, by reducing waste prereciclare before purchasing recycling, saving paper, promoting the concepts, impact on investment calculation, volunteering.

7. Personal conclusions

Interests of a company are not necessarily consistent in the short term. Because of their Sustainable Development remains no longer ignored. If the parties whose interests could work together apparently contradictory, could find ways of coexistence term complementary and effective. This perspective must be so arbitrary that it be based on respect for the demands of other groups, eventually forming a code of ethics implicitly or explicitly.

This theory can be considered parts of a strategic point of view. Long-term management strategy, therefore can be influenced by the interests of parties other than shareholders, as most strategies aimed at the economic interests of enterprises actually. Actually these parts affect or may affect current or future performance of global enterprises.

It has always been that human ingenuity and technology can cover the lack of resources and raw materials, and that they alone can fix problems like the accumulation of waste and pollution produced by

various companies. Analyzing the actual situation that we find shows that we are far from illusory confirm this hypothesis. Therefore, in the present context it is desirable that all economic activities to engage proactively towards sustainable development.

The issue of sustainable development is seen as a complex problem and possible solutions are asking, in fact, combining certain key elements from countries with very different interests. No power consumption is not by chance, which pushes us to a moral decision to plan the development and production. Problem of human concerns scientists, by their obligation to provide effective means to live in a world balanced, but also politicians, who are required to make decisions on possible alternatives.

Clock paradox, symbol of order, which measures the hours of disorder, can be explained by a chronological examination. In the past, production was seen as a benefit that involves costs, depletion reserve price of raw materials and energy, while it makes an accumulation of waste from production processes on earth surface, affecting the ability of the ecosystem. Thus, industrial growth as the index of social health as economic parameters, is only short term value, especially if you continue in already heavily industrialized area, and if current production that follows these criteria will continue to grow, it will be expense of future production and the expense of environmental balance is quite fragile.

I talk about a fundamental change our way of life. But this can't happen without massive political pressure, and the problem is that nobody riot for austerity. People come into the street because they want to eat more, not less. If he had made to choose between a new set of cutlery and survival of humanity, I have a hunch that the vast majority would choose the set of cutlery.

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