

CASE STUDY: STRATEGY TO ACHIEVE AN ENVIRONMENTAL-SUSTAINABLE CULTURE

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Summary - The Patterns of Sustainable Production and Consumption require the participation of different sectors that involve society, from Businessmen, Industrialists, Consumers, Academics and Government, so that we all contribute with our actions to the achievement of the planet's sustainability.

Specific cases are presented from different scenarios, to analyze and change the mentality towards sustainable lifestyles that prioritize the care of nature.

Keywords: Sustainability, Future Generations, Environmental Degradation, Sustainable Production, Sustainable Consumption.

Abstract -- Sustainable Production and Consumption Patterns require the participation of the different sectors that involve society, from businessmen, industrialists, consumers, academics, and government, so that we all contribute with our actions to achieving the sustainability of the planet.

Specific cases from different scenarios are presented to analyze and change the mentality towards sustainable ways of life that prioritize the care of nature.

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INTRODUCTION

Sustainability has brought us a new paradigm in our relationship with the environment, it proposes a new vision of the environment.

The aim is to achieve an innovative approach to the protection of nature, present and future social equity, and a peaceful and gradual social and political change, which in an organized and planned manner modifies our relationship with nature, with ourselves and with society. Sustainable Development is a way of understanding the world as the complex interaction of economic factors, social, environmental and political systems. However, it is also a normative or ethical vision of the world, a way to define the goals of a well-functioning society, one that provides well-being to its citizens today and in future generations. The basic point of sustainable development in that normative sense is that it urges us to take a holistic view of what a good society should be. For many people a good society is a wealthy society, where higher incomes are the ultimate goal of economic and political life. However, such a view is clearly limited, since a society that was rich on average because one person was super rich while the rest were in fact very poor, would not be fair to the majority, people would not see it as a very attractive society, which is bringing welfare to the citizenry. The Sustainable Development model that is intended to be implemented refers to the rational use of the natural resources of a place, taking care that they are not extinguished so that future generations can also make use of them, giving time for the resources to regenerate and to absorb the impacts generated by the Economic Sector, therefore, having an environmentally sustainable economic development, achieving that future generations can also make use of them [1, 2].

The idea of sustainable development arose from the need to introduce changes in the existing economic system based on maximum production, consumption, unlimited exploitation of resources and profit as the sole criterion for good economic performance [3].

At the 1992 United Nations Earth Summit, held in Rio de Janeiro, a Commission for Sustainable Development was also established to promote the change of mentality necessary to implement it. In 1992, the European Union drew up the Community's Fifth Environmental Action Program, entitled "Towards Sustainable Development". This program recognizes that the road to sustainable development will be a long one and that the environment depends on the collective actions taken. Likewise, it also assumed the difficulty that this change in the mentality of the Member States, both in the business world and in the citizens themselves, would entail [3, 4]. The Industrial Revolution was, without a doubt, the beginning and starting point of economic growth based on technified production processes. The Industrial Revolution unleashed not only the economic, scientific and technical boom, but also the intensive, extensive and irrational use of natural resources in search of models of accelerated economic growth. On the other hand, in the stage of artisanal production, primitive industry not constitute important factor of environmental deterioration. The first industries used coal as the only energy source, and although they produced large quantities of gases, these quantities were so modest that they did not impact the environment; likewise, the traditional processes of production and exploitation of the soil and subsoil allowed the "natural" renewal and conservation of these resources, since such processes were extremely rudimentary, and did not cause devastation or annihilation of resources. Once big industry arrived, sophisticated machinery, more complex production processes and large-scale production brought as a consequence an intensive and systematic exploitation of natural resources that became generalized and extended in an uncontrolled manner, without foreseeing the irreparable consequences of environmental indifference. Industrialization were not only increasing, but were also conceived in an irrational way, resulting in the serious environmental problems that invade us today. The Industrial Revolution is not an isolated fact, it was the engine of the historical development of capitalism, what was at stake was precisely this, nobody could stop its accelerated pace of growth despite the fact that it implied environmental deterioration, the devastation of resources and the attack against humanity itself, this seemed of little relevance, and the image of hundreds of chimneys spewing smoke represented for a long time the symbol of progress and the consolidation of economic power [5].

There is no congruence in living in a world with finite resources (clean fresh water, clean air, fertile soils, sufficient reserves of fossil fuels) and exploiting them with an economic system based on infinite growth, without taking into account the time required for their regeneration process and the natural processes of adsorption of impacts on the environment. Soils are a finite resource, which means that their loss due to high environmental degradation, as a result of bad practices, such as slash and burn agriculture, oil spills, climate change, would imply that their desertification processes would not be reversible in the time of a human life, affecting future generations. Some say that talking about man's extinction sounds exaggerated, but it is a palpable reality, the serious damage we are currently experiencing due to the effects of man on the environment, that is, due to the modification of the environment caused by man's action. Society must modify its lifestyles and habits, if we do not want the social crisis and the degradation of nature to extend irreversibly, to the point that the planet will no longer be able to supply the necessary natural resources in quantity and quality, to perpetuate the life of human beings, affecting even the least guilty, the other living beings that cohabit this planet earth and even more serious, those that do not yet exist. This is largely the result of models and styles of development, without sustainability, that consider natural resources as inexhaustible and profit as the supreme goal of economic agents.

Although Sustainable Development has had a strong debate about its interpretation, most of the world's nations and governments have accepted it. The discourse was legitimized, officialized and widely disseminated since the United Nations Conference on Environment and Development, held in 1992 in Rio de Janeiro, known as the "Earth Summit". Because of its moral burden of goodwill that tends to promote harmonious relations among human beings and between humanity and nature to achieve sustainability, it is a matter of goodwill, especially of the governments of the world, ignoring or deliberately omitting that we live in a world where the economic and political systems contradict any principle of sustainability [4,6].

The Patterns of Sustainable Production and Consumption are strategies that emanate from National and International Public Organizations, to counteract the serious environmental deterioration produced by habits or traditional consumption patterns of our current society.

These habits include the excessive purchase of goods and services, without taking into account, if there is a real need, the durability, the origin of the products, the resources used for their manufacture and the impact of these, at the end of their useful life, both in the environment and in society, resulting in a mentality of a "one-size-fits-all" mentality.

consumerist society that not only seeks to cover its basic needs, but also to achieve well-being based on other types of personal satisfaction [6].

The consumerist society promotes the excessive use of natural resources, raw materials and energy beyond what is required to satisfy the basic needs of the population, exceeding the regenerative capacity of the planet, threatening not only those of us who currently inhabit the earth, but also future generations. These present and even future impacts include scarcity of natural resources and fossil energy sources, soil degradation, deforestation, species extinction, increased generation and disposal of waste, increased generation of Greenhouse Gases that contribute to climate change [7].

We must understand that consumption patterns based on wealth and growth do not take into account the limits of the planet and that resources are finite, since constant exploitation and even deterioration due to careless dumping and discharges into the environment are and will be limiting their availability in the future. Living within the limits of the planet implies sustainable patterns of production and consumption that allow modifying the way resources are exploited and extracted, and how they are produced, distributed and consumed, i.e., a reconversion of these systems based on wealth and growth to those based on environmental quality and efficiency is required [8].

Sustainable Consumption and Production Patterns involve different actors, which are developed from the Private Sector, Companies, Civil Society, Academia, Non-Governmental Organizations and Government, we all must be involved for the success of the strategy. These patterns involve an adequate balance between the interaction human beings and the environment, through Policies and Actions focused on the green economy. They imply sustainable lifestyles that prioritize individual decisions and actions that minimize the use of natural resources, the generation of emissions and waste, which, in turn, support in an equitable manner the Socio-Economic Development and progress of all people. It is about achieving the transformation of societies, in order to live in balance with the natural environment. We must prioritize the depletion of natural resources and biodiversity, as well as social and environmental deterioration and degradation. To this end, we must choose services and products that meet basic needs and improve the quality of life, while minimizing the use of natural resources, toxic materials, waste and pollutants throughout the life cycle of a product or service, so as not to jeopardize the satisfaction of the needs of future generations.

Each stakeholder will play an important role in achieving the objectives of Sustainable Development, for example, a

Environmental Engineer, will perform the analysis of the life cycle of a particular product, generated in the Private Sector, estimating and accounting the potential impacts generated in each of the stages that make up the life cycle of the product: from the extraction of resources or materials required for its production, transportation, production processes, marketing, use and final disposal. For each stage of this cycle, the inputs in resources and energy inputs must be considered, as well as the outputs in the form of emissions to the atmosphere, water, soil and solid waste generated, and by means of these waste emissions, such as Greenhouse Gases, the Carbon Footprint is known. The Ecological Footprint is the environmental impacts generated human demand on the resources existing in the planet's ecosystems, related to the earth's capacity to regenerate these resources [7, 9].

In the case of Civil Society, aware of the impacts derived from consumption and the adoption of green lifestyles, this should be reflected in a decrease in household consumption expenditure, which corresponds to the market value of all goods and services that were acquired for consumption, including durable products such as automobiles or personal computers. A responsible and sustainable consumer reads and analyzes the information on the environmental impact of the product, adopts the principle of the 3Rs in residential and office consumption, incorporates waste separation campaigns, and values the information on labels and sustainable certifications.

Governments must carry out many basic functions for societies to prosper. Among these core functions of government are the provision of social services such as health and education; the provision of infrastructure such as roads, ports and energy; the protection of people from crime and violence; the promotion of basic science and new technologies; and the implementation of regulations to protect the environment. Of course, this list is only a brief subset of what people around the world expect from their governments. In fact, all too often they get the opposite: corruption, war and lack of public services.

Finally, an additional factor that adds to environmental degradation is the trend of continuous growth of the world population, according to the United Nations in 2011, the world population reached seven billion inhabitants, currently in 2024, we are eight billion. The more we are, the more we pollute, the more environmental impacts we generate, more water footprint, more carbon footprint, more environmental degradation [6, 7, 8, 9].

DEVELOPMENT

Methodology

The cases presented as a proposal to promote an environmental-sustainable culture will be based on a specialized search of the bibliography related to the factors that contribute to environmental degradation from the point of view of the Society, the Professional, the Entrepreneur, the Private Sector Producer, the Academic and the Government.

To this end, it will focus on the following information collection and analysis strategies:

- 1) Identify the significant variables or factors that influence decisions to favor the sustainability of the planet.
- 2) Establish the possible scenarios from the Society, the Professional, the Entrepreneur, the Academic and the Government, with respect to the interaction with the environment.
- 3) To design practical cases involving decisions in society, in public and private companies, which influence the sustainability of the planet.
- 4) Apply a subsequent questionnaire to verify that a change in people's mentality on environmental issues was achieved, taking into account a random sampling.
- 5) Statistical analysis of the results.

DISCUSSION AND ANALYSIS OF RESULTS, CURRENT ENVIRONMENTAL PROBLEMS: CAUSES, CONSEQUENCES AND SOLUTIONS

The current problems suffered by our mother earth are varied and also with increasingly dramatic levels that make even impossible at some point in our history, that nature can repair them with the passage of time. Among them we can mention the contamination of the waters of rivers, lakes and seas, massive and accelerated deforestation, loss of species habitats, presence of photochemical smog, soot which contributes to low air quality, loss of water for human consumption, rising sea levels, advancing desertification, deterioration of natural resources, loss of biodiversity, loss of biodiversity, loss of biodiversity, loss of biodiversity, loss of biodiversity, loss of biodiversity, loss of biodiversity, loss of biodiversity, loss of biodiversity, loss of biodiversity, loss of biodiversity, loss of biodiversity, loss of biodiversity, loss of biodiversity, loss of biodiversity, loss of biodiversity, loss of biodiversity, deterioration of natural resources, climate change, loss of biodiversity and the productive capacity of ecosystems, and the presence of persistent synthetic chemical substances that promote bioaccumulation causing serious health effects, immunotoxicity, and reproductive incapacity of animal species.

These facts are considered by important thinkers and scientists as manifestations of a global crisis that crosses all spheres of what we consider our civilization [10, 11, 12].

One of the most beneficial marine ecosystems for all the environmental services it provides to humans is coral, as they participate in global biogeochemical cycles, provide breeding grounds for fish and invertebrates, protect the coastline (from the danger of hurricanes) and supply many populations with goods and services such as food, recreational spaces and cultural benefits. Such is the case of the famous coral reef in Australia, as well as those found in Mexico, in the Mexican Pacific and Atlantic, where thousands of tourists arrive every year, which implies a significant economic flow, however, despite their economic and biological importance, these symbiotic animals are disappearing or dying because of coral bleaching. These ecosystems are characterized because corals form massive amounts of calcium carbonate from the environment and deposit it in the form of a skeleton, and for this, they make use of the symbiotic relationship with photosynthetic dinoflagellates called zooxanthellae, providing more than 95% of the nutritional requirements to the host colony, through the products resulting from photosynthesis such as and lipids, and even facilitate the assimilation and conservation of nitrogen, one of the species that is mentioned in the literature is called *Symbiodinium microadriaticum*. For its part, the coral provides zooxanthellae with their waste products as inorganic metabolic nutrients, including ammonium and carbon dioxide, and also provides an ideal environment for the survival of the dinoflagellate. The coral structure is basically composed of the genera Pocillopora, Porites and Pavona. But zooxanthellae are sensitive to thermal stress, caused by the warming of the oceans derived from climate change, when they lose their carbon source, by the loss or expulsion of the microalgae that live in their interior, the coral experiences the characteristic bleaching, by the loss of pigmentation, and the virtual cessation of reef growth [13, 14].

We are the species that most damage those around us, whether biotic or even abiotic factors, to understand the vulnerability of natural systems, just look at the way we act, we overexploit resources, we are not responsible for waste, our society is based on consumerism, and does not realize the priority of caring for nature. The causes of all these environmental problems are anthropogenic, product of the overexploitation of renewable and non-renewable natural resources, such as soil, water, fossil fuels; bad practices such as slash and burn agriculture, the use of fertilizers, herbicides, pesticides, synthetic toxins, untreated waste with discharges into the environment.

Unsustainable companies overexploit resources, for example, aquifers, leaving us without water for human consumption, due to their economic voracity, which causes an excessive generation of pollutants or waste, which demand a large amount of material and economic resources for their adequate treatment and/or final disposal, and which, in many cases, is not provided by them.

The consumption habits of our current society are characterized by an excessive purchase of goods and services, which in most cases is done without taking into account whether there is a real need for the product purchased, nor the durability, the origin of the products, the resources used for their manufacture and impact on both the environment and society, of these products at the end of their useful life, an example of this is the business model called fast fashion. Every year in our country, approximately 15 million cell phones are discarded, and in many cases, because of fast fashion, we are continuously buying and discarding them. These devices contain toxic substances such as flame retardants and heavy metals, which if not handled properly present significant risks to the environment and human health of carcinogenic, teratogenic and mutagenic type, generating highly toxic leachates when deposited in landfills.

What a problem, isn't it? Our society is immersed in a materialism, the result of the increase and expansion of a consumerist social class that not only seeks to meet their basic needs, but also to achieve a welfare based on other types of personal satisfaction. Every month in the United States, as in many first world countries, thousands of families change their smartphones, Tablets, personal computers, because they are out of fashion, we can see in the streets, that the American leaves these products for the garbage truck, to be destined to be garbage, although they are apparently new [15, 16]. Those who benefit from this unsustainable abundance are the Latino immigrants, and thanks to them, all these actions of environmental degradation are diminished a little, since they collect this "almost new" merchandise and continue giving them the utility that is required, even sending them to Mexico, the case of the countrymen who live in the United States, in the famous sales.

The decisions of us, the consumers, determine whether the producers, owners of the companies, sell or do not sell, overexploit or not, pollute little or much, so we determine the market. If there is no market, the environmental impact is diminished. Mass production is based on the irrational use of natural resources, raw materials and energy, above what is required to satisfy the basic needs of the population, exceeding the regenerative capacity of the planet, and generating immense amounts of waste released into the environment. National and international companies

International corporations, in particular the so-called Transnationals, are the ones that generate immense income per year worldwide, are the ones that, therefore, are overexploiting the resources, so we must make the decision, if we really need the products they offer, too much, to live well, affecting our mother earth indirectly. According to the United Nations Conference on Trade and Development (UNCTAD), the most globalized Transnational Corporations, therefore the ones with the largest foreign subsidiaries worldwide in 2004 were: General Electric, Vodafone Group Plc, Ford Motor Company, British Petroleum Plc, General Motors, Royal Dutch/Shell, Toyota Motor Corp, Total, France Telecom, ExxonMobil Corp, Nestlé, Nestlé, all representing a wide variety of industries, including telecommunications, motor vehicles, electrical and electronic equipment, petroleum products, energy and utilities, media, pharmaceuticals, food and beverages, and diversified product mixes, receiving total sales of \$2 trillion or ,000 billion or \$200 billion [17, 18, 19, 20].

Thus, a utopian environmental revolution would be to stop consumerism in order to halt environmental degradation resulting from the excessive economic growth of transnational corporations.

All this contributes to our own destruction, as we lose the conditions we need to live on the planet, without clean and safe water, without food, as a result of infertile soils, without clean air. Caring for the earth is not optional, but we are currently attacking the land that provides us with the satisfiers for our existence; the base of the food chain, through the trophic webs, provides us with food, the air we breathe, the water we drink, an endless number of environmental services, which when given without asking for anything in return, has been subject to exploitation and disrespect.

The priority is how we solve these problems, we should not allow ourselves to be distracted by unprofitable discussions that divert the issue from what is important, which are the solutions, what we need is to attack the bull by the horns, since we can, from our trenches, contribute from different scenarios.

As citizens, adopting sustainable lifestyles or styles, where what we buy, is to cover basic needs, with efficient goods, services and infrastructure, which results in improving the quality of the environment by making individual decisions that minimize the use of toxic materials and waste generation, in favor of our natural resources. As citizens, putting pressure on unsustainable companies to reduce their massive production; and/or belonging to Civil Associations that demand the right to a healthy environment free of toxics, or even

avoiding the consumption of the products they sell. As Entrepreneurs, adopting the principle of Environmentally Responsible Companies, complying with National and International Environmental Regulations, with a life cycle approach to production, effectively treating the waste generated by their production processes, ensuring sustainable production with eco-labeling and environmental certifications. The Government or State must ensure compliance with national environmental regulations in society and in public and private companies, and create the necessary and efficient infrastructure for waste treatment, as well as request the support of the academic sector, which can act as consultants to transfer effective innovative technologies for waste treatment. Another strategy is to provide incentives to environmentally responsible companies. The government should support and prioritize innovation and development of technologies that can be applied in production processes and in the generation of new products that meet sustainability criteria, preventing pollution by incorporating environmental and social factors in their design, in order to minimize impacts throughout their life cycle (Figure 1) [21].

An alternative action that our Entrepreneurs could choose is to prioritize the use of fuels from biomass (bioethanol and/or biodiesel), which reduces the generation of Greenhouse Gases, contributing to the quality of the air we breathe. This action contributes to CONAHCYT's National Strategic Programs on Energy and Climate Change, and the Sustainable Development Goals of the 2030 Agenda, proposed by the United Nations, in particular SDG 13 climate action, which focuses on the reduction of Greenhouse Gases (GHG), promoting the reduction of climate change. The replacement of non-renewable energy sources with renewable energy sources is part of the environmental solutions, as they contribute to the energy transition [12, 22].



Figure 1. Diagram of the life cycle of a product.

From the choice of the car we prefer to buy, we must analyze, what is the basic need, to transport my entire family, depending on the number of members, if I do not need more space, why choose a larger vehicle, for the simple fact of having the

resources, that choice would not be a sustainable lifestyle choice. If you choose the van, even if you are a small family of 3, remember that you are not worth for what you have, you are worth for the good deeds you do every day, to ensure sustainability and the preservation of life on the planet.



Figure 2. Directly proportional relationship between vehicle weight and fuel consumption.

The larger the size of the vehicle, the greater the gasoline consumption, therefore, the greater the amount of Greenhouse Gas (GHG) emissions, such as CO₂, will be generated (Figure 2). The chemical reaction that occurs in the internal combustion engines of vehicles promotes the generation of CO₂ (Figure 3) [3, 6].



Figure 3. Chemical reaction of combustion in internal combustion .

The concept of garbage has become obsolete with the advent of the term waste. Garbage is bad and generates impacts to the environment, waste is not. By introducing the concept of recycling, the separation of waste is essential to be able to recycle. The recycling of materials is facilitated when they are not mixed and free of organic matter. If they are mixed, that is garbage. Separated, it is waste [23]. Another interesting case, derived from the previous statement, is the one that involves the minimization of the use of resources and waste generation in the paper industry, from recycling in public and private companies and at home [24]. Paper recycling represents a cost reduction in the production process, since it uses less energy consumption, less water and, in general, less use of natural resources, compared to the process with the manufacture of paper from virgin raw materials. In addition, separating waste at the source (before mixing it in the trash can) and channeling it to its proper recycling, significantly reduces the volume of waste that would be in direct contact with the environment, when placed in a final disposal site.

A similar case occurs with PET bottles and containers; they can be recycled to manufacture new bottles and containers, which means a significant saving of natural resources, water, raw materials and energy, in addition to the reduction of waste due to their exposure to the environment, ranging from heavy metals to microplastics. Recycling could contribute to reducing the amount of PET bottles. It is estimated that there are approximately 5 million tons in dumps and landfills in the country [25].

Also, we can contribute as Professionals, for example, if I am a Civil Engineer, by promoting energy efficiency that favors the environmental performance of buildings, incorporating Sustainable Production and Consumption Practices in the life cycle of new and existing buildings, these decisions may involve from the use of waterproofing that promote cooler environments, to electricity consumption. Here in Tabasco, we generally use red, instead of selecting white waterproofing, which generates more pleasant environments, so that we do not need to set our air conditioners at lower temperatures, unnecessarily consuming more electricity and generating more GHGs. Even propose light colors, inside the rooms, to take advantage of sunlight and not consume more electricity with the use of lamps during the day. Have a rainwater harvesting system for use in the toilets, use treatment systems to use rainwater for watering plants and/or washing cars, thus contributing to the efficient use of water resources.

Let's imagine, as John Lennon's song says, that the 8,000 million inhabitants of the world decide that it is crucial and vital to stop degrading the environment, it is more likely, then, that the governments of the world apply relevant policies, so that it is achieved globally, and also that environmental laws are respected so that sustainability becomes a reality at last. Or let's imagine what would happen if the 126 million inhabitants of Mexico agreed that sustainability is a priority issue, what decisions would we make regarding water stress, climate change and pollution of our freshwater bodies?

The following options could be :

1. Let's buy primary products: fruits, vegetables and meats in national markets or stores.
2. Consume water instead of soft drinks, even carry thermos or containers to drink water, instead of buying bottled water. We would reduce the amount of waste we generate (the best waste is the one that is not generated). Reduce the generation of solid waste from domestic consumption,

including durable goods such as automobiles or personal computers.

3. Consuming organic products is healthy, environmentally friendly and favors the conservation of the diversity of Mexican agricultural and forestry species. Organic foods of vegetable origin (vegetables, legumes, grains, fruits, coffee and others) are grown with natural biodegradable fertilizers and pest control. They do not use any substance of synthetic chemical origin that also damages the fertility of the soils where they are used (synthetic fertilizers, herbicides and insecticides). Let us choose products with eco-labeling with National Environmental Certification such as MAYA BIO, which indicates that it is an organic product, and, therefore, a responsible sustainable purchase. The USDA ORGANIC International seal guarantees that an organic product, whether imported or domestic, meets the legal requirements to merit this label (Figure 4).



Figure 4. Examples of eco-labeling.

4. Separate inorganic waste from organic waste: PET Plastic, Rigid Plastic, Plastic Containers, Glass Bottles, Paper, Cardboard, Tetra Pack Containers, Aluminum Cans. Let's take the inorganic waste separated (previously washed) and not mixed at any time with the organic waste, to the recyclers.
5. Avoid burning garbage, even the bad practice of burning tires has been observed, as it generates carcinogenic substances such as Dioxins and Furans, and Greenhouse Gases.
6. Let's reduce to the minimum, the number of wastes generated by each member of a family, we are many, the more we are, the more we pollute, united we can make significant changes, wise decisions change the world. There is a directly proportional relationship between the number of
7. inhabitants and waste generation, we are currently 8,000 million in the World, by that, is in us, be

aware of the wise decisions to be made for a Sustainable Development.

8. Never throw garbage on the street, waiting for someone else to pick it up for us. Let's keep it in a bag until we get home, school or work and dispose of it properly. This will prevent clogged sewers, the main cause of flooding in cities.

The Refreshment Companies are leaders in sales in Mexico, some are considered Environmentally and Socially Sustainable Companies, since they participate in campaigns or Sustainability Programs, with actions such as Planting Trees, Water Treatment in their processes, Campaigns for the efficient use of energy in their facilities, Rescue of Animals in danger of extinction, etc. This also implies the application of ethical principles that seek the quality of life of the community and Human Development. However, there is still work to be done in the improvement of their production processes, for example, in the regulation of the concentration of carbohydrates in their products, which if not done correctly, could cause terrible damage to public health, such as obesity, and even diabetes, and affectations to different organs.

The State has the primary function of procuring the benefit of the of the population, ensuring

Economic Policies, that allow to capture through taxes, the sufficient income derived from the production of the Companies and Industries, and by means of the administration of the Public Services, to achieve the sufficient coverage to the population, that at the same time allows the Environmental Protection and the Assurance of the Public Health. To ensure Environmental Protection, the State must establish the Regulatory Frameworks or Environmental Policy, which set the parameters for Sustainable Environmental Management, for the different economic activities of the Social, Industrial and Business Sectors, with a Judicial Body, with the capacity to exercise its functions, strengthen values and guarantee an effective enforcement of the laws. However, Mexico is characterized as a country of laws; we have the General Law of Ecological Balance and Environmental Protection (LGGEPA), the General Law for the Prevention and Integral Management of Waste (LPGIR), Environmental Standards that establish the permissible limits of pollutants in wastewater discharges, NOM-001-SEMARNAT, etc. However, in the matter of Environmental Justice, at National, State and Municipal levels, there is no transparency, so that it is exercised, without detriment of the security of the one who denounces, but even, these laws, should be applied, without necessity of denunciations, sustained by the serious damage to our ecosystems and the environment, with the support in investigation of offices specialized in care to the environment, why is it necessary that the people, denounce, if it is something so priority, if it is

They need evidence, that the State creates the organism to collect evidence, derived from those that already exist to seek justice, with facts as evident as the case of the contamination of our rivers and lagoons, with the presence of hypoxia, of eutrophication in our fresh water bodies, with the drastic evidence that if you drink water frequently, from that eutrophicated lagoon, in the least of cases, we could suffer at least an enteropathogenic disease, or even by prolonged exposures, more serious cases. It is a reality, that someone has to pay, there must be someone responsible, but our State, like that of most of the States of developing countries, does not have as a priority to ensure that our environments are not degraded, although the savings in the Health Sector, would be greatly reflected, since there is no confidence that by investing in the environment, the problem of the Health Sector will change. Perhaps in some cases, due to corruption, instead of investing all the capital in the infrastructure and services required for the health aspect, resources are diverted for personal benefits, or even lend themselves to simulation, regardless of the serious damage to the collective.

Why are International or Transnational Corporations a risk for Mexico?

Due to the high price competitiveness of international or transnational companies, many national, medium and small companies have closed, and in doing so, direct jobs are eliminated, at the same time that the profits will hardly stay in the place where they originate, which means that the companies that earn these resources will no longer reinvest in the service sectors and local products. With Local Companies, it is possible to offer products of vegetable or animal origin, which can be fresher and cheaper than those bought in a self-service store, hundreds of kilometers away from the origin of the product. In addition to the amount of fuel used to transport the goods and products, raw materials and logistics necessary to carry out the production and commercialization processes of the Transnational Companies, across hundreds of kilometers of distance, even crossing an entire ocean, which makes necessary the use of airplanes as a means of transportation, which generates a considerable amount of Greenhouse Gases. Often, these companies relocate some of their corporate activities to other countries, since they realized that workers were used to lower wages and labor laws that do not provide for their welfare.

Transnational companies, dedicated to the massive production of primary products (fruits,), use bad practices such as slash and burn, to make available for cultivation large tracts of land, in addition to the fact that with the desire to want the soil to generate large amounts of production, fertilizers, herbicides are used, including

synthetic pesticides, xenobiotics, being these persistent organic pollutants, established in the Stockholm Convention, as carcinogenic, teratogenic and mutagenic, which is why they are so relevant, due to the damage and repercussions they can cause to the human health of the population. We must return to our local corn and bean crops, and recover the production of fruits that have a high nutritional value and are part of our cultural richness such as jinicuil (*Inga jinicuil*), huazontle (*Chenopodium berlandieri*), quelites, chipilín (*Crotalaria longirostrata*), chaya (*Cnidioscolus Anconitifolius*), Mexican cilantro (*Eryngium foetidum*), among others, supporting our Mexican farmers, so that they receive a decent income, and at same time stop positioning the products offered by transnationals, which do so much damage to the environment, with their irrational exploitation, and the effects on human health, and the health of living beings with whom we cohabit this planet.

CONCLUSIONS

Economic systems based on wealth and growth must change towards those based on quality, efficiency, and environmental aspects, in other words, although romantic or utopian, to live within the limits of the planet. It is a logical and ethical action to care for and respect what gives us the primordial. To continue exploiting our Planet in an infinite economic growth, as if they were infinite resources, will eventually bring us terrible consequences even more serious than those we are already suffering. We are going to live with our reality, they are finite resources, the Economy must also progress with a view to that reality. Finally, Sustainable Development is a vision that will allow us to be fair with future generations, they are not to blame for the decisions we make today, from the of view of unsustainable producers and consumers, because the planet we leave them will not be enough to satisfy their basic or even vital needs. We must open ourselves to a change of mentality and become a sustainable global society that takes care of its current and future generations by making wise decisions that take care of our planet earth, since our daily decisions have an impact on the social, economic and environmental aspects, since wise decisions change the world. This exercise of presentation of cases, offers information and strategies in Environmental Education. We will seek to strengthen this research work with two lines of future research, the first associated with the study and analysis of waste management from its characterization by per capita generation, volumetric weight, selection and quantification of by-products using NMX Mexican Official Standards, in the ITVH facilities to establish the potential for recycling in our institution. Also, as a second line, we will carry out a study of the effect of environmental education to promote a sustainable environmental culture, limited to students of the Tecnológico de

Villahermosa, and school students.

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