

Chapter 4

Sustainable development, why?



I. Introduction

The current observation of our ecological environment and the elements that constitute it (air, water, land, etc.) encourages us to reflect on its future, particularly regarding the natural capital we will provide for future generations: overexploited water resources, polluted air, rural areas destroyed by the encroachment of urbanization, polluted seas and oceans, exploited mining and energy resources, and a fauna and flora on the brink of extinction, etc. Unfortunately, what our historians and scientists describe is the coming of an era that presents the unique wealth of our future generations.

II. The scourges or miseries of humanity or the "3-M":

A. Threats to the planet: desertification, degradation of biodiversity, water and air pollution, climate change... This is the environmental aspect of sustainable development, probably the most significant.

B. The miseries of humanity: persistence of poverty, growing inequalities, malnutrition and lack of drinking water, endemic diseases... This is the social aspect of sustainable development;

C. The shortcomings of global governance: dysfunctions and injustices in international relations, particularly between developed and developing countries. Difficulties in implementing regulations that establish sustainable development, as well as in enforcing existing treaties and conventions. This is the economic and political aspect of sustainable development. An action must be part of sustainable development if it manages to reconcile the 3 "E": Economy, Equity, Environment.

II.1. The principles of sustainable development and their origins:

II.1.1. Definition of sustainable development

The concept of sustainable development became globally known for the first time through the Brundtland report in 1987. This report defines sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Government of Quebec, 2005). To achieve this, sustainable development takes into account three dimensions: environmental, economic, and social aspects. In other words, sustainable development aims to maintain

and improve the quality of the environment by contributing to environmental sustainability while seeking the self-sufficiency of communities. Figure 1 shows the desired balance of these three dimensions that aim for sustainable development [5].

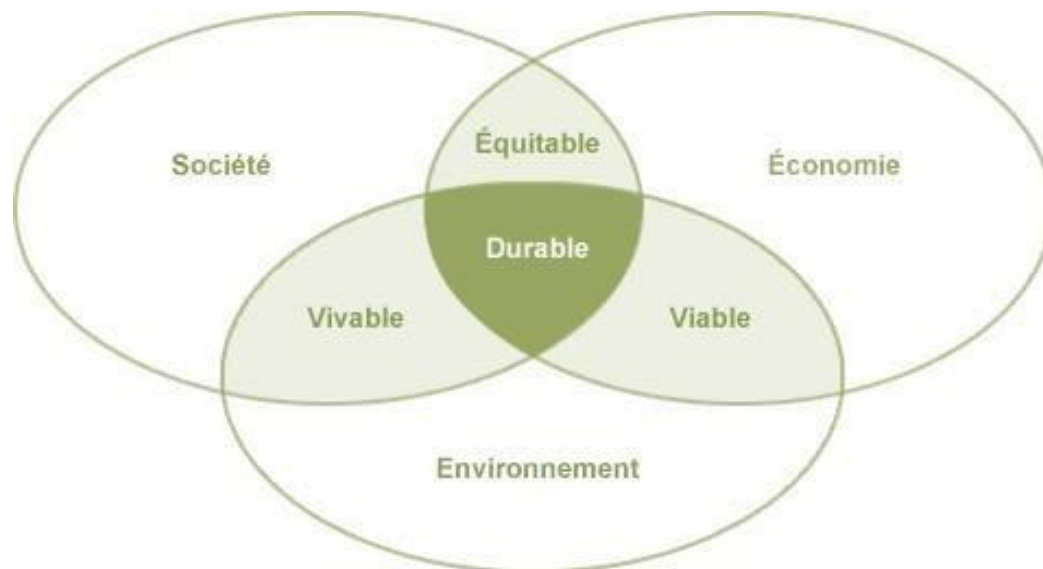


Figure 1. Balance of dimensions according to sustainable development.

The fundamental objectives of sustainable development are equity between nations, generations, and individuals, ecological integrity, and economic efficiency. The realization of these three objectives relies on the following measures:

1. Ensure social equity:

Meet the essential needs of present and future human societies at local and global levels and improve the quality of life (employment, education, health and social services, access to quality housing for all, and respect for human rights and freedoms, as well as access to participation in various social groups in the decision-making process).

2. Preserve environmental integrity:

Integrate, into all social, cultural, and economic actions, the concern for maintaining

the vitality, diversity, and reproduction of species and the protection of natural ecosystems, both terrestrial and marine. This is done through environmental conservation measures, restoration, planning, and maintenance of habitats essential to species, as well as sustainable management of the use of exploited ecosystems.

3. Improve economic efficiency:

Promote optimal management of human, natural, and financial resources to meet the needs of human society. This makes businesses and consumers responsible for the goods and services they produce and consume. Additionally, through the adoption of appropriate government policies (polluter/user pays principle, internalization of environmental and social costs, environmental taxes, etc.).

At the international level, the theme of sustainable development now encompasses that of the environment. This observation is reflected in the titles of the three Earth Summits:

- 1972: United Nations Conference on the Human Environment in Stockholm.
 - 1992: United Nations Conference on Environment and Development in Rio de Janeiro.
 - 2002: World Summit on Sustainable Development in Johannesburg.
- The challenge in implementing sustainable development is for all stakeholders (citizens, associations, businesses, governments, etc.) to adapt their behaviors, actions, policies, programs, laws, and regulations according to a global vision to simultaneously achieve a balance of these three fundamental objectives.

II.1.2. The 16 principles of sustainable development

The law on sustainable development defines 16 principles that all sectors and authorities must consider in their various activities. These principles serve as guidelines for all public sector organizations, regardless of their mission, to ensure that their interventions are part of an approach that considers the three interrelated dimensions of sustainable development: environmental, social, and economic.

II.1.2.1. Health and quality of life

The protection of individuals, their health, and the improvement of their quality of life are at the heart of sustainable development concerns. People have the right to lead a healthy and productive life in harmony with nature.

II.1.2.2. Equity

Production and consumption methods must minimize negative impacts on social and environmental levels. Waste, resource depletion, and inequalities among people must be avoided. The human factor must be taken into account. For example, a worker's income must be sufficient to meet their basic needs. Rights such as working hours and conditions must be respected.

II.1.2.3. Social Solidarity

Solidarity and the sharing of the Earth's resources is a fundamental principle of sustainable development. Countries must share raw materials fairly among themselves and pass them on to future generations. Solidarity must exist between states, particularly between industrialized countries and developing countries, as well as between generations. Therefore, the conservation of raw materials is a necessity to respect this principle.

II.1.2.4. Environmental Protection

Sustainable development is based on the principle of respect and protection of the environment.

Without this condition, it would not exist. All sustainable development projects must be environmentally friendly. New technologies developed to reduce pollution must be applied. All of this aims to achieve one of the main objectives of sustainable development, which is to reduce pollution in order to preserve the planet and future generations.

II.1.2.5. Economic Efficiency

Economic prosperity must promote social progress and respect the environment.

II.1.2.6. Participation and Engagement

Sustainable development requires the participation of all social, political, and economic partners in projects. Citizens, project managers, and governments must all be involved to ensure the success of a sustainable project. A council should be established to

persuade citizens and raise awareness about the importance of such projects for society and the future.

II.1.2.7. Access to Knowledge

Actions should be encouraged to promote education, access to information, and research in order to stimulate innovation and desensitize the public and their participation in sustainable development practices.

II.1.2.8. Complementarity

Authority and responsibility must be delegated to the appropriate levels of authority. An appropriate distribution of decision-making locations should be sought, ensuring they are as close as possible to the citizens and communities concerned.

II.1.2.9. Prevention

If there is a known and identified risk, measures must be taken. These measures should be prioritized by implementing the best available technology at the lowest acceptable cost.

II.1.2.10. Precaution

When making decisions, we must take precautions to avoid disasters that can harm our health and the environment. In order to assess the associated risks and prevent damage, the competent authority takes precautionary and appropriate measures. For example, limiting greenhouse gas emissions can slow down global warming.

II.1.2.11. Protection of Cultural Heritage

Cultural heritage, consisting of goods, places, landscapes, traditions, and knowledge, reflects the identity of a society. It transmits its values from generation to generation, and its conservation promotes sustainability in development. Given the factors of rarity and vulnerability that characterize it, it is important to ensure its identification, protection, and enhancement.

II.1.2.12. Conservation of Biodiversity

Biodiversity provides invaluable services and must be protected for present and future generations. Protecting species, ecosystems, and vital natural processes is essential to ensure the quality of life for our citizens.

II.1.2.13. Respect for the carrying capacity of ecosystems

Human activities must respect the carrying capacity of ecosystems and ensure their sustainability.

II.1.2.14. Responsible production and consumption

Changes must be made in production and consumption patterns to make them more viable and responsible in social and environmental terms. Particularly through an eco-efficiency approach that avoids waste and optimizes resource use.

II.1.2.15. Polluter pays

The polluter pays principle, whereby anyone whose activities cause or are likely to cause damage to the environment bears the costs of all measures for pollution prevention, pollution reduction, or restoration of the sites and their environment;

II.1.2.16. Internalization of costs

The value of a product or service must reflect all the costs it imposes on society throughout its life cycle, from creation to consumption and final disposal [9], [10].

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