Humains needs and sustainility

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Définition

"Strong sustainability: Among two main models of sustainability (weak and strong), strong sustainability captures the essence of irreversible, dynamic and hierarchical relationships between environment, society and economy while weak sustainability model creates a bias towards economy creating a detriment for environment and society. Therefore, businesses should strategize towards innovation with a strong sustainability approach and circumstances at institutional level should be created to support this.

- System thinking: Sustainability is a system property and not a property of individual system elements. Therefore, products, services, technologies and organizations cannot be regarded as sustainable on their own right but they may be elements of sustainable socio-technical systems. Therefore, design and innovation for sustainability should adopt a systems thinking approach as a reference to evaluate product / service concepts within which the system they will be produced / consumed.

What are the needs we are talking about?

The need is defined by a feeling of deprivation, of a lack that the individual wishes to fill.We can distinguish several needs : fundamental / primary / absolute and secondary / relative which are defined in the different theories.The needs are characterized as follows : they can be unlimited and evolving. Needs change according to the context of society, environmental issues and the individual. The needs are the same but it is the way to meet them that changes according to the cultural, social, historical context ...

Human needs and sustainability

Even primary needs consume resources and produce polluting emissions. Humans will exploit and appropriate resources and transform them to meet their needs. This is not without consequences on the state of the planet (see course on planetary boundaries). It is within this framework that Malthus (1966) posited his principle of population, where he shows that there is an intrinsic divergence between the increase of population and that of subsistence. Subsistence increases more slowly than needs. Malthus believes that the earth will not be able to feed the entire population in the long term and therefore that population growth must be regulated.

Since the beginning of the 1970s, one of the ideas carried in ecological thought is that there are limits to growth, economic but also industrial, demographic, pollution, consumption (" The limits to growth " by Meadows et al. 1979 sponsored by the Club of Rome). The report showed that after decades of rapid growth, humanity must reach a threshold beyond which growth would be neither possible (due to planetary boundaries and finite resources) nor desirable. It is the work of Georgescu-Roegen (with " La décroissance " Georgescu-Roegen 1979- http://classiques.uqac.ca/contemporains/georgescu_roegen_nicolas/decroissance/la_decroissance.pdf) which poses the problem of the inevitable déplétion of non-renewable natural resources. One of the conclusions of this work was that the decades of growth was an exception in history and that this context was about to end. Consequently, it was urgent to anticipate this reduction before a decline. Ayres and Kneese in their writing " Production, consumption and externalities " (1969), present an approach that questions production methods but also consumption patterns by analyzing flows and therefore identifying the origin of emissions. In their work, the authors show the principle of conservation of the mass of flows in the economic system. In fact, part of the flow is transformed into a system and a larger part of the flow is emitted in the form of pollution.

It is the foundations of ecological economics that have given rise to reflections on sustainable development.

The Brutland report, united nations, defined in 1987, sustainable development by :

" Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs"

In this definition, there are two essential notions : 1) needs and 2) the level of sustainability 1) How can we define the needs? What needs are we talking about ? Are these basic needs ? What is the difference between needs and wants ? Are our daily needs necessary ? The central question would rather be how to clearly define its needs with regard to the resources that we are going to consume or the programs that we are going to emit to produce in order to meet the needs. 2) The level of sustainability of the concept of sustainable development with two positions : weak and strong sustainability. In the concept of sustainable development, the concept of development includes structural change or a modification of the lifestyles of society (we are not talking about an economic model or growth) What type of sustainability : weak (we admit that technology can replace nature) or strong (we admit that nature is irreplaceable).

Here it is what is important is to decouple economic decrease and ecology, through new models which call into question the relationship with society. For example, social and solidarity economy approaches, sharing economy, The main question is : What kind of models are suitable to stay within planetary boundaries while meeting needs ?

The question which human needs compatible with a Sustainable development (SD) ?

As we have seen, most definitions of SD speak of human needs.

Sustainability is our ability to meet our needs while staying within ecological limits. Also, in one of the four principles of sustainability it is said that " in a sustainabile society, people are not subject to conditions that systematically undetermine their capacity to meet their needs)

How will its needs make it possible to achieve sustainability ?

There are several models of needs like Maslow's. See video : Maslow's Hierarchy of Needs Explained - https://www.youtube.com/watch?v=xT6BpFhPsfY

In this course we will be interested in the model of the economist Mandref Max Neef, he published a book in 1991 entitled " Human scale development " demonstrating that human needs are limited and classifiable.

Max neef **identified 9 main needs common** to all cultures and all historical periods ; What changes is the way we will meet these needs. The nine basic needs are

- Subsistence : we need food, water, shelter, 3
- Protection : a safe environment, social security,
- Participation : take part in decisions that affect us
- Idleness : being able to relax
- Affection : to have friends, to love and to be loved
- Comprehension : Learn, understand, meditate
- Creation : cook, create, invent
- Identity, having a sense of belonging, having an identity, knowing yourself
- Freedom : being free to choose how we want to live our life

Even if the needs were the same in all civilizations, the means of satisfying our needs for protection, subsistence, freedom are very different than in those times. Certain objects / contexts / people fulfill a need, such as the insurance contract which provides protection. Others are more synergistic and make it possible to meet several needs. For example, breastfeeding a baby can meet both the baby's need for subsistence, but also his needs for protection, affection and identity.

Max Neef highlights other ways of meeting needs : **destroyers**. Which claim to meet a need but prevent us from meeting several others. For example censorship which would meet the need for protection but prevent us from meeting other needs such as creation, freedom, identity, understanding.

The **pseudo-Filler** that will give a false impression to meet our needs (like fashion for identity).

Max Neef offers four categories to organize how we meet our needs : **being, having, doing and interacting**.

Watch the video : Fundamental human needs

https://www.youtube.com/watch?v=28GMoDzpvPQ

Explanation of the Max-Neef matrix : https://www.youtube.com/watch?v=jJTvd0Yg2hk

Max-Neef recommends that emerging countries must make themselves independent of the current economic model which is centered on consumption. Its countries must strengthen social identity and use resources efficiently. For this, Max Neef encouraged promoting social development. In addition, it differentiates social development and growth. And so he encourage development on a human scale.

How are its needs useful to move towards sustainability ?

First, When we try to reduce our contribution to impacts which also reduce the ability to meet the needs of other humans.

It is about following a process to guide our reflections. We can highlight our business, products and services by using Max Neef's Nine Fundamental Needs and how they are being met. Second, when we try to reduce an unsustainable practice, it allows us to take a step back on the product, namely its origin, to what need it meets, and to question whether we could meet the same needs in another way or with a less impactful product ? Is the product necessary to meet the need ?

For example, how can we rethink the organization of a festival, which should meet the need for participation, idleness, creation and identity. Would we have another way to meet its needs by reducing CO_2 impacts, the use of resources and with less impact on local ecosystems ?

Asking this questions would make it possible to explore different solutions that are more compatible with socio-ecological challenges.

Can we develop new ways of meeting the needs for freedom, identity without overconsuming our resources, producing and consuming so many products and services. Can we meet the needs of idleness and freedom without going to the other side of the world ?

And if we find sustainable ways to meet our need, can we improve it to meet other needs synergistically and using fewer resources ?

In other words, being sustainable is our ability to meet our needs (by redefining the means to meet them) within planetary boundaries.

The 9 fundamentals needs of Max Neef can be very helpful in finding ways to meet them, using fewer resources and having a holistic view of the system. It allows us to give a new look at the system we are trying to change. This is essential to stimulate innovation and avoid superficial solutions.

It is important to link human needs and ecological economy. See the video : Ecological foundation of basic human needs - https://www.youtube.com/watch?v=iLediUlP24s

Satisfaction of needs through goods ? (Economic theory)

In the thought of the economic classical school, the needs are supposed to be known by the individual consumer and the producer, who is even rational to him.

In a supply and demand model, we imagine that the individual has defined his need. But the needs are shaped by the market.

In economics, the difference between natural need and artificial need does not arise. The economy is concerned with the way in which human activity will allow the satisfaction of needs through the production of goods.

There are several classifications of "goods". (In design for sustainability goods are defined as products, systems, services and infrastructures).

Classification according to rarity

Free goods : available in large quantities and which do not need human labor (air)

Rare goods : economic goods that need human intervention to produce them

Classification according to nature

Material goods: physical aspect

Intangible goods : service, benefit

Classification according to their use

Produced goods : machines used to produce

Intermediate goods : raw materials

Final consumer goods: final products

Classification according to service life

Perishable goods: will disappear after the first consumption

Semi-durable goods : will gradually wear out

Durable goods : long use (housing)

Carl Menger 1840-1921 helps identify the conditions that transform needs into material good. He identified four main ones :

1. Humans must be aware of a current or future need
2. The object or the service must have objective characteristics which make it possible to satisfy the need.
3. The human must have knowledge of the objective characteristics of the object
4. The object must be available

The " economic " good exists when it is insufficient and causes scarcity is at the heart of the value of this good. The value is the importance that the individual attributes to this good according to the needs (Water in a mountain context and water in the middle of the desert)

"The word VALUE, it should be noted, has two different meanings […] One can be called 'use value', the other 'exchange value'. use frequently have little or no exchange value; conversely, those with the greatest exchange value frequently have little or no use value. water, but it acquires almost nothing: one can hardly get anything in exchange for it. A diamond, on the contrary, has almost no use value; but one can often obtain a very large quantity. other goods in exchange "(Smith 1776).

According to karl Max, the exchange value of a good is the amount of labor socially necessary for its production: "living labor" and "dead labor" (embodied in the means of production). By paying a salary, the capitalist becomes the owner of the labor-power, for the duration for which he bought it. The source of exploitation: the worker devotes more hours of labor to the service of the capitalist than is necessary to reproduce his labor power. Current dynamics predicted by Karl Max.

"If our values are fair, everything else (price, pollution, etc.) is fair" Georgescu- Roegen

In this context, it is important to quantify the intensity of our needs and the value that can be attributed to a tangible or intangible (knowledge, partnership, innovations..) asset. Here we will quantify the level of utility of an asset. Here we will talk about assets to include any element that would allow to have a value of the tangible (environmental impacts, etc) or intangible (knowledge, partnership, innovations, patrimonies,..) flows exchanged. To this, it is important to promote the distribution of assets for social justice. The surplus of a good or an asset is not visible (since it is abundant) for some individuals but it is essential for others (since it is rare in this community).

The question that can be asked is the following : **Objects, nature, people only have values because they are useful ? Exchangeable? Difficult to produce**?

Questioning the need by value would be a way to lead towards sustainability ?

What need are we trying to satisfy through the product? What desire? What ambition? What action should we take (and how much does it consume or emit) ? What transformation of the world is desirable? What will it be used for? Whose ? What absolute finality?

Any need must be judged on the basis of the means implemented to meet it.

Current products tend to be integrated into "super-systems" forming "technical eco-systems" or even a single "technical system" in which the user (and the designer) loses his autonomy.

Could one lead be to reappropriate the technique to promote the satisfaction of " lean "needs and regain one's autonomy ?

VII

The commons : values of sharing and value of savings to promote the satisfaction of needs by promoting the empowerment of the individual.

The notion of common refers to a free and collective management of scarcity: a common is a resource shared, managed, and maintained collectively by a community; this establishes rules in order to preserve and perpetuate this resource while providing the possibility of the right to use it by all. These resources can be natural: a forest, a river; material: a machine tool, a house, a power station; intangible: knowledge, software.

And should we give a "value" to nature?

VIII

"Progress can be a great comfort. But beyond a certain threshold, it becomes uncomfortable and even unlivable. Unlivable at the existential level, because it gives the image of a dead world, dumb, disenchanted, asphyxiating in the long term. And unlivable at a more concrete level: by inducing climate change and a biodiversity crisis, this will make the world uninhabitable for humans in the decades to come. The question is therefore to relearn how to pay attention, to connect one's sensitivity to the multiplicity of life forms which inhabit an environment, which constitute it but in a discreet way, pollinators, soil fauna, forests… "(Ed Begley Jr)

A brief reminder of the values of the sustainable development concept
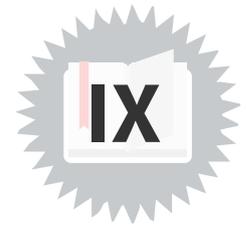
We can dissociate the constituent values of SD from the associated values

The three constitutive values in the definition of sustainability are as follows

- Economy : productivity, employment, profitability
- Society : justice, education, health
- Ecology : protection of biodiversity, fight against climate change,

To this we add the values at the interface of each of its spheres which are: environmental justice, social justice, energy efficiency, etc.

To these constitutive values of the definition we can add fundamental associated values , which are not in the classic pattern of sustainable development.

Recognition of the existence of conflicts between the three spheres of SD but also between present and future generations : There will always be a posture that will give more importance to the social or ecological or economic sphere. It is important to recognize the existence of diversity and these different postures and the right of expression of the supporters of each of these spheres.

Reflexivity

It is essential to be able to question the definition of sustainable development in all these facets: Is it possible to reconcile development and sustainability ? How can we take into account future generations? Is it possible to reconcile the diversity of supporters (both those who advocate for the green economy and those who advocate degrowth) ? How to strengthen the ecological sphere in the reflections?

It is therefore fundamental to question sustainability in order to create a dynamic concept adapted to the evolving societal context.

Citizen participation

Sustainability cannot be achieved without the participation of each individual through these daily actions, the adoption of decentralized technologies, political participation, etc.