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# ROLE OF GLOBALIZED APPROACH FOR SUSTAINABILITY DEVELOPMENT IN HUMAN LIFE

**Srishtee Chaudhary**
*Lecturer, Electroncis&Comm. Engg, Govt. Polytechnic College for Girls, Patiala, Punjab, India*
*srishtee@rediffmail.com*

**Rajesh Mehra**
*Head, Electroncis&Comm. Engg., NITTTR, Chandigarh, India*
*rajeshmehra@nitttrchd.ac.in*

## Abstract

*Sustainable development is a complex, interdisciplinary and multidimensional issue dealing with various aspects of environment and social, considering the future of the planet. In this paper sustainability development is presented with its goals to be achieved with respect to planet's future and limitations encountered for the same. The globally changing scenario leading to over utilization of resources and its effect on environment is discussed with respect to some examples. The limitations regarding current world scenario is discussed and various ideas are proposed for sustainable development. Also latest examples for sustained environment resources are being observed. The concept of organic electronics for sustainable eco-friendly world is conferred.*

**Keywords**

Sustainable Development, Sustainability Goals, Sustainability Ideas, Organic Electronics

## 1. Introduction

Sustainable Development can be defined as fulfilling the present needs but not on the cost of future needs. It is an organizing principle for human life. Sustainable development relates to

the concern of utilizing natural resources without challenging the humanity. Sustainable development assumes a desirable living for human in whom living conditions are not sacrificed with respect to use of resources in near future and not affecting the natural systems and the environment. So that future generations may also have their needs met.(UN documents, n.d.).

In sustainable development everyone is involved. We being the part of the system should get responsible to each other and towards the natural resources to be sustained. Sustainable development provides to create a right pattern for production and consumption. The question of sustainability arises as demand is increasing day by day but resources are limited. Earth as a planet with natural capital is being over-utilized, leading to devastating effects such as vanishing forests, changing unstable weather patterns, depletion of Ozone layer, melting of glaciers etc. Furthermore use of toxic chemicals in our societies is harmful to human and environmental health. Therefore we need to encircle some principles for green and sustainable environment that are not affected from toxicity. So some steps are needed to be considered to check the patterns of resources available, where and to what extent presence, their utilization , rate of depletion and the corresponding effect on Sustainability.( Sustainable Development, n.d.) Sustainable development involve certain conditions essential for safeguarding the environment without effecting the overall balance.

As for instance the frequency spectrum is limited but number of subscriber's/users is increasing day by day with respect to mobile communication. So to meet this demand frequency-re-use concept is utilized to increase the capacity of the system and to accommodate more number of users. Whereas this increased radio wave communication radiations effects the environment, humans and animals both positively and negatively. Cellular phones and many digital systems in use produce radiation. Cellular phone radiation has been classified as Group 2B by International Agency for Research on Cancer (IARC) which is considered to be carcinogenic. Further the discarding of these electronic equipments in the environment result to electronic-waste (e-waste) contributing to toxicity. Sustainable development defines that the environment and persons are interdependent on each other. The photo-synthesis is an example of positive interdependence. However ionized radiation results in negative interdependence weakening the seeds and plantations.

Sustainable development requires collective and extensive contribution by humans in carrying the responsibility for Sustainability. It was well said that "Need leads to Invention" (Commoner, B., 1972) but didn't specified that invention would lead to resource degradation.

Innovations changed the current scenarios and ways of living for the public. Outdoor games replaced by indoor games (video games and all). The public that was supposed to enjoy outdoor games for long hours without any feeling of exertion nowadays prefer net surfing, playing games on laptop, listening music on i-pad. Thus increasing consumption of electricity that is further related to water resource, this specifies a kind of interdependence. Technology innovations were used to be a boon but if taken granted can lead to disasters.

Everyone wants a better option. Some people explores better options with respect to employment so they switch their jobs, some want better homes and housing, for that persons changes their locations or reconstruct the older infrastructure, while other people want better schools, better shops, or cleaner and safer streets. Others may want all these things. Public need can be grouped into three terms a better environment, a better economy and a better society. But it is realized that if one issue has to be tackle, then probably have to tackle the others as well. For instance, an unemployed person would rarely think to eat in a restaurant whereas an employed person with better salary would prefer a five star restaurant. Thus person's job profile specifies his/her standard of living. Similarly public would prefer to visit a tourist place with better public transport and facilities with safe environment with adequate staying facilities and drinking water. These are not local issues but are faced at a national as well as international level. To make these things work, different governments of different nations need to make sure that people have an effective voice in deciding what happens where they live.

Sustainable development can be categorized as: environmental sustainability, economic sustainability and sociopolitical sustainability which are interrelated and complementary.( Sustainable development, n.d.). Key to sustainability, the concept specifies that business success is no longer defined only by monetary gain but also by the impact an organization's activities have on society as a whole. 3BL specifies company is also responsible to stakeholders other than shareholders. Stakeholders can be all those who will be affected by company's practices and models including workers, surrounding societies, communities. Netherland is an example of a country in which 3P concept took place. "People" are consideration in TBL. The organizations responsibly must consider how its practices affect workers and stakeholders..

Child labor is not preferred in a TBL business, rather they would pay fair wages to its workers, maintaining healthy work environment with tolerable working hours."Planet" being a natural capital should be benefited as much as possible to fit the natural order and with the least harm to the environment and minimize environmental degradation. A balance has to be made by

supervising the chain of resources its utilization and disposal and rate of utilizing and depletion of resources.TBL does not endorse the production of toxic materials, chemicals and weapons etc. “Profit" is an economic value for the organization after deducting the cost of all inputs, including the cost of the capital. A triple bottom line organization ensures their work has some positive impact on social and environment. Profit is not restricted to the inherent profit of the organization.

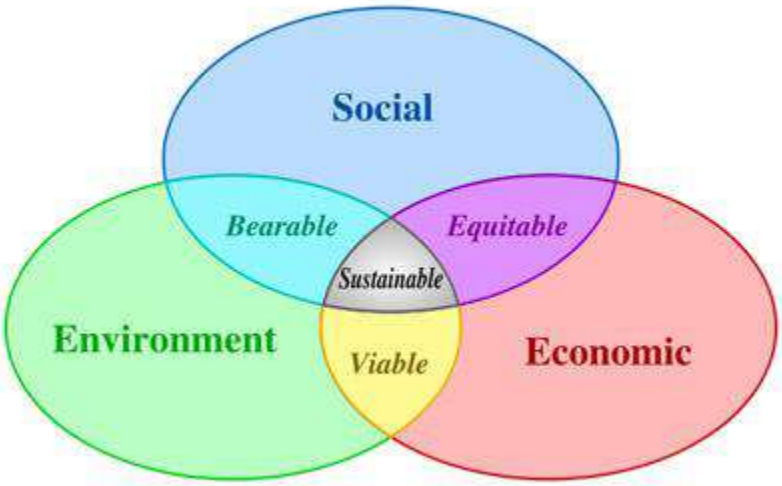


**Figure 1:** *Sustainable Development Goals*

## 2. Goals and Limitations of Sustainability Development

Rio+20 summit was proposed to initiate a process of designing Sustainable Development goals with 192 UN member giving the common consent for the summit. The goals proposed are action-oriented, easy to communicate, pertaining to be global and universally relevant. While proposing these goals it is taken into account various national policies frameworks, the realities, quantity and extent of development. The Rio+20 outcomes document, “The Future We Want”. The goals are as Combating Poverty, Changing Consumption Patterns, Promoting Sustainable Human Settlement Development, Biodiversity and Forests, Oceans, Water Resources, Advancing Food Security, Energy, including from renewable sources.

### 2.1 Imbalance production-consumption scenario

Even though public is familiar with the depleting resources still they resist to control and manage their utilization pattern. Animal carriages are replaced by vehicles. Now-a-days more vehicles are used as they are convenient. People prefer covering shorter to shorter distance

through vehicles instead by a walk (increasing consumption of resources). Also for a common destination point public prefers their independent vehicles rather than pooling the vehicle for it.

### 2.2 Technology impact on the environment

Land clearance for making roads or for installing optical fiber cables, chemical contamination of the environment through factories wastes ,burning of wastes results in toxicity in the environment, re-use and/or recycling of the Information and communication technology(ICT) devices which may emit toxic elements, all these effects the environment. The reuse or recycle of ICT devices or part of the devices should be done carefully. Strict regulations should be there globally and universally for recycling of materials with toxic contents. Nations having unlicensed market should frame some policies. In many organizations the processes to recover metals are not safe and eco-friendly generating dangerous and hazardous compounds constituting a threat to the environment as well as to the persons involved in the work.

### 2.3 Wealthy vs. un-wealthy

For the poor Sustainable Development is of mere concern and people below poverty line. (A thirsty and starved person would store whatever food he sees is available to any contaminated plastic vessel or bowl rather than thinking of its pros and cons). A desire for a clean and safe environment is developed by wealthy citizens. In this process government plays a vital role. As through its policies government should provide basic needs for the sustainability of the person, right to live, right to educate. (Remigijus Ciegis., et al 2009)

### 2.4 Selfish attitude/behavior

Some persons, states, countries self-centered approach of me being a priority first. Sustainability issue cannot be resolved by this attitude. Sustainable development cannot be attained in isolation. As sustainable development is a global issue concerning all the countries and population residing in them?

## 3. Sustainable Development Ideas

Our current living pattern leads us to unsustainable and inequitable development as we are living beyond earth's ecological limits. Resource use is unsustainable and is directly linked to consumption and production practices. To overcome the problem of sustainability some of proposed ideas are as follows:

### 3.1 Re-invent Barter system

Barter system is defined as a system of transacting the give and take of materials or services, for other materials and services. In simple statement "You do my work, I do yours" OR "You give me this, I will give you that". For a sustainable development this barter system could be re-invented with reference to various resources located in various countries. For a country with more vehicle mobility with more population the requirement of petrol, diesel will be more irrespective of the availability. So a concept of barter system can be utilized to get these resources (petrol, diesel) in exchange of those resources that are deficit in other's particular region.

### 3.2 Recycling

Technology has provided so fast services for the public that the concept of recycling is vanishing day by day. But in order to have sustainable development recycling should be considered as a major issue. (Pearce D., et al, n. d)**.**As for instance in green building the concept of water recycles is there, the rain water collected by cisterns is used for landscaping irrigation. Constituting the Recycling policies and principles for specific products resource wastes can be minimized and resources can be conserved, contributing to the sustainable development goals.

### 3.3 Resource utilization

Currently 20 % of the wealthiest persons are utilizing 80% of the resources. There is a kind of mismanagement for utilization of resources. The right pattern for utilizing the resources could provide better sustainable development. As a common example is we are asked and supposed to switch off lights/fans when not in use so as to save electricity. Similarly close the water taps when not required so as to save water resource. Public should have a responsible behavior for their needs and utilization criteria.

### 3.4 Switching to renewable resources

As planet is on the urge of depletion of non-renewable resources, we should go for substitutes for the same that is for renewable resources as sun, wind etc. As for instance solar cookers, solar panels etc are utilizing solar energy. Solar cookers used for cooking as cooking device. Solar panels used for generating electricity, heating water etc. But the problem with these kinds of equipments is they are dependent on the availability of renewable resources as on a foggy day it is difficult for solar systems to operate. Someone wonders if a team of architects and engineers could work on for a rotating building structure or rotating equipment so it could utilize

the natural resource as solar energy for the maximum time, as changing the direction of the building structure or equipment as the direction of sun changes.

**3.5 Clean Technologies**

With the changing scenario on a global front more and more technologies are coming in account. But for sustainable development clean technologies are required that are environment friendly. Clean technologies propose alternatives are not harmful for environment.( Marco Mezzi., et al, 2004 ). Clean technologies are not always available. Even if they are available companies are resistant to use them as they are dependent on old technologies. A common problem with technologies is not the technology itself but how they are utilized. Technologies were introduced as a boon and blessing to human era. They were not proposed to be harmful to the environment. It was not taking into account the interrelated parameters involved of environment and technologies that made it harmful to the environment. Air Pollution is an example of side-effect that was never proposed by the designers of technologies as maybe it is from automotive sections (vehicles) or machinery sections (factories). With respect to technology initial or theoretical behavior would always be different from that of practical operation. The efforts should be to implement a clean technology rather than cleaning the technology. As to control pollution CNG (compressed natural gas) is proposed instead of petrol/diesel/LPG as they produce less undesirable gases.

**3.6 Building Configurations/Architecture with respect to sustainability**

The designing or architecture of any structure depends upon a person's requirement, area to be covered, building dimensions, building shape, constraints of the area, material to be used, correct use of materials and building by laws of that particular area. But now various design methods and construction techniques are developed globally in reference to safety of the buildings also, as for example seismic configurations. Nowadays architecture is also becoming multidisciplinary but main roles for an architecture building are played by an architect, designer, and draftsman. (Beder,Sharon, 1994) The design analysis should be done before the completion of the structure that explores how energy loads can be reduced in the building and sustainability goals can be accomplished regarding the assumptions of the building parameters to be considered. Some of the parameters are as follows:

- Impact of multifunctioning spaces, space allotment per person, reduction in building area, maintenance issue on human performance.

- Impact of site conditions as shading, exterior lighting, landscaping, adjacent site condition on human performance.
- Impact of orientation of building on window to wall ratios, sizing, lighting, renewable energy consumption and energy consumption.

**3.7 Green Buildings**

Buildings having a design or structure that is self-sufficient for its survival i.e. for proposed life-cycle of building the resources are assigned, managed and processed as it is sufficient for building survival and are environmental friendly creating a synergy among the practices used. These structures does not provide any load on the environment and human health as they utilize renewable resources, e.g., using solar energy, rain water harvesting etc. The structural designing of Green buildings vary from place to place as orientation of the building varies availability of renewable resources, climate, environmental conditions and technologies to be applied. .( Building Design and Construction,n.d.).Some examples can be quoted as a building located in Louisville, Kentucky's NuLu (New Louisville) district , first commercial Platinum LEED certified building, another example is the Taipei World Financial Center, a landmark skyscraper located in Xinyi District, Taipei, Taiwan.( Remigijus Ciegis ., et al, 2009). Green buildings further can form Eco-Villages. An example is Green Villages in Bali, Indonesia.

**3.8 Organic Electronic Technology**

Organic electronics utilize organic small molecules or polymers for having desirable electronic properties. (Organic electronics, 2018) Organic electronic materials are constructed from carbon-based molecules. In today's world we are solely dependent on electronic technology. So objectives should be clarified about which technology, by how means i.e. methods and processes for manufacturing of devices so that environmental impacts can be justified. Because these devices are more environment-friendly they contribute to a more sustainable electronic world. With Organic Led's (OLED) the electronics industry has achieved enormous success, being used to build OLED-based smart phones, screens.

The example stated in this section specifies that energy cannot be created nor be destroyed; it is transferred from one form to another. For sustainable development an approach to utilize the existing resource by merely converting it to another one can be useful. Here resource in one form is utilized by converting it into another form.

DRDO's eco-friendly solar melter to thaw snow into water: Army posted at remote mountains of extreme altitude areas above 18000 ft don't have electricity so kerosene stoves are used to melt the snow as water is available in rivers and streams mostly in valleys far below the posts. Fuel has to be airlifted adding cost and logistical problems. To overcome this problems solar melter is invented. (Kanwar, Shimona, 2014).The snow melter traps smaller wavelength infrared (IR) rays and then converts them to longer wavelength IR rays that cannot escape and could be utilized for melting snow. Currently solar shelter is installed at high altitude (tested at Khardung La highest motorable pass in Ladakh, Jammu&Kashmir, India) which can get heated upto 55 degrees Celsius when outside temperature is sub-zero. So trapped energy is tap for melting the snow. The slow melter has insulated chamber where snow can be placed to reduce heat transfer. The outer body is made of galvanized iron sheet and inner chamber is made of stainless steel. Currently it converts 7kg of snow into 7 litres of water with 40 kg weight. Improvement on the apparatus is proposed to make it handy and portable and further integrated with filtering system to make it safe for drinking.

## 4. Conclusion

Sustainable development being an inter-disciplinary issue has to be dealt with great concentration at a global level. The world has to understand that earth as a planet is sufficient for one's need but not for greed. The question of depleting resources because of irresponsible behavior of the present generation and over utilization of the existing resources has to hold forth. For a sustained future present generation should seriously take into account the issues impacting the environment, needs and requirements for fulfilling the same without disturbing the environmental behavior. Currently Planet is facing a horrible impact of Plastic from seas to oceans to soil, as it is not bio-degradable; also burning it results in emission of harmful gases. Many states and countries including Australia, India, Hawaii, Italy, China and Bangladesh has banned plastic bags. But here issue that has to be understood is that banning is not eliminating the use until and unless Plastic manufacturers and Package Industries are still in ordinance with Plastic. Also nations and mankind should be united at the global level to deal with it, forgetting the border issues. Another major issue degrading the environment is the waste. Waste from homes, industries and institutes is contributing to various types of Pollutions. The mankind is least bothered about Waste disposal and its Recycling. Countries with no strict Environmental Policies are experiencing huge mountains of wastes. The great limitation is negligence of proper

Solid Waste management strategy The nations need to come together on a common platform to achieve sustainable development goals. The responsibilities can vary from developed nations to developing nations and to under-developed nations so that globally in mere future upcoming generation should have the sufficient resources to fulfill their needs. The lack of co-ordination between various Government agencies, Country and State Policies, Environmental and Ecologist scenarios make it difficult to construct a valuable study for Sustainability. There is lack in ensuring sustainable level of population, conservation and enhancement of resource base. Environmentalists, economists and Government agencies need to have integrated decision making.

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