

UN SDGs
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Module 5

Distinction between Development and Sustainable Development

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UN SDGs
: 17 goals to transform our world

Module 5
* Distinction between Development and Sustainable Development

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So, in today's lecture, we have module 5, which talks about distinction between development and sustainable development. So, we will see what is the difference between these two terms; and this is under the course of UN SDGs.

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Development

1. The term development appeared before the term sustainable development and initially referred to creating material wealth to meet basic human needs.
2. After World War II, the concept of development was expanded to refer to the economic growth of sectors across the economy; attention was paid to the economic structure, and focus was put on industries that spearheaded the economy.
3. By the early 1990s, the definition of development had shifted once more to include social and human factors in addition to the meaning of economic growth.

So, let us define development term. So, the term development appeared before the term sustainable development. Of course, it came first and initially referred to creating material wealth to meet basic human needs. So, you can see over here, there is this phrase creating material wealth to meet basic human needs; that was the actually leading premise for term development. And it has actually evolved over a long period of time; so, we will see what came later. So, the second thing what happened after this. After World War II, the concept of development was expanded to refer to the economy growth of sectors across the economy.

So, if you see this economy was divided into different sectors and the overall economy growth of those sectors, that became the actually meaning behind the term development; attention was paid to the economic structure and focus was put on industries that spearheaded the economy. So, economy if you see, even in today's time also as we see, economy is mostly driven by the industry, the various units, corporations and organizations which work for monetary benefit, work for actually economy gain. So, in order to make their economic gain, they conduct certain services, they deliver certain products. Like for example whenever we go to market and we try buying maybe a piece of electronics, maybe a piece of garment cloth; or if you are going to any eatery we are having our lunch or dinner at some nice place.

So, those are all actually some sort of actually fulfillment of a human needs and somebody is taking it up as an industrial activity. So, this industrial activities together of various sectors, sectors we are aware of agricultural is one a very traditional conventional old industrial sector. Not particularly industry we call it; but now, it is also a kind of a sector under economy. So, under economics agriculture, perhaps you can call it as a first one; because agriculture is with us with the humanity for a long long time, from the period we started. We learned, humans learned how to grow crops and make it as a cyclic activity around the year, and they made their food security.

Then, comes industries like a manufacturing industries, service industries, aviation, railways, textiles, garments and all of them combined, if you know metals, electronics, electrical, all of those combined. They are the different, you can call it as a sectors; manufacturing is one sector, construction is another sector, infrastructure, planning, civil engineering, these are another sector where they go for maybe laying off the roads and bridges, railway lines, et-cetera, et-cetera. So, these actually activities together, they boost the economy; so, this term was adopted. You can see

over here economic growth of sectors across the economy, spearheaded by industries. Now, let us see, by the early 90s, the definition of development had shifted once more to include social and human factors.

So, from here if you see, this is not just industries, a little more than that, in addition to the meaning of economic growth. So, of course, economic growth was there this, you can care, you can say that it came like a first; because from here, this whole development term actually started coming into being and then social and human factors. These two things also got added. What happened next?

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The slide is titled "Development" and contains two numbered points:

- 4. Parallel to the development of society, the concept of development has gradually been perfected, including economic growth, economic structural advancement, and social progress.
- 5. Development may be defined as the process of implementing economic restructuring to give people a better living environment and social benefits.

Handwritten annotations in red ink include:

- Under point 4: "Sustainable", "Dynamic concept", and "evolve → ways -".
- Under point 5: "evolve → ways -".
- A line graph with a fluctuating line.
- A small video inset of a man speaking is located in the bottom right corner of the slide.

Parallel to the development of society, the concept of development has gradually been perfected, including economic growth, economic structural advancement, and social progress. So, more elaborate points, more inclusive covering a number of things; the activities which help to the economic growth, activities which help economic structural abilities to grow and advance over time. Now, of course, the social progress, which includes community and society and all of that. Lastly, development may be defined as the process of implementing economic restructuring, to give people a better living environment and social benefits.

So, now if you see, this became a kind of thoroughly refined term at this stage; it is a process of implementing economic restructuring. So, how do you restructure your economics? Because economics maybe going on its own; but it needs some channelization, some orientation, some

focus, so that restructuring. Why that restructuring and what sort of that restructuring which gives people a better living environment and social benefits? So with this intention if you drive your economy, this becomes a development. So, this is the last definition of development like this term; because if you see these terms and their meanings, they evolve over time. If you open the dictionary and see any word, their uses; and most of these words, they have evolved over time.

In terms of their uses, if you see you can check on the internet, what kind of trend has been there for using a particular word? Sometimes maybe it is low low low, then suddenly it peaks; then again it may go down, then again it may peak and may come down or maybe it can go go go. So, this also is possible with the reference of a time and usages, and similarly the meaning part of it. So, the meaning also keeps on evolving sustainability word if you see. So, sustainability word is a dynamic concept. The definition of sustainability is still not frozen, it is evolving. How sustainability term was used hundred years back. There was no scenarios which we are having in today's time and this like a particular year.

So, understanding a particular word sustainability was through different context altogether. So, this world is so critical; climate change was not that bad at that time hundred years back and all that. So, understanding of sustainability world was a little different; but over the time, it has evolved; so we will see what is the sustainable development.

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Sustainable Development

1. Meanwhile, the term sustainable development appeared later, first appearing in the World Conservation Strategy in 1980. However, at the time, sustainable development was used to refer to ecological sustainability to argue for the conservation of biological resources.
2. Sustainable development was officially published in 1987 in The Brundtland report of the World Commission on Environment and Development (WCED). Sustainable development is defined as development that satisfies current demands without compromising future generations' ability to meet their needs.

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Dr. [Name]

So, here along with the development word how it evolved. Meanwhile, the term sustainable development appeared later, first appearing in the World Conservation Strategy in 1980. However, at the time, sustainable development was used to refer to ecological sustainability to argue for the conservation of biological resources. So, if you see how it has evolved, how it has evolved has a lot to do; how this industrialization and all of these regions which are behind this climate change has a big phenomenon, started taking shape. So, the first impact felt was on the biological resources. And this is where it gets its reference from the biological resources.

So, what was the task? Conservation of biological resources; because biological resources were started getting depleted, getting lost, getting damaged, getting bruised, abused. And all of those kinds of things started happening for animal kingdom, plant kingdom, water, air, even soil. So, those living nonliving entities as they started degrading, there was a call to conserve. So, to conserve them and that was directly related to the ecological sustainability; because we want these things to continue. We do not want to spoil and hint of the balance of these things.

Because, if we, we are all aware. If we tinker permanently with the balance of these things, the living conditions on this planet are going to change. Why? There is so much of hue and cry to safeguard these things is because, if those are permanently damaged and bruised and a kind of abused; that is going to create a permanent imbalance in living conditions. And since, we do not have another planet, another home; so it is like we are destroying our own home, and all our humanity including all other living beings. Now, from all species will come to a very threatening situation. Their existence is going to get threatened.

So, that is the kind of criticality we are talking about, and this led to evolution of this term, sustainable development. So, you see how it started taking shape from the year 1980. Next, sustainable development was officially published in 1987. I think that you already know, in the Brundtland report of the World Commission on Environment and Development, WCED. Sustainable development is defined as development that satisfies current demands. I think this is a, I think universal definition as of now, without compromising the future generations ability to meet their own needs. Straightforward reference is coming from this conservation term of biological plus many other things, like a society, economics and all of that. So, there are three aspects of sustainability, so ESEs.

So, conservation of all of them; it is not that the technology evolves so much, and there are still humans who are unable to feed and put on clothes on their body. So, that is a very kind of contrasting and paradoxical situation where this whole development is leading, if you are not able to feed our own brothers and sisters. So, that is the situation there where it becomes a comprehensive, wholesome approach to conserve all of those things and entities, for today, as well as for the tomorrows and generations. So, that is what it says for the future generations ability to meet their own needs; so I hope this is clear now, let me move forward.

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Sustainable Development

3. Until the Rio de Janeiro Earth Summit in 1992 and the Johannesburg Summit in 2002, sustainable development was affirmed and generalized on three dimensions: economic development, social development, and environmental protection.

4. The United Nations has adopted 17 Sustainable Development Goals (SDGs), composed of 169 specific goals and 232 targets aimed at eradicating poverty, protecting the environment, and ensuring that all people live in peace and prosperity by 2030.

2015 - 2030
2023

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APTEA

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Until the Rio de Janeiro Earth Summit in 1992, and the Johannesburg summit in 2002, sustainable development was affirmed and generalized on three dimensions, which you already know: economic development, social development and environmental protection. Next point, the United Nations has adopted 17 Sustainable Development Goals, composed of 169 specific goals and 232 targets aimed at eradicating poverty, protecting the environment, and ensuring that all people live in peace and prosperity by 2030. So, here with this fourth point, the premise of SDGs came into the existence; because we are living during this timeframe. These 17 SDG goals are meant for application implementation during this period.

So, we have reached somewhere here 2023, we have just entered somewhere here; and still there are seven good years to go for it. So, during this period, whatever the premise and objective and the context is decided by the UNSDGs, that has become the defining an element for this term,

what do we mean by sustainable development. So, you see, there are 17 goals as emphasized 169 specific goals inside that; and a 232 targets and indicators, 169 actually targets and 232 indicators; so, that is how it is progressing. And I am pretty sure in 2030 and onwards, it is going to include even more things perhaps, and we will see a new evolved definition of sustainability or sustainable development.

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The Differences in Development & Sustainable Development

1. While the economy (and society) is the pillar of development, sustainable development is a close and harmonious mix of socio-economic and environmental development. *ESE*
2. Material wealth/commodities are at the heart of the development paradigm, but sustainable development is people-centered.
3. Natural resources are the basic condition for development; human resources are the basic condition for sustainable development.
4. Development in connection with the environment is oriented toward exploitation and reclamation, whereas sustainable development is oriented toward conservation and reasonable usage.

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MoE, MKR

17 Goals

169 Indicators

So, what are the major differences as you might ask, let us see them point by point. So, the first one, while the economy and society is the pillar of development, we saw initially for development. Sustainable development is a close and harmonious mix of socio-economic and environmental development. So, not just economy and society, which we saw under the term development; but including environment also those three ESE aspects, then it becomes a sustainable development; so, this is the first difference. Second, material wealth, commodities are the, at the heart of the development paradigm. So, we saw initially producing goods, meeting the demands and providing services; so, that is to fulfill human needs and all.

So, that is at the heart of the development, simple development. But, sustainable development is people-centered. Here also you are fulfilling the demands and all, but those are most material demands; but humans needs are even there are many things which are beyond material demands also. For example, all our whole sustenance in the future; psychological demands, psychological happiness, and a mental well being, physical well being, all of those things if you see; the well

being of the environment or well-being of the entire communities, the people from all the strata; so, all of those things. Then, it came into the picture and that became a people-centric, then it became SD.

Third point, natural resources are the basic condition for development. You exploit natural resources, because from this is where we are meeting and fulfilling all our requirements. Human Resources are the basic condition for sustainable development. So, here not just the natural resources minerals, ores and agriculture, and all of these things we are exploiting from the nature, but human resources also. What about the capabilities and potential we all carry? In what ways we can utilize that and make use of it to improve the existing scenario. So, one of the most wonderful things in this world what we know as often today is the human brain, and human brains potential; so, that is like a human resource.

You may be aware our Ministry of Education, Government of India, used to be known as the Ministry of Human Resource Development MHRD earlier. So, here if you see, it is not just education; because education still you can call it as a one aspect of the human resource, but there could be no many other things. Why this was done? Of course to make it very generic at the global level and all of that; because, other countries actually follow this MoE term to make it kind of a generic business thing. But, I see as a intention and as an inherent meaning what is embedded in this MHRD term was I think a far greater.

So, I hope you can understand now what do we mean by human resource, and how it can be capitalized for the growth of a sustainable development. Lastly, development in connection with the environment is oriented towards exploitation and reclamation. What do we do with the nature? How this whole climate change has happened as a one global phenomenon now, is because of this over exploitation and reclamation; whereas, sustainable development is oriented towards conservation and reasonable usage. So, that is the strongest difference between D and SD. So, here we want to utilize it; but at the same time, we want to conserve it also.

We do not want it to look just exhausted and then there is nothing always zero amount, something is available tomorrow. No, no, no, no, not that situation we want. So, we want to conserve it or two, we want to replenish it also, we want to recycle it, we want to put all of those R's for us. And we want to keep it for future generations to use is also, and reasonable usage, not over exploitation, and mainly not exploitation also; because exploitation is a word which has

some negative connotation to it. So, we should not actually take any such thing with such a negative connotation; we should go with a positive connotation.

So, this word this term if you see reasonable usage is definitely a fairly kind of positive, an intention word. So, that is there in the intent of sustainable development; and this is why we need this format of development which is sustainable development.

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The screenshot shows a presentation slide with the following content:

- Development** (with a red square icon)
- 
- Text: "Growth, advancement, positive change, or the addition of physical, economic, environmental, social, and demographic components are all products of development. The goal of development is to raise the standard of living for the populace while protecting the environment's resources and creating or expanding job opportunities locally and regionally. Development involves a change in the quality of something as well as the setting up of circumstances that will allow that change to continue in the future."
- UN SDG - Module 1 (bottom left)
- SD Goal 2 (bottom right)
- Video inset of a man speaking (bottom right)

Some more definitions for your understanding. Since, in this module, we are trying to understand it deeply what is the difference between D and SD? So, growth, advancement, positive change, or the additions of physical, economic, environmental, social, and demographic components are all products of development. The goal of development is to raise the standard of living for the populace, while protecting the environment's resources and creating or expanding job opportunities locally and regionally. Development involves a change in the quality of something as well as the setting up of circumstances that will allow the change to continue in the future.

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■ Development



The term "development" has undergone several meanings and emphases over the years from experts and numerous academics.

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UN SDG 2
of Sustainable Goals



The term development has undergone several meanings and emphases over the years from experts and numerous academics.

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■ Development



This strategy served as the foundation for the UN Development Program's (UNDP) 1990 HDI (Human Development Index), which was created to quantify development. In the area of gender, Martha Nussbaum created the abilities approach and placed a strong emphasis on the empowerment of women as a vehicle for development.

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UN SDG 2
of Sustainable Goals



This is strategy serves as the foundation for the UN Development Program UNDP. If you have visited Indian villages and towns, you may have seen those bulky, big size water; water actually these pumps, these hand pumps. So, there is a very interesting story for these earlier, the regular household pumps used to go like a little shallow in the ground, maybe 50 feet or typically like that. I am talking about most of the places across India; it varies upon the conditions of water

table in your particular area. So, what used to happen? Earlier in the sanitation, people used to kind of go for soak pits or septic tanks and things like that. And there used to be some exhaust which used to go into the soil.

And it usually typically used to travel and get a contaminating this water supply through these typical household hand pumps, and used to cause different water related diseases. And a good number of people used to fall sick, and contract to diarrhea and all of those kinds of medical situations, lot of people used to die also. But, with this UNDP initiative in during that period, lakhs and lakhs of this deep underground these bore holes were made; and these big size hand pumps were installed which were quite efficient, which went related to this quite deeper.

And brought uncontaminated fresh, portable water from these deeper pockets, under the soil, under the surface, and, they used to serve. So, this became a huge success and that contributed a lot in saving these health issues from that time. Over the years, if you see water supply infrastructure has been improved. Now, there are almost every town, or city, or village they have a piped water supply, from those big overhead tanks we all know. And now actually this problem is kind of more or less solved, perhaps the government of India and all the state governments had worked to improve this situation over the years.

And now actually, we are in a different phase altogether. But, if you see as an initiative, this has been a really boon kind of thing for majority of the rural India. So, how such initiatives have helped over the years for the cause of sustainable development? It is really amazing kind of journey to see. 1990 HDI Human Development Index, which was created to quantify development. In the area of gender, this researcher who created the abilities to approach and placed a strong emphasis on the empowerment of women as a vehicle for development. So, another factor if you see empowerment of women, so there is a criteria how to judge something which is successful or unsuccessful, or maybe at a scale of maybe 1 to 10 or 0 to 10. Where do you place it? How successful maybe some scheme is?

And if you want to judge a development itself. So, there are several things as a kind of parameters, in that even empowerment was women was introduced as one of the criteria, which is really amazing to see. And it has contributed a lot in over the years to help women in the society. The condition has still not reached to the desired level, but at least it is improving.

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Just to define the types of development, there are there could be many. So, development is a generic term also, but what we mean development is in the terms of material growth, societal growth, infrastructure growth and all of that. But, it can mean in the various other domains also, development as a cognitive development; human brain we know carries a huge potential. So, how one can help and become a good a human resource over the year in his life, and contribute to the society. So, helping somebody with the skills, with the set of required knowledge and other resources; so, that is a cognitive development. Moral development, because everything cannot be police or their law and order can not be implemented to every person; there can not be a police for running behind every human, every citizen of the country.

But, if there is a kind of a good moral development, you can expect a fairly, reasonable behavior and response from the community in the society; so, that is moral development. Emotional development, how are we able to deal with ups and downs in life and many other challenges, which we at daily basis we encounter. Physical development: like a bodily development, another things, physical in terms of human body, physical in terms of infrastructure also perhaps. Language development, social development, so development can be of multiple types; we will see briefly.

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■ Social Development

The goal of social development theory is to explain qualitative alterations in society's framework and structure that aid in the achievement of its goals and objectives.



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Social development, the goal of social development theory is to explain qualitative alternatives in society's framework and structure that aid in the achievement of its goals and objectives. So, respect to the social, society as a entity, framework and structure that aid in achievement of its goals and objectives; so, that social development.

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■ Social Development

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Development may be described as an upward rising movement with higher degrees of vigour, efficiency, quality, productivity, complexity, comprehension, creativity, mastery, enjoyment, and accomplishment that is relevant to all civilizations at all historical junctures. Development is a social transformation process, not only a collection of policies and programmes put in place to achieve a certain goal. The previous five centuries have seen an increase in the speed and intensity of this process, and the last five decades have seen a notable acceleration.

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Development may be described as an upward rising movement with a higher degree of vigour, efficiency, quality, productivity, complexity, compliance and creativity, mastery, enjoyment and accomplishment that is relevant to all civilizations at all historical junctures. Development is a

social transformation process, not only a collection of policies and programmes, put in place to achieve a certain goal. The previous five centuries have seen an increase in the speed and intensity of this process, and the last five decades have seen a notable acceleration. So, if you see a social development over the years, this has been very kind of a slowly evolving then middle ages came, and then modern ages came.

Now, it is kind of accelerating very fast. So, the social development also if you see, this is you can call maybe in the last few century, like five centuries it is talking about; and how this has been in the last five decades, how it has been; so, very fast accelerated place of growth and development. And previously you can qualify as older times, where this has been more or less static; and then it started taking like big change.

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■ Concept of Sustainable Development

Sustainable development basically merges economics and environmental science both in theoretical and practical perspectives. Several other articulations consider sustainable development as a process of development by which various environmental, economic and social benefits can be simultaneously and concurrently maximized. These articulations suggest that sustainable development, in short, is a blend of economic, social and ecological approaches, each of these being indispensable and complimentary to each other. Sustainable development(SD) is, in-fact, a pattern of resource use that aims to meet human needs while preserving the environment so that these needs can be met not only for the present generation, but also for generations to come.

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Dr. Nisha S. Prasad

APTEL

The slide features a title 'Concept of Sustainable Development' with a red square bullet point. The main text defines sustainable development as a blend of economic, social, and ecological approaches. Key phrases are underlined in red: 'simultaneously and concurrently maximized' and 'pattern of resource use that aims to meet human needs while preserving the environment so that these needs can be met not only for the present generation, but also for generations to come.' There are handwritten red annotations and a signature on the slide. A video inset in the bottom right shows a woman speaking. Logos for UN SDG - Module 1, APTEL, and Dr. Nisha S. Prasad are also visible.

SD basically merges economics and environmental science both in theoretical and practical perspectives. Several other articulations consider sustainable development as a process of development by which various environmental, economic and social benefits can be simultaneously and concurrently maximized. So, it is not like you give priority to one over the other or maybe third; but, you can do it simultaneously or beautifully, you can do it concurrently all at the same time. So, that is the beauty of it; it can be as a subset. Of course, the environment comes at the outer level, social can be at the one level, and the economics can be at the inner level.

Or, maybe you can go for this kind of approach also, where there are all three coming together and overlapping. So, you may have seen these, this diagram, this diagram also perhaps. So, it depends on the approach what you can take; so, it can be simultaneous, it can be cyclic, it can be concurrent also with the intention to maximize the efficiency.

These articulations suggest that sustainable development, in short is a blend of economic, social, ecological approaches; each of these being indispensable and complementary to each other. So, they actually complement each other, they help each other, they compensate each other. SD is, in fact, a pattern of resource use that aims to meet human needs while preserving the environment, so that these needs can be met not only for the present generation, but also for the generations to come, that Brundtland definition.

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■ Concept of Sustainable Development

Sustainable development is a socio-ecological process characterized by the fulfillment of human needs while maintaining the quality of the natural environment in definitely. The linkage between environment and development was globally recognized in 1980, when the International Union for the Conservation of Nature published the World Conservation Strategy and used the term "sustainable development". This term has been used as a unifying theme in presenting environmental and social concerns about worrisome trends toward accelerated environmental degradation and social polarization in the 1970s and 1980s. The concept came in to general usage after the Brundtland Commission Report (1987), formally called the Report of World Commission on Environment and Development (WCED).

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Dr. Nisha S
of Pimpri, India

Sustainable development is a socio-ecological process characterized by the fulfillment of human needs while maintaining the quality of the natural environment in definitely. The linkage between environment and development was globally recognized in 1980, when the International Union for the Conservation of Nature. You may have seen or maybe heard about this organization; you can search for it separately, published the World Conservation Strategy and use the term sustainable development. So, this was the one official organization which coined this term. This term has been used as a unifying theme in presenting environmental and social

concerns about worrisome trends toward accelerated environmental degradation and social polarization in the 1970s and 80s.

The concept came into general usage after the Brundtland Commission Report 1987, formally called the Report of the World Commission on Environment and Development WCED.

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■ Concept of Sustainable Development

WCED was set up by the United Nations General Assembly. Thus, the term 'sustainable development' was widely adopted by main stream development agencies following the publication in 1987 of "Our Common Future" by the World Commission on Environment and Development (WCED), chaired by the then prime minister of Norway, Gro Harlem Brundtland. It stated that "sustainable development is development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs."

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Dr. Shweta B. Patil

It was set up by the United Nations General Assembly. Thus, the term SD was widely adopted by mainstream government agencies following the publication in 1987 of our common future. So, that is the title of this report by the World Commission on Environmental and Development WCED, chaired by the then Prime Minister of Norway, and she was Gro Harlem Brundtland. It stated that sustainable development is development that meets the needs of the present generation.

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■ Concept of Sustainable Development

It is now considered to be one of the most widely recognised definitions. As we can notice, it contains within it two key concepts:

- The concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and
- The idea of limitations imposed by the state-of-art technology and social organization on the environment's ability to meet present and future needs."

Handwritten notes on the slide include: "SD", "① damage", "② heal itself", "need/greed", and a diagram showing a balance scale with a minus sign on the left and a plus sign on the right.

It is now considered to be one of the most widely recognized definitions. As we can notice, it contains within it two key concepts. So Brundtland definition if you see is presently the prevailing definition of sustainable development. What do we mean by it? Maybe you can separately search for that document that is easily available over the internet or in your library, our common future. And you can go in detail, you will really see how amazingly they tried covering a lot of elements, and the scope often this SD has actually widened from that time onwards.

And even till today, that definition is prevailing. So, that is kind of you can say the rigorous and inclusive that definition is, that it is prevailing even today. So, the two key concepts of that are the concept of needs, in particular, the essential needs of the world's poor, to which overriding priority should be given. So if you see needs, and in that also essential needs; because previously we saw there is definitely that definition between need and greed if you see. That is the kind of a distinction you can understand over here; definitely we need things, but do we really need things. So, if you really make a proper judgment of making a purchase, before making a purchase, or before availing a service; definitely, you can, you will be able to answer it to the majority of next steps.

So, the self evaluation is the first step towards contributing towards sustainability. For example, if I want to buy a pen, so do I really need this pen? I have to introspect it. This decision should

not be based on the impulse or maybe the appeal this pen, or maybe some offer which is going on and on on the sale of this pen or something that; or maybe the company or the brand or anything, it should be purely based on the actual need. So, this is what the difference between just requirement, a need and an essential need. So, we must understand after this course of the world's poor; because this is the group which has the most crucial need for resources. They are the people who have a like who does not have things; things include a lot of things.

Previously, we have discussed in the first and second SDG, how the scarcity of resources by a virtue of being someone poor belongs to a poor family, poor household, leads them to a very miserable life. They are unable to even get to a fundamental things or basic commodities in their life. So, those are the challenges we need to meet first. So, those are the challenges should be given a overriding priority. So, how noble this cause is really I appreciate this concern. And the second key point the idea of limitations imposed by the state-of-art technology and social organization on the environments ability to meet present and future needs.

So, the here the factor comes towards environments abilities. We know environment, if you see water bodies, even the sky, air, the earth itself; they have their own healing capacities. If you throw maybe some pollutant in maybe river, definitely for that immediate moment that particular water is going to get polluted; and it may not be fit for consumption or usage of time and types. But, if you allow some time, the water body itself is going to take care of that pollutant and it will heal. So, nature's elements, they have their own healing capacities, in own healing capabilities. But, what happens the rate at which we are damaging these things is exceeding the rate at which it can heal itself.

So, understand the damage at the rate what it is happening and the rate at which it can heal itself. So, if this is greater, definitely it will be a positive thing and the element is going to heal itself. But, if damage is greater, if this side it is greater, then this healing capacity is going to fall short at the rate at which the damages are being caused; and there will be a surplus of a damage. So, that is the negative situation we want to avoid. So, that is what is there in this key concept in this second point. The idea of limitation, because if you see, of course, all of these natural elements, they have their threshold; at what level they will be able to heal themselves? So, that threshold we must not actually kind of knock across.

So, that is the warning you can understand from this. So, the idea of limitations for environments ability to meet present as well as future needs; because if it is damaged, definitely we will be falling short for today's need also and certainly for tomorrow's future generations also. So, that is the situation we do not want; that is why we need SD.

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Concept of Sustainable Development

The United Nations 2005 World Summit outcome document refers to economic development, social development and environmental protection as the "interdependent and mutually reinforcing pillars" of sustainable development.

Many definitions and images (visualizing sustainability) of sustainable development may coexist. Broadly defined, the sustainable development mantra enjoins current generations to take a systems-approach to growth and development and to manage natural, produced and social capital for the welfare of their own and future generations.

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The slide features a central diagram with a red circle at the center, surrounded by concentric circles and arrows pointing outwards, symbolizing a systems approach. There are also some handwritten-style red annotations on the slide.

For the United Nations 2005 World Summit outcome document refers to economic development, social development and environmental protection as the interdependent and mutually reinforcing pillars. So, three major pillars and together they are sustaining SD. Many definitions and images, visualizing sustainability we saw in the previous slides; these overlaps or maybe a sub setting and all of that, so the SD may coexist. They all can happen at the same time as this is perfectly alright. Broadly defined, the sustainable development mantra enjoins current generations to take a systems-approach to growth and development, and to manage natural, produced and social capital for the welfare of their own and future generations.

So, if you come from a background of design or something, you may be aware of what is systems-approach; but briefly, I will tell for everyone else. Systemic approach is a kind of an interdependent approach, where number of stakeholders are involved, and they together collectively making that system run. For example, solar system, very single, very simple example. We know there is a sun star in the center and then there are planets revolving around it, as far as Neptune and Uranus, and Jupiter and earth, and Mars and Mercury, and Venus. So, it is

so, it is a kind of a system which is governed by the massive gravitational pull of Sun our own star, and they are all revolving, and this perfect distances between them. These planets is keeping them at a balance distance.

And Earth particularly if you see if this is the orbit of our earth. So, it is so perfectly located that it is not so close to get too much of heat, or it is not too farther also to become very cold. It is such a distance, it is, it is a such a kind of a sweet spot it is placed that has allowed life to evolve. Otherwise, there is we know about our solar system; none of the other planets have. At least we know till date, there is no life found on any other planets; or, for example, any other star systems till date we do not know. Cohesive life conditions may exist. There are some evidences that some planets have beyond a solar system; they have kind of a supportive life, life supporting conditions. But, life itself is still not, we are not able to find it.

So, that is a system where all of these things are interrelated. Even the existence of Jupiter, Saturn is also crucial for the survival of Earth. If you know it is very nice; if you do not know, I will tell you. Jupiter being one of the biggest planet inside the solar system. It attracts majority of the comets and steroids and those wandering objects, which accidentally come into the solar system; and that prevents earth getting hit by those. So, you see, we may even though we do not directly owe anything to Jupiter, but its presence in our solar system is also a boon. So, you see, how it is interdependent. If you remove the Jupiter from solar system, things are going to go haywire.

And life itself will come to the kind of a threatening situation on this on this planet. So, it is a system, where each and every stakeholder all the planets, our Sun, even these asteroids and all these things satellites, they play a crucial role. Similarly, in our day to day life also, things are interdependent; and mutually they are working together, railways if you see. So, there are railway tracks thousands and thousands of kilometers. Then there are railway stations, trains, thousands and lakhs of people who are working to enable railways to function right. So, if you see they are all the major stakeholders; and together, they are enabling this system to run. If one of them goes malfunctions or something goes wrong, the entire system will come to a halt.

So, this is the beauty of systems-approach. And similarly, now I am coming to SD. Why do we need this? Because if our development, the present form of development is causing imbalance in the ecology or social structure; it is going to create an imbalance which we cannot sustain, which

we cannot kind of prevail over. And that is why we need a systemic approach to control those things; so I hope it is clear by now.

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Building Blocks of Sustainability

Agenda 21, an action plan of the United Nations (UN) related to sustainable development, clearly identified information, integration and participation as key building blocks to help countries achieve development that recognizes these interdependent pillars - economic development, environmental development, social development and cultural development. It emphasizes that in sustainable development everyone is a user and provider of information.

Feedback Loop

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Dr. Manoj K. Prasad

The slide features a red square icon next to the title. The text is centered and underlined. A handwritten diagram in red ink shows a circular arrow loop with the words 'Feedback Loop' written next to it. In the bottom right corner, there is a small video inset of a man speaking.

Now, let me give you some building blocks of sustainability. What are those? Agenda 21, an action plan of the UN related to SD, clearly identified information, integration and participation as key building blocks to help countries achieve development that recognizes these interdependent pillars ESEs, and cultural development. It emphasizes that in SD everyone is a user and provider of information. So, it is like a feedback loop. What is feedback loop? So, feedback loop, there is a kind of resources and inputs which go; and then there is backtracking of information from that side to again improve, or improvise, or correct or all of these.

Then again it goes, then again it comes back, then again it goes, again it comes back; so, that is a feedback loop. So, this entities, information, integration and participation are the integral building blocks; because through this, we know what to do, where to do, how to do, all of those kinds of other things.

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■ Building Blocks of Sustainability



It stresses the need to change from old sector-centred ways of doing business to new approaches that involve cross-sectoral co-ordination and the integration of environmental and social concerns into all development processes. Furthermore, Agenda 21 emphasizes that broad public participation in decision-making is a fundamental prerequisite for achieving sustainable development.

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■ Building Blocks of Sustainability



According to Hasnia Vancocck, (2007) sustainability is a process which tells of a development of all aspects of human life affecting sustenance. It means:

- a. it needs to resolve the conflict between the various competing goals;
- b. it involves the simultaneous pursuit of economic prosperity, environmental quality and social equity famously known as three dimensions (triple bottom line) with the resultant vector being technology.

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According to this researcher social sustainability is a process which tells of a development of all aspects of human life affecting sustenance. It means, it needs to resolve the conflict between various competing goals. It involves the simultaneous pursuit of economic prosperity,

environmental quality and social equity; famously known as the three dimensional or three aspects.

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Green Development and Sustainable Development

Green development is generally differentiated from sustainable development in the sense that the former prioritizes what its proponents consider to be environmental sustainability over economic and cultural considerations. On the other hand, the proponents of sustainable development argue that it provides a context which is to improve overall sustainability where cutting-edge green development is unattainable. For example, a cutting-edge treatment plant with extremely high maintenance costs may not be sustainable in regions of the world with fewer financial resources. An environmentally ideal plant that is shut down due to bankruptcy is obviously less sustainable than the one that is maintainable by the community, even if it is somewhat less effective from an environmental standpoint.

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SD

Green Development → Sustainable Development

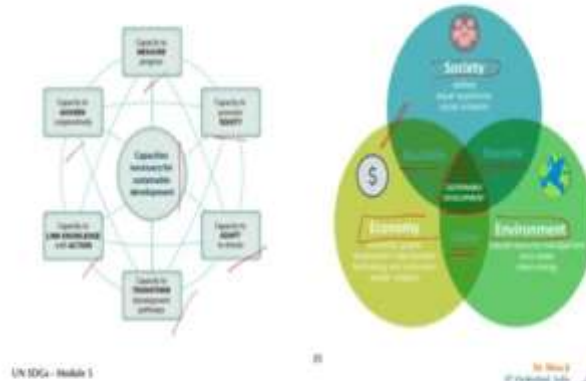
APTEL

Then, we have green development and SD. What are these green development is generally differentiated from SD, in the sense that former prioritizes what its proponents consider to be environmental sustainability. So, if it is green development, it addresses environmental issues as the primary, or perhaps whole sole driving agent driving a force, over economic and cultural considerations or social considerations which are part of the SD. So, this is the difference I hope you know that already. On the other hand, proponents of SD argue that requires a context which is to improve overall sustainability where cutting-edge green development is unattainable.

For example, a cutting-edge treatment plant with extremely high maintenance costs may not be sustainable in regions of the world with fewer financial resources. So, green development is a nice approach, but unless and until it is supported by the other. One example you saw here economics. If there is no funding, how are you going to take up that green development initiative that becomes a problematic? So, green development is nice, but we need all the three aspects ESEs. An environmentally ideal plant that is shut down due to bankruptcy is obviously less sustainable than the one that is maintainable by community, even if it is somewhat less effective from an environmental standpoint.

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Sustainable Development



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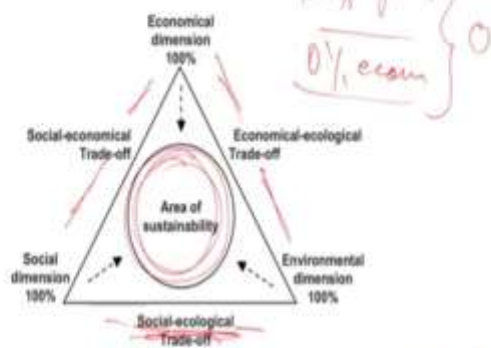
Dr. Shree P. P. Patil
Dr. Pankaj K. Patil



So you know this, this bubble we have been talking about environment, society and economy. At the cusp of these two, we have equitable solutions. Here we have bearable solutions, here we have viable solutions, together we have SD solutions. So, at a cusp where all these three together meet, we get SD. Capacities necessary for SD, capacity to promote equity, adapt, transform, Link knowledge with action, govern and measure; so, these are capacities.

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The Triangle of Sustainability



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Dr. Shree P. P. Patil
Dr. Pankaj K. Patil



■ Sustainable Development



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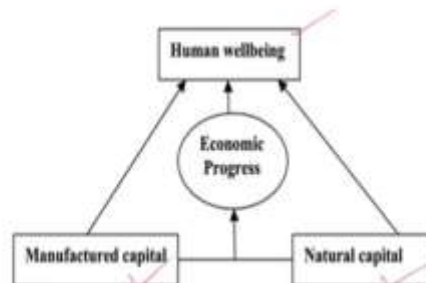
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■ Forms of capital contribution to human wellbeing



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So, this triangle of sustainability what we saw over here is the similar kind of a diagram, where we get this sustainability area; and then we have at these junctures like these trade-offs. So, it is a trade-off between these two, social and ecological here, economic and ecological over here, social and economic over here; so, it is a trade off initially we discussed. If a solution is 100 percent green, but if it is 0 percent economical; then combined result is zero.

So, we need some trade-off; so that is this trade-off we are talking about over here. This trade-off happens between these through together in this juncture; that is where we call it SD. Where, we take care of human wellbeing. We maintain our manufactured capital and natural capital also.

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■ Sustainable Development



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For what, for people, for dignity, prosperity, justice, partnership, planet, which covers majorly in a nutshell and everything, and anything around us, around this planet and this whole ecosystem; this whole ecological balance that becomes SD. So, with this, we have come to the end of this lecture. Thank you all.