NPTEL
NPTEL ONLINE CERTIFICATION COURSE

Course Name

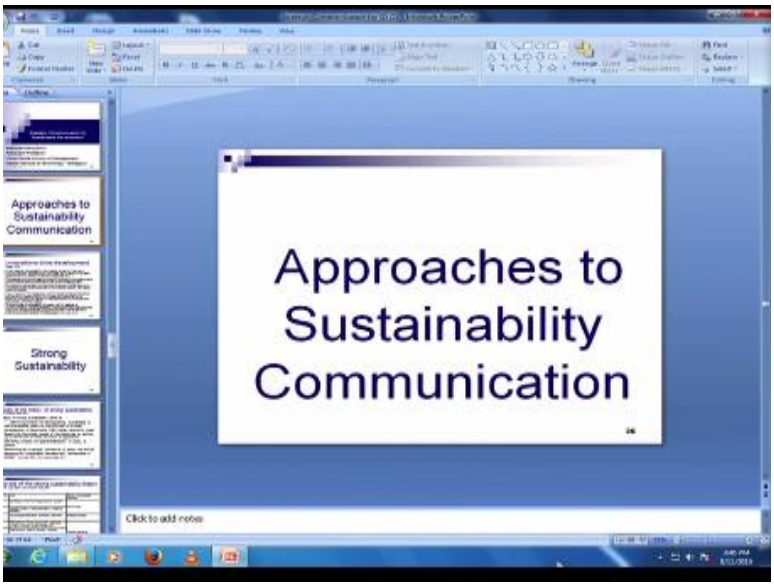
Strategic Communication for Sustainable Development

by
Prof. Aradhna Malik
Vinod Gupta School of Management
IIT Kharagpur

Lecture 05: Approaches Sustainability Communication : Strong Sustainability

Welcome back to the course titled strategic communication for sustainable development, my name is Aradhna Malik I teach at IIT Kharagpur and I am helping you with this course. In the past lectures we have talked about what sustainability is, what communication is, what sustainable communication is, we also discussed the methods of sustainable communication. Today we will talk about approaches to sustainability communication.

(Refer Slide Time: 00:45)



So this is what we will do.

(Refer Slide Time: 00:50)

One thing that I would really like to draw your attention to is.

(Refer Slide Time: 00:52)

The concept of innovations driving development we talked about development and, you know this is so relevant to this approach of sustainability communication in the sense that new ideas form the basis for any kind of sustainable development. New ideas how we approach new ideas forms the basis of any kind of change from point A to point B, any kind of development, any kind of growth in the field of sustainable development..

So innovations drive development, we will work on this a little bit more when we talk about strategic communication for sustainable development, but I just wanted you to start thinking about this as we moved along.

(Refer Slide Time: 01:38)

The first approach that we will discuss here is the concept of strong sustainability and you will say what if there is a strong sustainability then what is weak sustainability. So we will talk about that also.

(Refer Slide Time: 1:56)

The goals of the theory of strong sustainability are identifying criteria for distinguishing sustainable and non-sustainable paths on the grounds of a wider consideration of arguments than merely economic one. So when we talk about sustainability we are essentially talking about keeping our assets as they are keeping our capital preserving our capital and eating off of the profits. So it is not when we talk about strong sustainability we find out what which one of our efforts we discuss which one of our efforts is going to carry forward is going to drive this whole idea of going on and on and on and which of the parts that we take are going to serve us better in the longer run than in the shorter run.

(Refer Slide Time: 02:46)

And which of these parts that we take in the field of sustainable development are going to be covering a wider ground which of these parts are more overarching. The second goal of strong sustainability is specifying the proper scope of the discourse by setting up a framework of fields of action and application. So when we talk about this course we are essentially talking about the framework, the fields of action that we have this discourse in what do we draw from which fields are we talking about.

Are we talking about fisheries, are we talking about agriculture, are we talking about forestry, are we talking about education, or health or what. So which field in which field are we actually going to do the sustainability or sustainable development, how are we going to apply the ideas that we have framed about sustainable or with regard to sustainable development. The third goal here is delivering a basis for operationalisation in policy and politics.

How do we convey this whole idea of sustainable development to the masses, what do we do, how do we frame our policies around this idea, how do we internalize this idea as a nation, as a state as a community and how do we ensure that this idea is accepted by the masses by the people who actually need these efforts and by people who are willing to put in these efforts and

by people who have the resources that people who can put in the efforts use in order to help the people who need these efforts.

So that is another goal, how do we decide who does what in policy and politics regarding sustainable development. Performing as a rational corrective to clarify the diffuse discourse on sustainable development taking place in society. So how do we change these definitions, how do we change these confusions, on how do we clarify these confusions regarding the discourse, the discussion on sustainable development in society. And that is one of the, these are the goals of a theory of strong sustainability.

(Refer Slide Time: 05:07)

The levels of strong sustainability are this whole theory functions on three levels, the first broad level are is the core of the theory that consists of two levels. The first one is the ideation or idea the theory of intra and intergenerational justice within degeneration what do we do in order to preserve our resources in order to conserve our resources till the time we die, you know I need so many trees, I need so much water, I need so many, you know so much of energy during my lifetime, I do not care what happens to the next generations.

So that is one way of looking at it, you know so we say that as long as I live I have this much I will do something about it only if it affects me during my lifetime that is intergenerational justice. So I want to make sure that all the people I know are benefitting from it. Now what happens to the next generation is not really my problem that is the idea. So short-term goals we are focusing on short-term goals and the other is the intergenerational justice we will discuss this a little bit more in a few minutes.

So intergenerational justice is how do I conserve resources so that the same resources are available to the next generations also and to with the generations coming after those. So they last as long as possible even if I do not live that long the resources are there for use by next generations, even if they are not my children they are the children of somebody else in society. So they are there, I have received something from Earth, from mother earth, and I will give something to mother earth.

So that kind of thing or, you know we I am just passing through this whole quantum of resources and it is my responsibility to keep these resources the way they are. So that is intergenerational justice my ancestors ensured that I had a certain quantum of resources, so it is my responsibility to ensure that the next generation has a similar if not the same quantum of resources.

(Refer Slide Time: 07:21)

So that is the idea level, the second level here is the concept. Once we have an idea of where we want to progress the idea of strong sustainability primarily refers to or primarily includes the idea of intergenerational justice it is not only limited to one generation it propagates across generations. The second level is the concept level, so once we form that idea at the concept level we have the stronger week sustainability the mediating concepts, how do we decide, what contributes to the definition of strong or weak sustainability.

What are we going to put in this whole ambit of sustainability and that discussion constitutes the core of the theory. The third level here is the key principles, now once we have the concept in place we have the idea in place, we have the overarching concept in place, the direction that this idea is going to take in place then we form the key principles. What are we going to do to ensure the resilience of the sources.

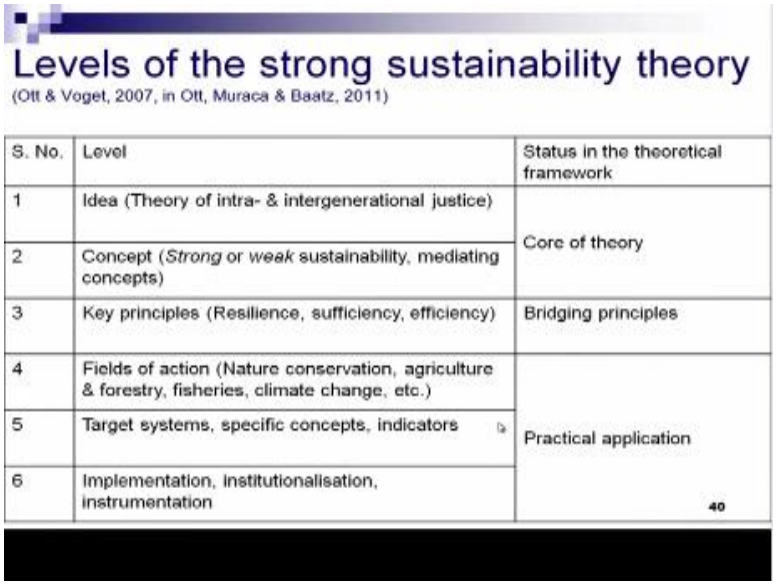
So if resources depleted how can we regenerate it, so that the quantum is preserved. The sufficiency, how do I ensure that everybody has enough to eat, how do I ensure that everybody has enough shade, enough water to use, and efficiency am I making full use of the resources I

have or am I wasting something fresh water for example, we consume some water, we let our taps run dry.

So there is one of the resources that we have that is depleting very, very fast is the ground water the whole concept of digging bore wells, came or tube wells as they are more commonly known, you know that concept initially people thought that there is enough water in the water table below the earth surface to last a lifetime. So people started, you know it was an expensive concept, but people started digging wells into the earth's crust in order to access the water table and in order to draw fresh water from the breath depths of the earth.

And there was so much indiscriminate digging or boring of wells that this resources started getting depleted.

(Refer Slide Time: 09: 34)



So how do I ensure that this is regenerated by conserving water or it is not depleted resilience means regeneration. So or maybe the trees, if I am using a certain number of trees yes I need to use trees I need wood for my, to build my house, I need wood for matches, I need wood for my

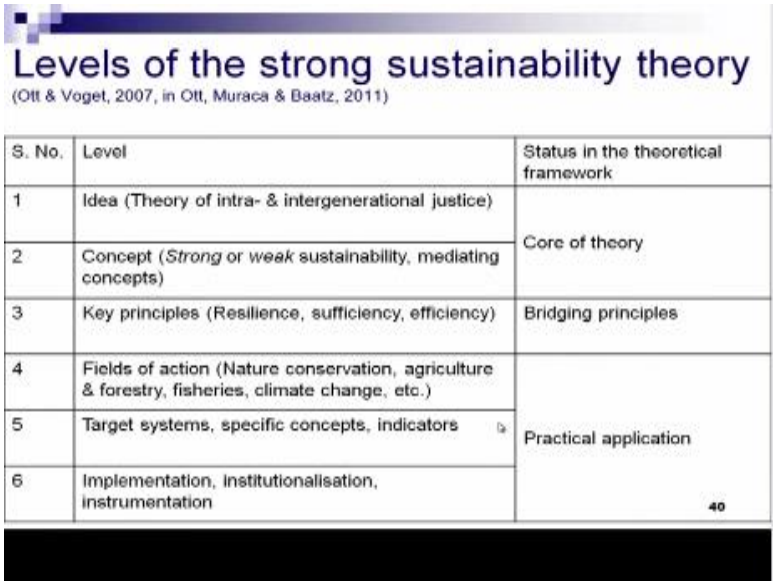
tables and chairs, I need to use wood in so many ways. But if I cut down a certain number of trees, do I end up planting the same number of trees in some other location or not.

So that is resilience, so the ability of a resource to regenerate itself or for us to facilitate this regeneration. The second principle here would be sufficiency do I have enough, do I have enough water to last me and my future generations. Now in recognition of the sufficiency principle the government of India has imposed a ban on or a limit on the number of bore wells that can be dug in several regions, I mean they have started limiting the number of bore wells that can be done in a particular geographical region.

So again, you know that is only to ensure the sufficiency, the intergenerational justice regarding the usage of groundwater across generations or, you know in the framework of strong sustainability this is to ensure that the ground water is available even to the next generation. So I was reading somewhere and again I do not remember the reference, I was reading somewhere that the groundwater levels are going to be 20% of what they are today by the year 2025 which is nine years from now.

We will not have enough water to drink, bore wells constitute or give us a supply of fresh water, fresh drinking water in so many homes, in so many parts of the country. And if that is not going to be there that those levels are going on so fast because of the indiscriminate drilling of bore wells.

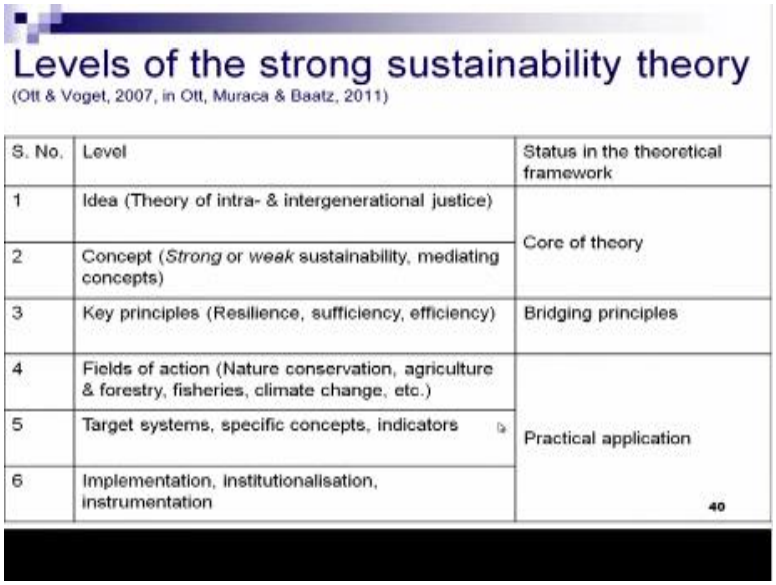
(Refer Slide Time: 11: 40)



So sufficiency, efficiency am I using the resource properly, I cut down a big tree the wood rods I use maybe one third of a tree or maybe one fourth over three or 10%, I just use the branches let the tree rod. Now it takes, you know several decades or sometimes hundreds of years for a tree to grow, but am I using it efficiently. So that is the, am I using the whole tree or am I just using some parts of it and just throwing the rest away is it any way that I can take the rest of the tree the parts that I do not need to somebody who needs them.

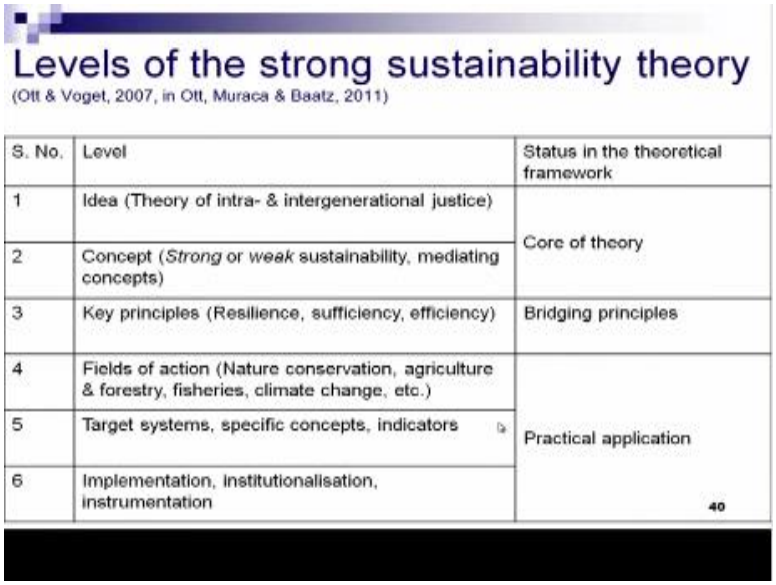
So they do not end up cutting more trees, am I making efficient use of the resources that I am using or not. So these are the key principles and they become the bridging principles between the theory, between the idea that is conceived, between the overarching principles or the conceptualization of that idea and the practical application of that idea. So how do I come upon this idea of implementing these policies, what do I do.

(Refer Slide Time: 12: 51)



I need to save water that is the idea overarching principle here is I need to make sure that there is enough water for the incoming generation so that is the idea concept is yeah concept here is.

(Refer Slide Time: 12: 59)

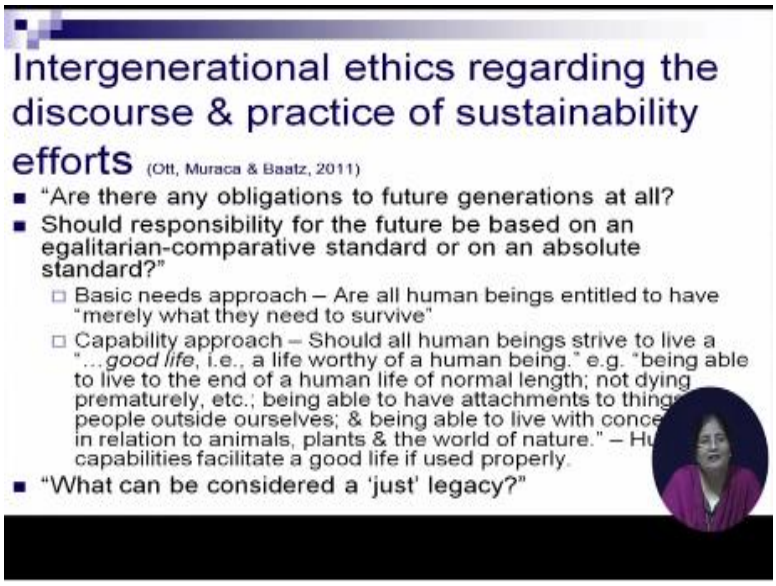


That when I talk about water when I am discussing the conservation of water, the concept here becomes strong sustainability okay. So idea is to preserve water for the next generations, concept is strong sustainability, key principle here would be sufficiency and efficient use of water we cannot really regenerate water, but efficient use of the available water. And then fields of action, nature conservation, agriculture and forestry, fisheries, climate change, etc., water conservation would be a field of action here. And then the target systems, so which were am I applying these principles, the target systems would be where in which pockets.

So when I, you know how do I operationalize it. So if its water conservation the target system here would be the surface of the groundwater. So you are digging a bore well, so any place where this kind of digging is possible or going on that would become the target system specific concept, indicators how do I know what is where and how much and how I can do it and then comes the implementation, institutionalization, instrumentation I form policies to ensure that we there is no indiscriminate drilling into the earth's crust in order to draw or into the earth surface to draw this water from the water table.

So that is how these levels of strong sustainability are practiced or are operationalized okay.

(Refer Slide Time: 14: 38)



Intergenerational ethics regarding the discourse and practice of sustainability efforts. So how do I ensure intergenerational ethics are there and I ask myself a question, are there any obligations to future generations at all should I worry about what happens to the next generation, if I do not have children all the more reason for me not to worry, if I have children I looked after myself my children will look after themselves it is not my problem to worry about what they will get and how they will deal with it, or should I really worry about it, should the responsibility for the future be based on an egalitarian, comparative standard or on an absolute standard.

Egalitarians standard is the basic needs approach are all human beings entitled to have merely again, sorry egalitarians standard is the, you know the concept of fairness, contextual fairness absolute standard is giving everybody the same thing. Now within this there are two approaches one is the basic needs approach, so how do I ensure intergenerational justice, so we say, we just need to have enough to survive basic means approaches everybody should have enough to survive.

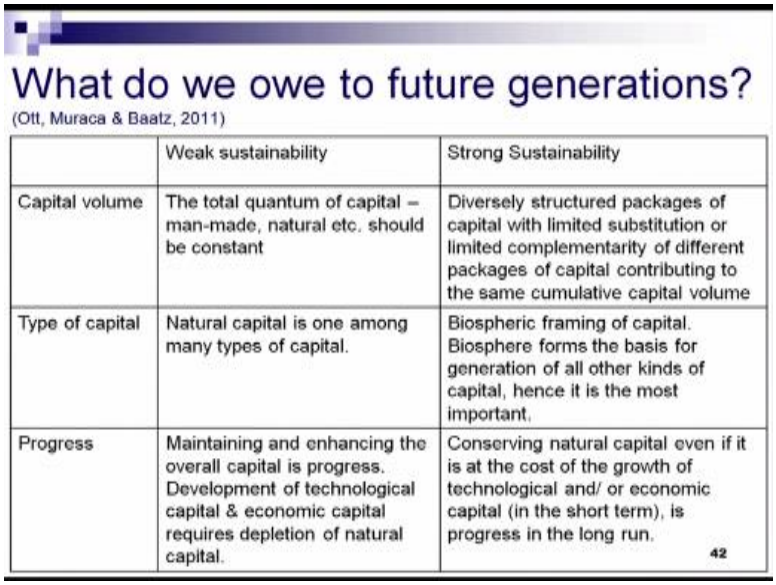
And capability approaches should all human beings strive to have a good life which means a good quality of life. I do not only need food, I need well cooked food, I need good quality food, I

need water to drink, I need water to take a bath, I need water to feel fresh, I need water to wash my clothes, so it is not only to survive I need to have a comfortable life being able to have attachments to things and people outside ourselves and being able to live with the concern for and in relation to animals plants in the world of nature.

I am not only here to survive I am here to enjoy my life to live my life to the fullest I have a right to live as long as possible with an optimal use of resources through my capabilities. If I have the capability to make a good life for myself should I not do it. So that is the idea of the, that is the capability approach should my capabilities drive how I use my resources, or do I need the resources just for survival.

And that is, you know part of the discourse, the discussion on intergenerational ethics in sustainability communication. And what can be considered a just legacy, how do we decide, how much to leave for our children or how much would be a fair legacy for our children.

(Refer Slide Time: 17:21)



What do we owe to future generations? Weak sustainability according to the concept of weak sustainability as far as the capital volume is concerned the total quantum of capital is what matters. So total amount of resources, if I do not have enough natural resource maybe I can leave

man-made resources, if it is not trees I can leave houses, if it is for shelter, trees give you shelter so I will make houses, I will make concrete buildings what if we do not have trees.

If we do not have oxygen, if we do not have, you know fruits I live artificial sources of nutrition that kind of thing. And strong sustainability says according to this theory of strong sustainability we focus on diversely structured packages of capital with limited substitution of or limited complimentarily of different packages of capital contributing to the same cumulative capital volume, sounds very complicated. All these means is that it yes, we need to save a certain volume of resources, but within that volume also we need to allocate specific percentages, specific fractions of, you know two different types of resources.

So I need so many man-made resources, and I need so many natural resources, and I need so much of economic resource within the natural resource I need to ensure that, you know there is, there are fish in the sea and in the rivers, and I need to make sure that there are mammals on the ground and not only mammals I need to make sure there are tigers and elephants and cows and deer extra.

So I need to and monkeys and bugs and I mean the ecosystem needs to be preserved, so I need to have a quota for every part of the sustainable system, and together also I need to leave the same amount of resource for my future generations, my children should not have to go to the zoo and find out what an elephant is I need to ensure that the elephants survive in the wild for the next generations to see what elephants are like.

So I should not kill their natural habitats, I should not destroy their natural habitats, I should not kill elephants for ivory, you know. So all of that comes into the picture. Whereas here we say okay, if it is not elephants if they do not see elephants they will see stuffed elephants in a museum maybe three generations from now, what difference does it make and that is weak sustainability, then comes the type of capital.

So weak sustainability theory says that natural capital is one among the many types of capital whether we save nature or we convert nature into technological resources, or man-made

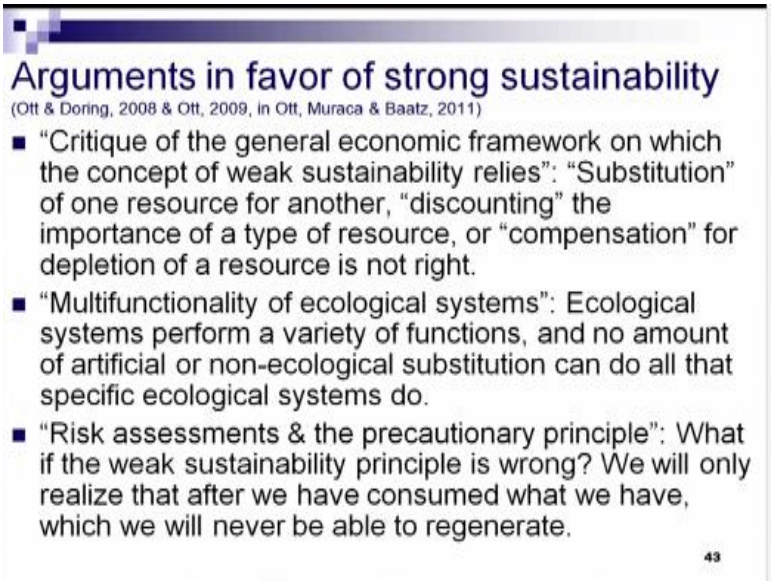
resources is one and the same thing. But strong sustainability propagates that the capital needs to be framed in a biospheric manner. So the biosphere needs to be maintained, the ecosystem, the natural ecosystem needs to be maintained because that is the basis for all other kinds of capital. I am living such a comfortable life because of greenery in my environment. If the greenery was not there I would fall sick, so I cannot enjoy my resources if there is no green life around me.

So I cannot just say okay, you have a very big flat and you are enjoying yourself in a concrete jungle and you see plants only on television or your computer no, I need to have plants outside so I have fresh oxygen to breathe, it is not the same as living, you know having a pollution mask for your building or something like that, you know pollution filter for building it is just not the same thing. So again progress, you know on the parameter of progress according to weak sustainability maintaining, and enhancing the overall capitalist progress it does not matter how the capital, you know the substitution is what counts.

So as long as the total volume is okay, is contained we are progressing and development of technological capital and economic capital requires depletion of natural capital, so if you want to progress technologically we need to cut down trees, we need to kill wild life, we need to use up the water, we need this, we need that, because we are building more buildings. And strong sustainability says that, you know conserving natural capital is important even if it is at the cost of the growth of technological or economic capital in the long term.

Because in the long in the short term, because in the long term it is the environment that will count much more than computers, and TVs, and electronic devices, and other kinds of equipments, you know building a car is nice but having too many cars is bad because they will kill the environment. So we need to preserve the natural environment, okay. So that is what these two theories talk about.

(Refer Slide Time: 22:23)



An arguments in favor of strong sustainability are that the, there is a critique, there is a critique or it is the critique of general economic framework on which the concept of weak sustainability realized, which is substitution of one resource for another in one. One resource can be substituted for another the some resources are not as important as others and that is what this discounting of the importance of a type of resources or compensation for the depletion of a resource.

So according the theory of strong sustainability says that, you know it does not matter what you do in exchange for depleting a natural resource it is just not the same thing, you cut trees in my backyard it is not the same thing I will lose out on shade, you will say I will cut a tree but I will build you a shed no, I do not agree with you. Because if you cut down a tree you also loosen the soil that is there in the ground, you also cut down a place where I can, a place that gives me shade, you cut down on my source of fruit and you say I will provide all this to you artificially and I say nothing doing it is just not the same thing that is compensation.

Discounting the importance of a resource, I will cut down a tree because a road has to pass by and we say nothing doing even on our IIT campus there are several places where roads have been built around trees that is the importance our campus. IIT Kharagpur campus gives to the biodiversity, to the ecosphere on campus.

Even in this day and age of technological development we are so concerned about preserving what we can in nature. So if a road can go around a tree that is what we will do, we will not cut the tree to build the road okay. So, you know so that is we consider every resource to be important then substitution one resource cannot substitute another okay. Then that the other argument here is multi functionality of ecological systems, no amount of artificial substitution can do what a single ecological resource can do.

And I am going to give you the example of a tree again, a tree serve so many functions it, the roots of the tree hold on to the soil that they grew in, they form a home for this subsoil life that is there, then the trunk of the tree serves as a home for several varieties of birds, the tree leaves give you shade, the branches give you shade, the tree bears fruit. So, you know so, I mean that there are so many advantages to having just this one tree and the leaves of course, you know that they the release oxygen into the atmosphere.

So that is another benefit, so I mean all things considered there are so many benefits of a single tree no amount of substitution can give us all of these benefits in one short that is multi-functionality, risk assessments and the precautionary principle. What if the week sustainability principle is wrong, we have come up with all these ideas, but what if the short-term things that we are trying to preserve or the short-term goals that we are trying to achieve are going to of what if these goals end up harming our lives in future we will not know because these concepts are fairly new and we just suddenly started realizing the hit that our lives have taken.

Because of this indiscriminate technological development at the cost of harming our natural resources. What do we realize that after we have consumed what we have, we will never be able to regenerate it and an example of this is the cutting down of trees 500 year old trees in Korea for the Winter Olympics there is a big human cry and I will give you a link to it in the, in one of the next lecture.

So you know I mean how are we going to regenerate all these trees it will take 500years more and who knows what will happen then, why should we cut down so many trees for a three-day event is there any way around it. So that is one big argument.

(Refer Slide Time: 26:38)

The other argument here is the greater freedom of choice for future generations. We want to leave a larger number of options for our future generations. Conservation of natural capital leaves more options for people to use in the future there is better compatibility with the argumentative framework of environmental ethics, strong sustainability plays greater respect to diverse cultural, biophilic, biophilic means, you know something that loves the life and spiritual values that people biophilic values.

So values that embrace life that focus on the preservation of life that people associate with the experience of nature and landscape. So these are some of the arguments in favor of strong sustainability over weak sustainability.

(Refer Slide Time: 27:29)

And the last topic that we will talk about today are is natural capital, natural capital consists of all the components of animate and non animate nature especially living and non living funds that can benefit human beings and other highly developed animals in the exercise of their capabilities or that can constitute indirect functional or structural conditions for such beneficence and the broader sense. The capital that the nature gives us the resources that nature gives us what nature has that we can use is natural capital.

(Refer Slide Time: 28:08)

Some management rules for the preservation of natural capital proposed by the German Advisory Council for the environment are, renewable resources may only be used at the rate at which they normally regenerate, we should not use resources indiscriminately we should only use them at the rate at which they can be regenerated, exhaustible raw materials and energy sources may only be consumed at the rate at which physically and functionally equivalent renewable substitutes are created.

So when we talk about raw materials that are being consumed we say they should be used only at the rate at which the substitutes are created otherwise we should not use them indiscriminately. Pollutant emissions may not exceed the absorption capacity of environmental substances and ecosystems and emissions of non-biodegradable pollutants are to be minimized, whatever the extent to which unoccupied storage capacity remains available.

So we should, you know when we talk about pollutants, when we talk about things that harm the environment they should not be released into the environment till a system is created to absorb the harmful effects of these pollutants. And here the two concepts that are focused on our

preservation, preservation refers to prohibition of degradation and investment refers to improvement and creative planning of the use of our resources.

So, you know just think about all of these concepts in the context of how sustainability is discussed and talked about and propagated and these are a lot of new ideas and this is one of the approaches to sustainability we will discuss another approach to sustainable to sustainability communication in the next class, thank you very much for listening.