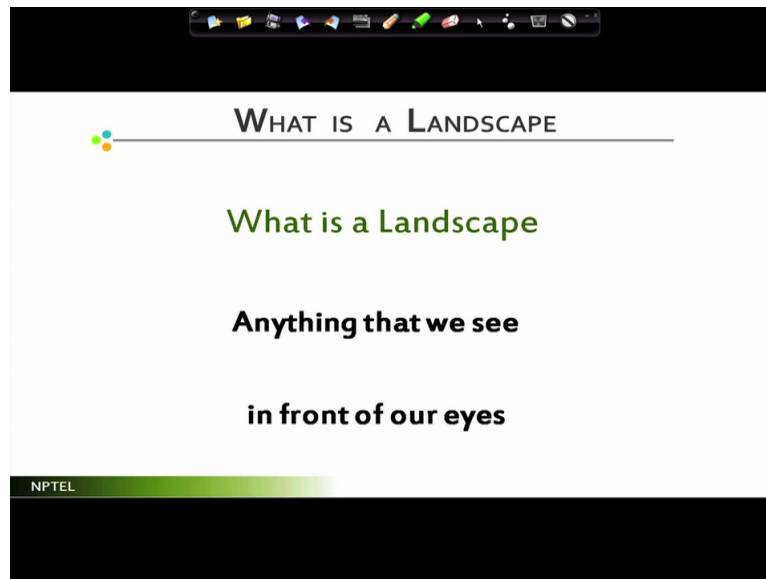


Course on Landscape Architecture and Site Planning-Basic Fundamentals
Professor Uttam Banerjee
Department of Architecture and Regional Planning
Indian Institute of Technology Kharagpur
Lecture 02
Module 1
Introduction to Landscape

Hello, so far we have discussed about the overview of this particular course.

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Now before going into the idea about what is landscape let me just explain to you how you should learn this particular course the way I will teach you through this entire course, will expose you to various design issues, implementation issues, engineering details through discussions and demonstrations.

You listen to the lecture very carefully, attentively if there is any doubt read on the slides to study the running texts and graphics in case you have any questions put a pause read with it, review the video and note down the question end of each week you upload the questions or clarifications whatever doubts you have in your mind in the discussion forum.

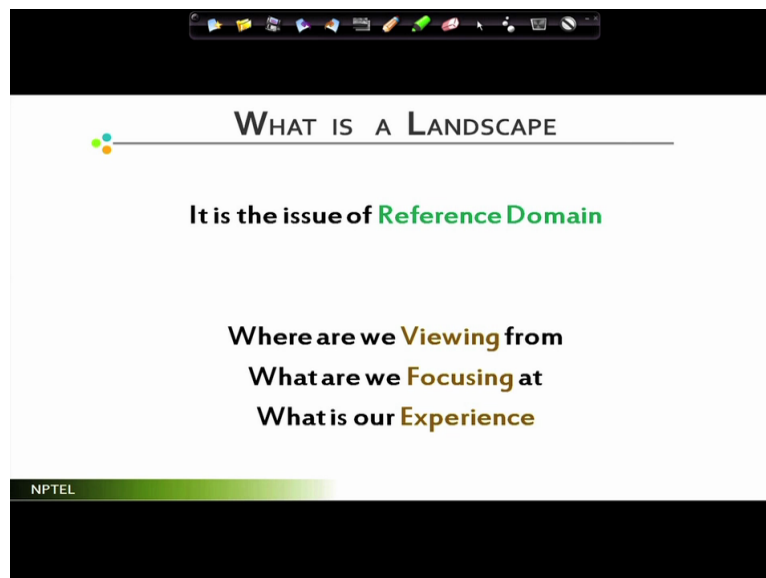
Every day in that particular week will keep a tab on what questions and clarifications are coming from new listeners or viewers. End of each week we will make a collection of questions and clarifications and make common answers to address almost all the questions. Feel free absolutely free to see clarifications there may be some doubts, there may be some confusions you can always share it please do we will be very happy to respond.

Along with each weeks lecture you will find a very brief list of glossary of terms that we have either used in this or may be connected with it and a brief list of reference those books which are highly essential or very useful for you to read at the end of 8 weeks you will find this glossary will keep on getting appended and the reference list also probably would be appended depending on what level of references we have already referred in the earlier lectures.

So end of the day you will learn about the subject and end of the entire course you learn about every aspect of it, you will have a set of glossary, you will have a set of reference and I will not always encourage you to read through various references (())(2:57) and put your hands on or buy those books or try to get the responses from your teachers or your friends.

Now let us get back what is landscape anything that we see in fact by literally terms landscape is what I am saying in front anything that we see in front is a landscape. Painters they make painting landscape painting they go outdoor and draw a painting, if you make a painting sitting at your home, sitting on your coach and look at the room that is also a landscape. So basically anything that you see is landscape which is in front of our eyes.

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So then what is our landscape design is all about, it refers to the reference domain means where are we viewing from, what are we focusing at and what is our experience most often since we are referring to the landscape as more in the nature and we are almost you know coming to an agreement that we are going to deal with these landscape as a natural process of

design with the nature then naturally if you are viewing it from window to outside, if you are focusing at the hill far away, if you are experiences you are looking at the nature.

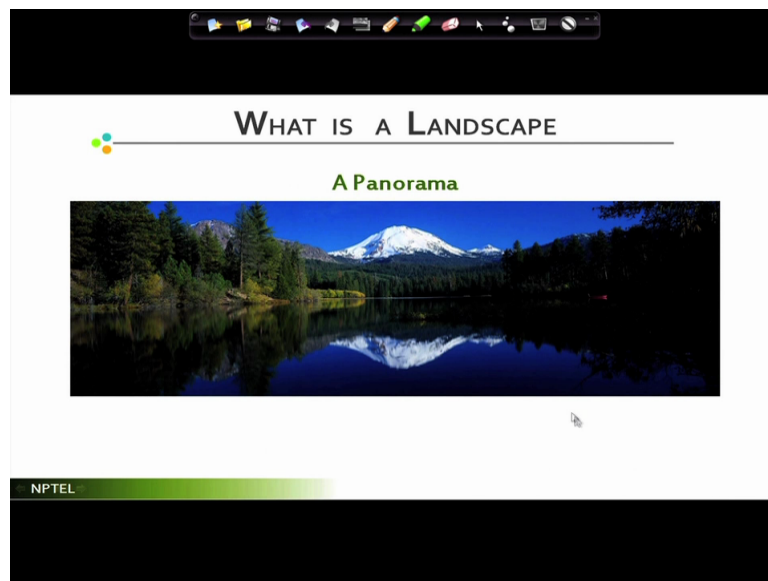
So idea is the entire landscape is with reference to the reference domain. Stand at the same window look inside yes then it will be a landscape because you are looking inside to the room. But the problem is you will not see nature so you will think no I am not seeing landscape the moment you turn 180 degree then you will feel yes I am looking at the nature you say it is landscape.

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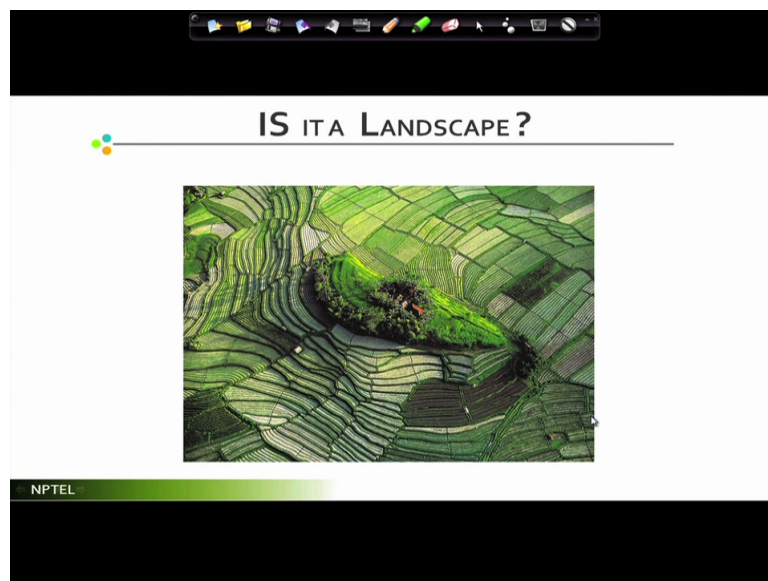
So basically what happens is, so this will be a fixed framed view where you can see the entire focuses at this particular point here at this point where you have landscape around, we have fens around, we have the pavement, we have the hedges on this side, we have (5:16) buildings at the base but when we look at it we find this is a fixed framed view, this is a landscape.

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Or it can be a panorama in the whole picture you see only nature, only nature this is one such situation.

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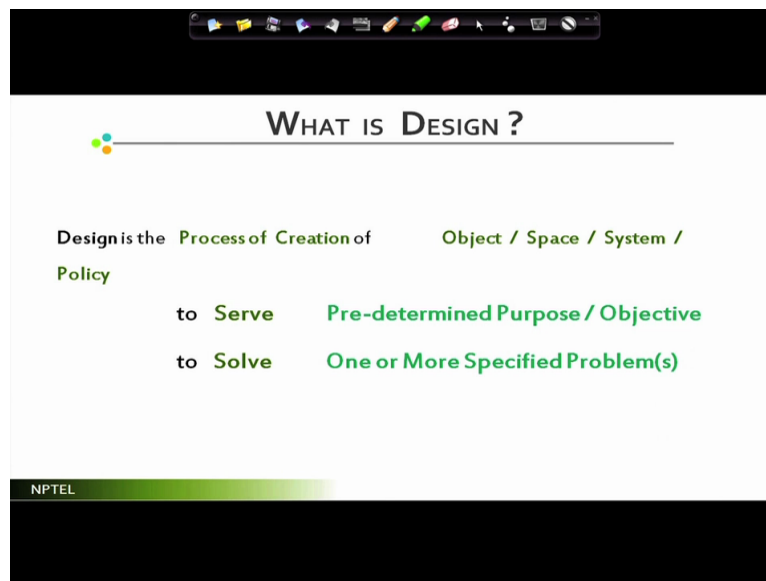
Now the question is if you have seen both the pictures do you call this a landscape should we call this as a landscape, these questions you know it comes in our mind should we call this as a landscape. Situation is since it is outdoor since it is natural most common answer by my all the students over the years is yes it is a landscape. I ask but I can see a house over there, they says still it is a landscape because in the whole frame of reference almost 98 percent is nature, it simply indicates that if you find in your frame of reference or frame of view there are major portions which are natural then automatically we assign this as landscape, ok.

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So what is the most common understanding, it is predominantly nature and natural elements. In fact you search yourself you ask yourself that whether this is true you have the same answer.

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Then comes a question of landscape design because we are gradually entering into the design part of it and our focus is on the landscape design but before we go into the definition of landscape design it is very important that we first discuss a few points over what is design. It is the process of creation of objects, space, systems or policies basically you touch on any item around, you look at any item around, you will find that that must have been having a shape, form, size, color, texture so this has been created.

So if you are designing something then it is created by you, so what you created you create an object like may be a pen, a pen that you have created you might create an eraser that I have in front of me, ok they are all design there anything that you look around you will find that they are all designed but it can be a space where I am sitting in or it can be a system that ok it is a computational system, it is an audio system, it is a mechanical system.

See the interesting part of the design is when you look at a car it is an object, when you sit inside the car it is the space, when you think about the entire car operating it is a system and the whole process of owning a car disowning a car and paying taxes, insurance and all these are the policies. So if you look at one item you will find that may be it is an object has a space within, it is running through a system and also has a policy of running it, you deviate from anywhere it does not work any further, so that is how it is.

That object or space or system or policy it has to serve some pre-determined purpose or objective, without purpose you do not design anything. Anything which has not been designed by people we always say that it is endured by nature God has designed it we say that because we got it, we had been endured with it, we did not designed so we say ok may be Almighty has designed it. The point is whatever it is if anything is to be designed it must have a pre-determined purpose or objective to serve that.

And solving one or more specified problem you may have some problems and you are trying to solve a problem for a pre-determined purpose and for which you are designing an object that is what is the design. If you look at the design let us say let us not talk about the landscape design now let us talk about the design of various things what kind of designs, furnitures, buildings architects will design a building, urban designers will design a city path, apron design will design the aprons, the dress makers will design or fashion designers will design the dresses so there are designs for everything.

So whenever we are designing there are many such ways by which we design so everything has to solve his purpose. If you enter your kitchen you find that there are so many crockeries cutleries, cutters everything is designed for some specific purpose and that is very very important that means whatever you are designing you must have a problem to be solved and then you must have a pre-determined purpose of solving that problem throughways and that is how the whole design is.

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WHAT IS HORTICULTURE & ARBORICULTURE ?

Horticulture means 'garden cultivation'

Horticulture refers to the Science and Art of growing fruits, vegetables, flowers, and ornamental plants

Originated from two Latin words

hortus **garden** *cultura*

cultivation

Arboriculture means the Science of growing and caring for ornamental trees

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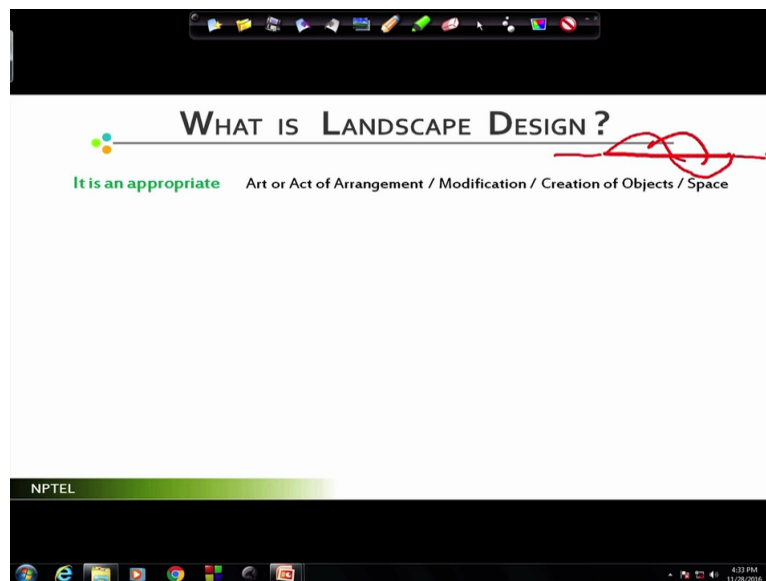
Then comes a question of if you are designing then landscape design is it a design, quite often I have been asked or quite often I have been contested that what is landscape design it is Horticulture job some people say Horticulture job is Horticulture, some people say no it is Arboriculture. Basically what happens is you know there are different aspects of landscape design let us go by definitions.

Horticulture means what the garden cultivation but is it necessary that every time in the landscape we will be designing a garden, no it is not, it is because of which Horticulture does not mean landscape design. This Horticulture term into which refers to the growing fruits, vegetables it is art of or science of growing fruits, vegetables, flowers and ornamental plants that is Horticulture.

So it is basically Horticulture is a Latin term from two terms which is originated from hortus that is garden and cultura that is cultivation that means garden cultivation so far what happened is all these garden cultivations were considered to be landscape. So Horticultures they think it is therefore their domain I am not contesting it, what I am trying to establish is the landscape is beyond.

There is another set of word that we get is Arboriculture which is also mean in the science of growing growing and caring for ornamental plants ornamental trees, yes in our landscape we do so. So what happens is there is no contest between Horticulture, Arboriculture landscape design, basically Horticulture, Arboriculture is a part of the landscape design.

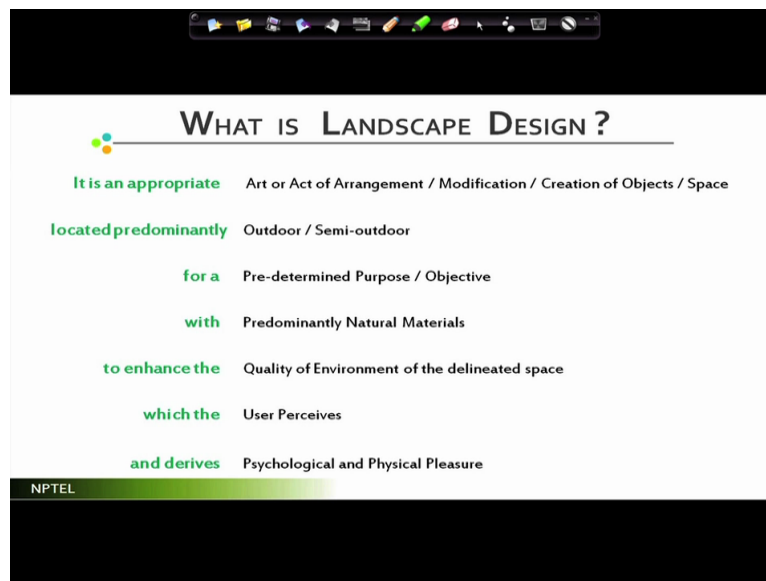
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Then what is landscape design, I put it very discretely here line by line when I will assimilate the entire thing it should turn out to be the definition of it. First it is an appropriate art or act of arrangement or modification or creation of objects or space that means if you have a space where elements are there you are rearranging it or you are modifying it an example is that you have let me give an idea.

You have a piece of land, you make a mount what you have done, here you have created and ofcourse you have modified it or you dig out from here and take this particular earth and make the mount. So what you have done you have changed it by which what you have created is an area where you have a mount and you have a water body. The point is whenever you are trying to see with respect to such modifications it is an art or act, in this act means action and art means art of doing it the technique of doing it, it is not artistic I do not refer it is artistic, it is not drawing a painting, it is the art of doing it means the technique of doing it and act means the action.

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So it is act or art of arranging, modifying, creating objects or space located predominantly outdoor or semi outdoor. The moment you design something by changing or creating or modifying and that is predominantly outdoor then it becomes a landscape project landscape site why I am saying predominantly outdoor because quite often we have seen landscape almost gets integrated with the architecture it flows from the interior to exterior, it flows from indoor to outdoor, there are some in between spaces which we call as semi outdoor like porticos, (15:00) patios such areas.

So naturally I will not treat this as completely outdoor, so it is outdoor or semi outdoor. So the moment you see that you are planning for certain area which is located predominantly outdoor then it is landscape design. For a pre-determined purpose or objective as I said for design it is true for any design, yes there is a pre-determined purpose, an objective with predominantly natural materials that is important.

Point is that if you are now see if you are arranging, designing, modifying, creating an outdoor space with a purpose pre-determined purpose whatever it is with predominant natural materials then naturally this is becoming a landscape design. So it is getting almost defined this cannot be treated anymore as any other design but you are handling with open spaces, you are handling with nature, you are handling with materials.

To enhance the quality of environment of the delineated space see this is important why you are planning, what is your pre-determined purpose whatever is your purpose of use of that

particular area you will find that you are basically trying overall enhancement of the quality of that environment of that particular space.

If suppose you are planning a garden, a park just beyond this we have many other areas which are nonconductive that means it is not good for that particular park but you are designing that particular park, what you are doing is you are enhancing the quality of that particular park. Ofcourse you are limited that you cannot do anything beyond but when you really plan for a little regional area or slightly broader domain when you are doing the landscaping or the urban design domain ofcourse these things also come in and you have to consider. So how ever basically the area that you have delineated you are trying to enhance the environmental quality of that.

Which is that particular space that space which the user perceives, you remember I have said if there is no user landscape is meaningless, the whole world the whole earth surface is natural. So whole worlds or earth surface is landscape it does not make any sense to anybody unless somebody goes there and sees it and then enjoys it.

So basically it has to be perceived. What is perceiving I will discuss later, when I will discuss about the behavioural issues but one has to perceive that means in this landscape there has to be a user otherwise landscape is meaningless. An example let me give you with respect to architecture you have a bedroom nobody sleeps in that particular room, there is a bed which has never been touched no point calling it as a bedroom ofcourse designing and saying that it has a bed so naturally it is a bedroom but if nobody sleeps in that particular room is no longer a bedroom. The point is there has to be a user because the purpose that you are satisfying is for users.

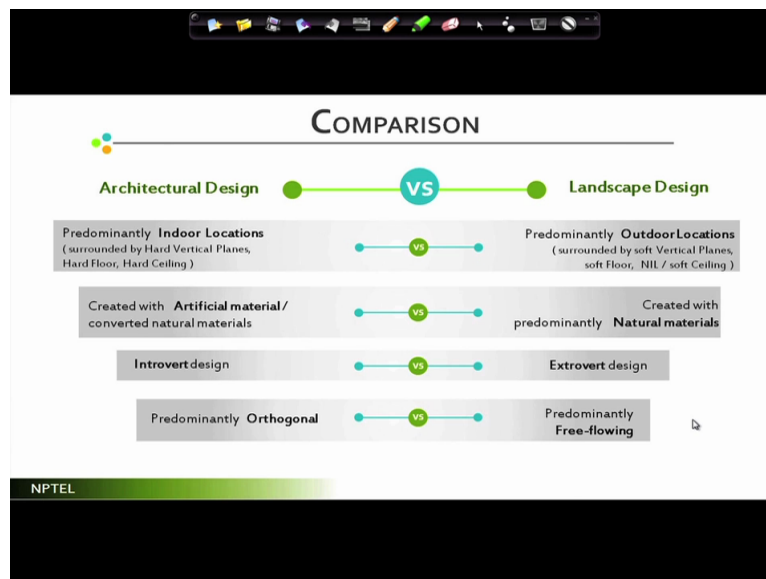
And the most essential thing is the user is perceiving that particular space and deriving psychological and physical pleasure out of it that means my landscape design is that design I am now threading all together if I read it together it is an appropriate art or act of arrangement or modification or creation of objects or space located predominantly outdoor or semi outdoor for a pre-determined purpose or objective with predominantly natural materials to enhance the quality of environment of the delineated space which the user perceives and derives psychological and physical pleasure that means it has to be positive.

The landscape that you are designing has to result into positive outcome to the user perception, if it is not then even a Jungle can never be a good landscape. So basic idea is it is

a very serious issue mind it, user is entering into a park, getting dejected rejects the park comes out and says, no I do not like this particular park, if that is true however best you have tried however best you have tried with every aspect it is no longer a good landscape design.

So essentially you have to understand that if you are dealing with outdoor or semi outdoor spaces to enhance the quality of that and you are taking your actions of designing with predominant natural materials user is perceiving and they are going back with psychologically and physically a pleasure then that is a design.

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Quite often there are I would say contest because I am also an architect I find that the people say that ok no no landscape can also be indoor, landscape can be a part of architecture, architecture can be a part of landscape let us not go into that debate let us not. Let us try to see can we draw not a very sharp one a comparison between these two you will find there it makes sense.

Quite often landscape and architecture will be integrated place side by side it is like you get up in your bedroom in morning come out in the balcony, veranda at the ground level, you see the garden outside, you step on to the garden when did you shift from architecture space to landscape space where do you draw the line it is very very difficult I would say that let us not try to draw the line let us try to see can we have some bit of discrete idea about how shall I call something as architecture design spaces or landscape design spaces let us see this.

Architecture spaces are predominantly indoor locations, they are surrounded by hard vertical surfaces, walls, hard surface as floor and hard surface as a roof or ceiling which ever level you are in. So it is basically an indoor location which is architecture.

What happens in landscape predominantly outdoor, why I am using the term called predominant because it is not very direct that all outdoors are landscape no there are some semi outdoor spaces so I am saying if it is predominantly outdoor it is landscape surrounded by what surrounded by vertical members, vertical planes, horizontal planes which is base plane and also the over plane but they are soft materials. Soft materials means if suppose we have walls replaced with a series of trees or if suppose we have walls replaced with a series of hedges that is soft material.

If you have floor replaced with grass soft material and how about the ceiling sometime most often in the landscape we do not have ceiling most often rather very rarely we do have some overhead elements over our landscape spaces then actually what happens is the moment you take the ceiling off it becomes very open, you think about a room you take the ceiling off you will find the whole feeling of looking at the sky the openness you will find that automatically you are in semi open area so this is the idea.

Next architectural spaces are mostly created with artificial materials, what are the artificial materials if you say the brick wall brick is an artificial material, concrete, steel, wood basically what happens is this artificial material means everything is generated from natural material but in the converted form. So if you are converting it to a material immediately we will call this as artificial, if you do not convert it and place it in the same manner then it will no longer be natural, ok.

And then here in landscape created with predominantly natural materials, why I am saying predominantly I may have a brick wall, I may have some steel fencing, I may have the wood which has been changed but most often majority of the materials that you will find they are all natural.

Architectural spaces or architectural designs are mostly introvert in nature means you go in surrounded by elements and interestingly our landscapes are extrovert in nature you do not like to be surrounded, you like to be in the open, so it is extrovert in nature. Architectural spaces, profile are predominantly orthogonal is rectilinear why predominantly I am saying

because there may be some of the designs which are slightly free flowing but predominantly they are all you know vertical orthogonal.

And in the landscape it is predominantly free flowing ofcourse there can be also some orthogonal thing but predominantly free flowing. If you see these four I am just again summarizing it then architectural spaces predominantly indoor locations created with artificial materials or converted natural materials which is introvert in nature and predominantly orthogonal in its profile.

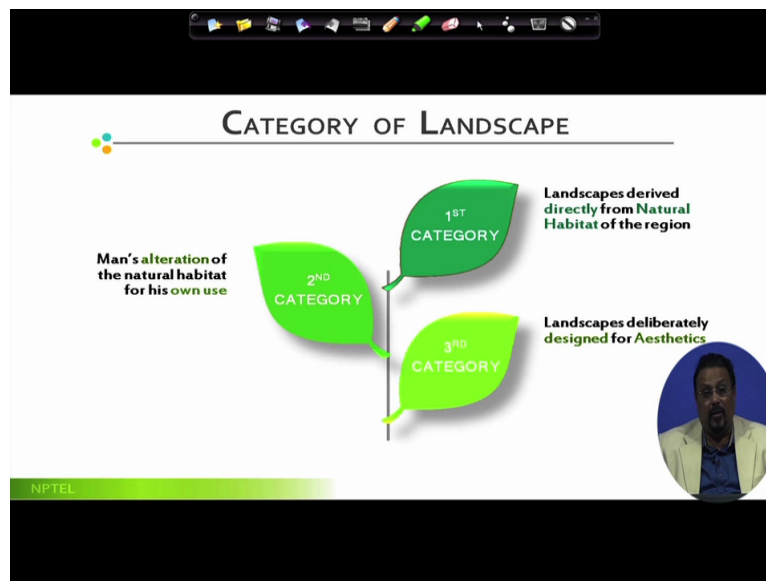
Whereas landscape is predominantly outdoor locations surrounded by softer materials, created with predominantly natural materials and extrovert in design and profiles are most often free flowing. So that makes a little you know sensible differentiation between architectural spaces and the landscape spaces. So when you are designing a landscape be very courteous.

In the process of doing or I would say over doing do not convert a landscape space to architectural space. But there is no limit if you make design of an architectural space you can always convert this to a landscape space the moment you have gone into this part of it of the line then naturally it will be treated as a landscape space.

The green house if you see within that you will find that everything is ok it is introvert may be the green house which has all those plants to be grown within it but if you look into it all the materials are mostly natural ofcourse surrounded orthogonal profiles may be but yet since it is open you can see the sky your eye flows of beyond the limits of the ceilings on the walls you start feeling that you are in the myths of a nature it almost tends to be landscape.

So there are some blurred areas like green house and all but however the very discrete difference if I say architecture is indoor, landscape is outdoor, architecture is artificial material, landscape is natural material, architecture is introvert and landscape is extrovert, architecture is orthogonal, landscape is free flowing this is how it is.

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Then we will be discussing about the categories of landscape, the categories of landscape you know basically what happens is that whenever you are trying to see a landscape can be differentiate the landscapes, let us see this category.

Very broadly this can be divided into three categories, first category, second category and the third category. What is the first category first category is a kind of landscape which is directly derived from the nature or natural habited of region. What is the second category, such natural habitat if it has been intervene by human being for some personal use being oblivious to the change that one is making that is also a kind of landscape to us, when you look at the landscape it is a second category where human intervention had been there.

And then there is a third category in which there is a deliberate attempt of creating a landscape means you design a park, you design a garden and here you do not care what it was originally now you are changing the whole thing with a deliberate attempt of changing.

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1ST
CATEGORY

- Landscapes derived more or less directly from the Natural Habitat of the region
- In their purest form these exist only where man is absent, or there had been least human intervention
- Example: Forest, Desert, Sea coast, Open meadow

NPTEL

Let us look at the first category what you have said is landscapes derived more or less directly from the natural habitat of the region. In the purest form these exist only where man is absent or there has been least human intervention. So whenever you go to a hilly area whenever you go to a sea shore, whenever you enter into a forest they are all first category. If there is a I would say that nothing can be absolutely pure if you are visiting that area because if you are visiting means there is a road, there is a path if you are visiting for your safety there may be a small structure or shelter so there could be such situation but the actual first category is what has not been explore or exploited.

The example is forest, desert, sea coast, open meadow. Let us look at this picture who has created this nobody no human being has created this this has been endured by nature. The entire thing is available to us people rush towards this area take trouble of travelling miles and miles spend lot of money and go there and enjoy, they would like to stay there and enjoy that landscape. In fact such items always attract people where people ready to pay the price for it but the result is reward is they will come back happy because they have seen a nature.

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1ST
CATEGORY

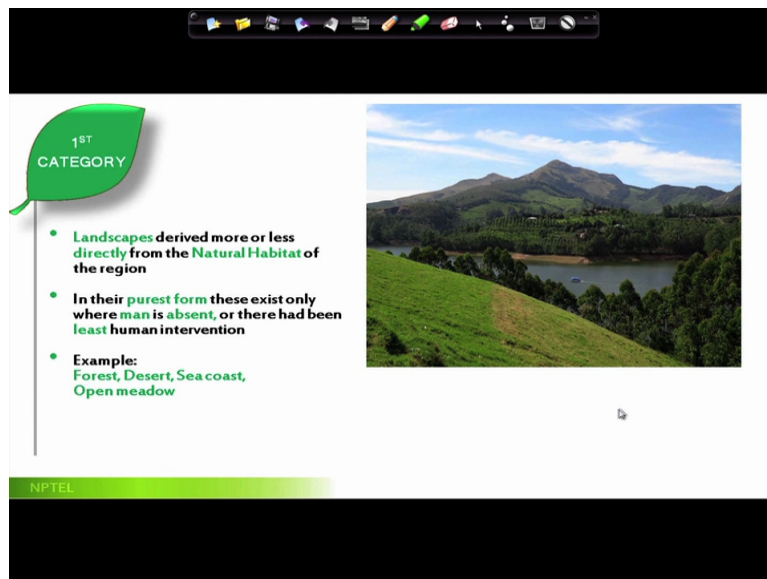
- Landscapes derived more or less directly from the Natural Habitat of the region
- In their purest form these exist only where man is absent, or there had been least human intervention
- Example: Forest, Desert, Sea coast, Open meadow



NPTEL


Look at this another kind of nature raw nature no interventions there are plantations which have grown automatically, there are change in colour with the clouds and sun raw nature.

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1ST
CATEGORY

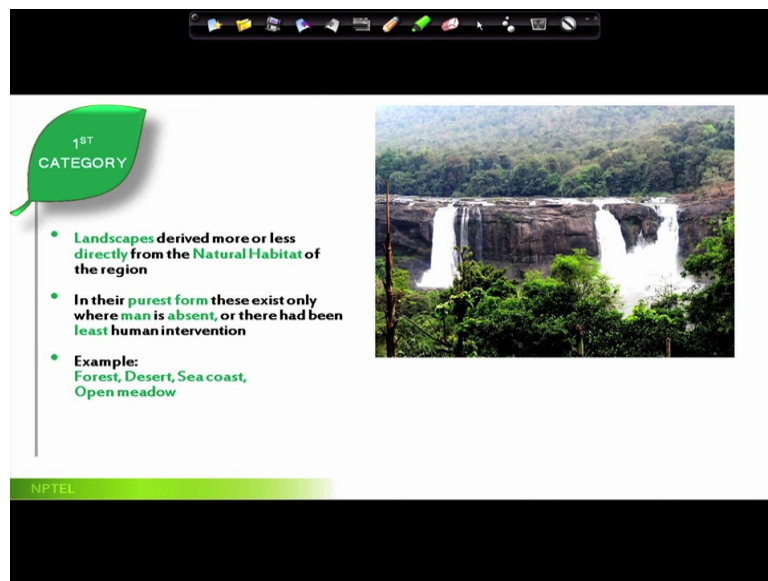
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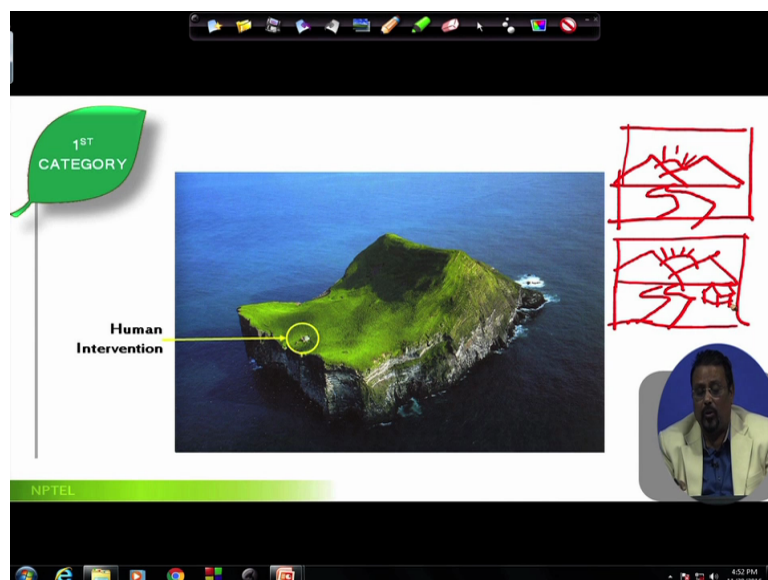
And how about this this is also raw nature there may be a little bit of interventions somewhere but this lake is not created this lake is generated naturally only may be slightly trimmed or maintained.

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And this one this is a raw nature I am sure that if you really look into your past or ask your friends you might have been to all these places or many of these places or similar places which you wanted to see as a raw nature, you turn around you might find there is a little bit of some other human intervention, the point is if it is a raw nature it is a first category.

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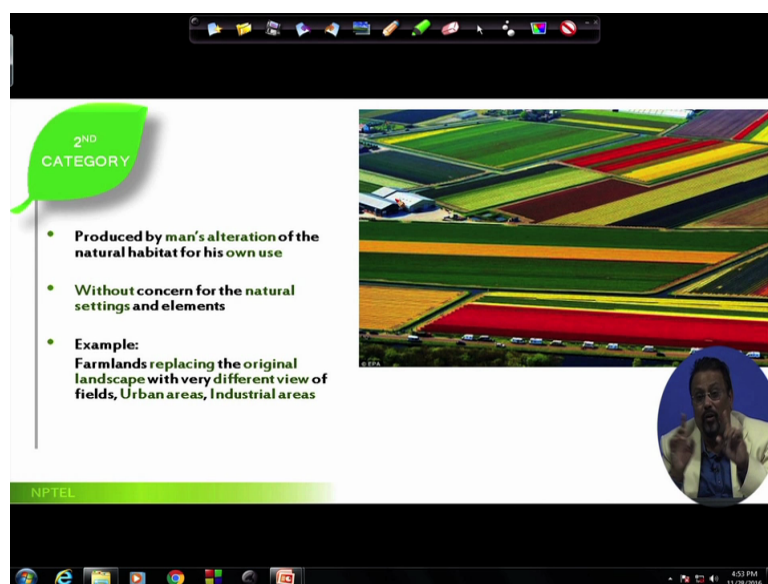


Look at this one this is raw there had been erosion this is subjected erosion the top is green cover this is raw nature I will give an indication here. Look at this picture can you identify something which is different from the earlier one you will see yes there is a small human intervention there is a small hut over there. I would still consider this as a first category because such human intervention is so negligible so marginal it does not make much of a

difference. So this does not go into the second category though by definition this could have gone to the second category when it will go to the second category when the interventions are quite significant.

I will give an example I am drawing a picture which you had been drawing since your childhood days follow this very standard picture all of you can identify the sun, the hills, the meadows and the river. Imagine if in the same thing everything is same the river is still there and somebody makes a small hut is it really bother about the whole scenario, no what we are seeing is we are seeing the whole picture.

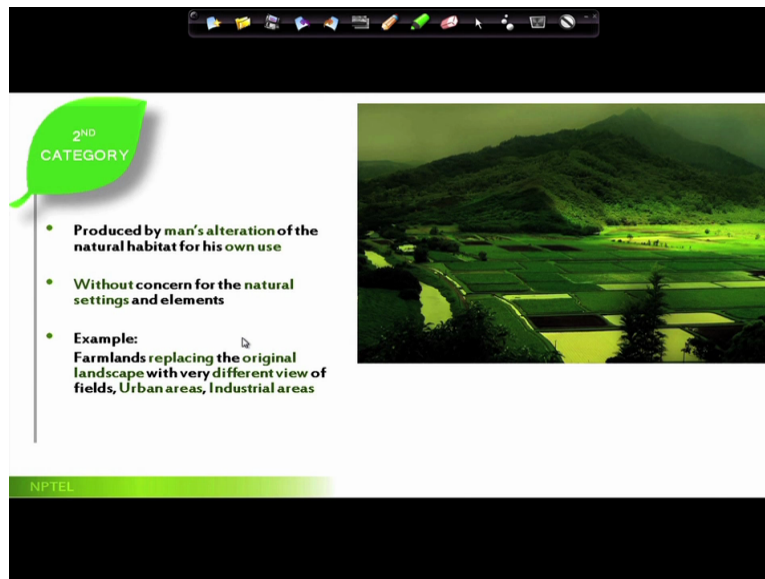
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The first picture is the first category, the second picture when somebody is making here the idea is different look at this what has happened with the second category there had been mans intervention somebody has made a hut for his own use. The point is he is not concerned what change he has made to the whole scenario which I am seeing as a first category so he is not seeing it, he is bother about his own self, he is bother about his own benefit and ultimately he is making the scenario to us. So when we see this we consider this as a second category.

Example will be farmlands replacing the original landscapes with very differently view of fields and other things. The entire farmland is a wonderful attractive landscape for us, we go there can you see that there are you know people who had been there to see this that means people are enjoying by this, people are attracted to this, there are other buildings but the thing is over a landscape is a second category landscape.

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The slide features a dark blue header with a toolbar. On the left, a green leaf-shaped graphic contains the text '2ND CATEGORY'. To the right of this graphic is a list of three bullet points. Further right is a photograph of a valley with terraced fields and a river. At the bottom left, the text 'NPTEL' is visible on a blue bar.

- Produced by man's alteration of the natural habitat for his own use
- Without concern for the natural settings and elements
- Example:
Farmlands replacing the original landscape with very different view of fields, Urban areas, Industrial areas

NPTEL

This is another category in which what change has been made, I do not see any structure over there in general but the thing is I can see there is a farmland. So people have created a farmland over there not really thinking that what landscape he has created he has only created the entire landscape together that has become a second category to us, ok. Then we will go to the third category.