Buffering & Perspective View
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What we have seen is how do we – what all the different information which we can input and how you can have it on a same scale or a scheme level and how you will be able to use the GIS for creation of different kind of maps related to agriculture that is water, water storages and other activities now there is one more activity which we can do is; it is buffering. So buffering is nothing but around a point, around a point what are all the objects which are in the nearby areas. So this is useful, suppose here, and this is also known as a proximity. So you have a road and how many houses are there within 10 or 20 meters on both the sides of the road, 10 meters on both the sides of the road. So this type of information is needed when you are talking about environmental issues you have many other issues which are related to these type of things. For the agriculture purpose what are the things which we can do is; there are certain traditional lakes and these are all the lakes which you have extracted from the different sources that is a topographic sheets as well as from the imageries and then it has been brought into a composite mode. Now my interest is; these lakes; how many lakes are therein a particular village. So that is the issue. So if it is one, at least one lake should be there which can be developed and people can get water from that particular source. If it is a lake adjoining to covering both the villages then what happen is these two village people they can maintain this lake and get their water supply from these type of lakes. So this is the type of utility which you will be able to do that.

So any – so this is, one is public funding and a governmental initiative and another thing is the village based initiatives. So, if both the things; if they come together then what will happen is then water for the agriculture, water for the drinking purposes can be solved to some extent. I am not saying that it is totally completely joined because it varies from Geography to geography and mentality of the people that is mental means social aspects of the people that is what is more important.

So now when you look at it. So accept this, this area this village except this village. So all other villages they have got some smaller or a moderate or a bigger lake. So they are all, they are all see now what I have given is; I have given 200 meters as well as 500 meters from the lake periphery towards that area what does it indicate. This indicates people can walk about if they walk around 250 meters or 500 meters they will be able to get a water source for the drinking purposes. So this type of buffering analysis is possible from the basic layers of the GIS.

Now other important things which we can do is geostatistics and you will be able to do many things then interpolation is another issue. Sometimes what is happening is; in some of the areas there may be some data gaps. Suppose if you have at one point one information you have on another information in between the information is missing either in time mode or it may be in a distance mode with based on the adjoining points you will be able to have a gradient you will be able to extrapolate and then fill up these points with reference to the adjoining way. That is what the interpolation means. So what is the digital elevation? Digital elevation is nothing but the giving a three-dimensional picture, three-dimensional picture of a

particular area which I will be showing it to you how it is done and how you can. It is only a viewing purpose which we are of interested. So now second thing is the geocoding; see geocoding is calculating the spatial locations that is XY coordinate from the street addresses that is also important in some of the areas. So this will be for pipelines and drinking water supply sources those guys they will be interested now what are all the outputs which we can get from this GIS.

So, now okay. I have just taken out all the old records. I have converted into digital mode and i have used GIS and everything is in the digital format. Okay, right? That's fine how do I get a result and how do I show it to people. So, okay; now there are ways which you can do that, one thing is a visual in the form of a map as well as in the form of a visual representation. It can be on a screen. I can take it out and then show it on the two people on the screen as well as you can do it on a print it on a paper mode.

So then as well as you can have a wall maps what with the colourful wall maps which you will be able to express whatever you want to do that. So otherwise; the third option now is you can just fizzle in map servers and you will be able to generate and then you can put it on the websites.

Okay, now another graphic display disk techniques which I was talking about is the perspective view. So that what you want to do that. So how it is different from the normal thing is; so what is it you would be able to see I don't know that it looks like a hill somewhere it is high somewhere; it is down. So how did I generate is. So this is the digital elevation mode and wherein you have given a three dimensional approach to those players. So now instead of in a plane map what you will be able to see you are able to write only the hills, valleys and things like that whereas hills and valleys are not going to be helpful in a long term portion because perception you have to create a perception of the people. Now what I did was this is the digital elevation model. So what over that what I did was I have just draft to over the images, satellite images.

This satellite images is some of them; these are all the cloud patterns which is observed on that particular day and that is the direct. First what I did was I try to take the image and then I have geo-referenced it and it is. These two geo-referencing of the DEM as well as the satellite data they all. I have just registered with each other and draft over that; that is the first thing I did. Second thing in which what I did was these are all the drainage lines and this is the river course. So this is; I have created as a separate layer and that layer also I try to dap over there.

Now fourth one is; these are all the road network location. Also I had dropped over there are overlaid it. So now I have the elevation I have the land cover surface features as evident from the satellite I have the road network I have the drainages. So all these things as you see it; as you, when you go with this type of information over there you will not find any difference between what you have created and what is available over there; your management problem, your execution problem will be easier; otherwise on a normal mapping system and these type of things are not available. So whether it is a valley or a hill that we do not know unless you give elevation thing this type of totally integrated picture can be created – created for any

analysis. Now how can we use this; the next question will be, how can you use it. Now I want to have one more dam when do I do that? So if you have a dam here; is it possible. So if we have a dam then how do i distribute water? Okay, if I have to – if I don't get a ground water on the top so I have to have a groundwater is potential is over here. So, can I take these pipelines up. So these type of ancillary the questions which arise after seeing those activities; so those things can be cleared up by this type of method. This is what you try to call it as a perspective map from one side. So can I rotate it and then see? See now what is happening is I am not able to see the other side of it and now I am looking it from one side. So can I do it on the other side of it.

So in this way; now what is another thing we I have tried to do is and I have to try to create a DEM. In this DEM; these are all the areas where groundwater is available more, likely to be available more. Now I have tried to have a ground water potential map which I would show you later. So that has been, that has got a different constraint and this has got a better advantages. This better advantages is; suppose if you have a groundwater potential on this higher areas. So what happens is the elevation is very higher. So your possibility of getting the water from these areas are negligible even though the aquifer conditions are good.

So this type of co-evidences which you will be able to get a better picture as well as the appreciation. What I try to do was the same information I try to rotate it from here to here. So here this portion is the same, this portion is here, this portion is here, this portion is on this side. So I am trying to rotate it in all directions so that what happened is when I look from here I don't get a view of this area when I look at it I don't get a view on this area. So like that when I start rotating the same information, the same perspective view in a different way. So whatever the shadow region, whatever which I am not able to see those information I am able to get it which you will not be able to get it on a normal mode.