agMOOCs
Village Agricultre & Other Water Demand and Supply Source
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We have been talking about how do we calculate the water availability, storages and demand. Now what is the unit in which you are going to do that? There are -- which we -- what we have seen is we can do it on a basin level as well as we can do it an administrative level that is like a village level activities. Now what we will be able to do? What we are going to learn now is about how do we do it and how do we represent it on a space mode.

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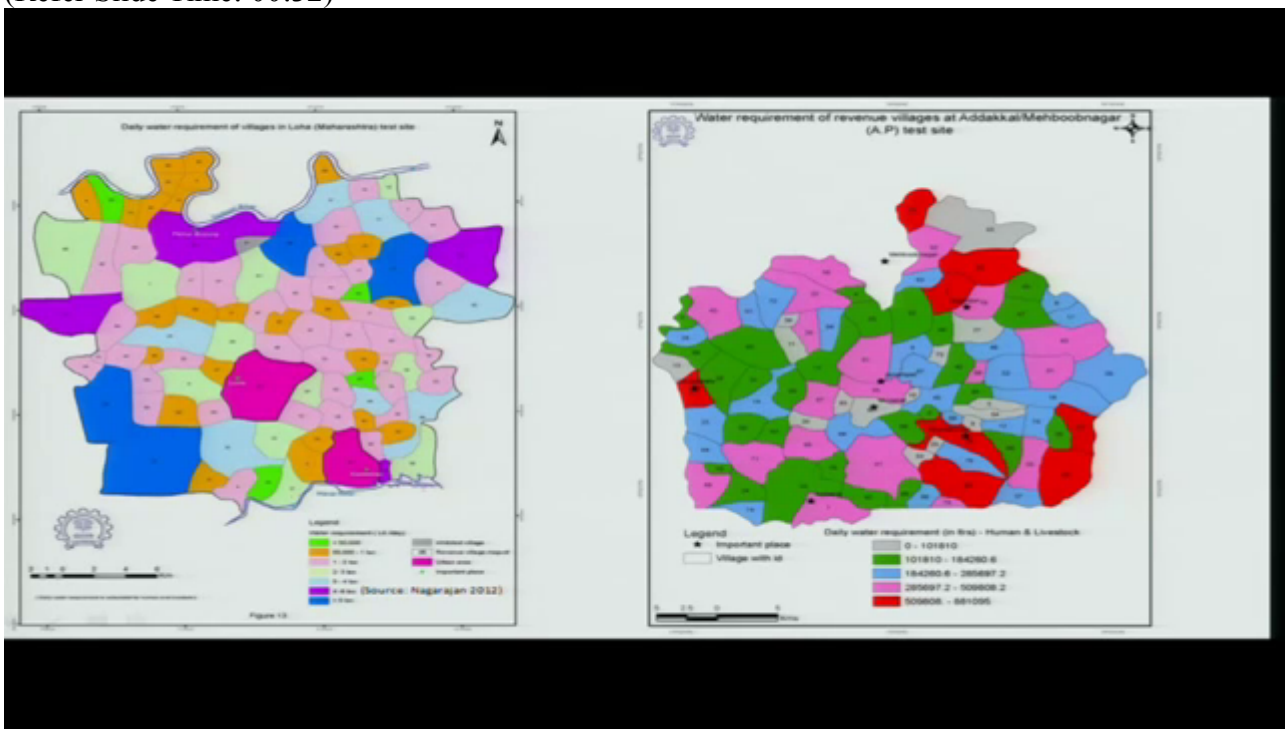

Now, these two things whatever like water requirements are there and those requirements are given daily water requirements in this area. So, what all the different things? These are all the -- this area is bound by two river basins, one is a Koyna river and another is a tributary of Koyna, which is one (inaudible 00:00:53) river. And these are all the boundaries, these are all the villages, and what we try to do here is what is the water requirements, individual water requirements from these villages and then we have grouped them under different categories whether water is needed more, water is needed less for the agriculture, living, livestock and other activities.

So, this when you look around what do you feel this is these are all the areas where you have more water is required and these are all the areas where the water requirement is very less. Now, how do you manage this? How do you supply additional water is the main issue or it is a micro level or a site-level problems which need to be understood. And this is, if it is going to be a – agriculture is the major component in this part of the country.

Now, this is a driest area in Indian conditions and another driest area which we are trying to calculate is in the other Andhra Pradesh, Mehboob Nagar area. Similarly, here also these are all the areas where it is more, the sum of the areas are very moderate, some of the areas are very less water requirement. So this to show that water requirement is – it's not a uniform

thing which either if you have to collect a pipeline type of activity it has to follow through these areas so that everybody is supply. And what is the route it will be it will be help us in planning our water transportation corridors in this area.
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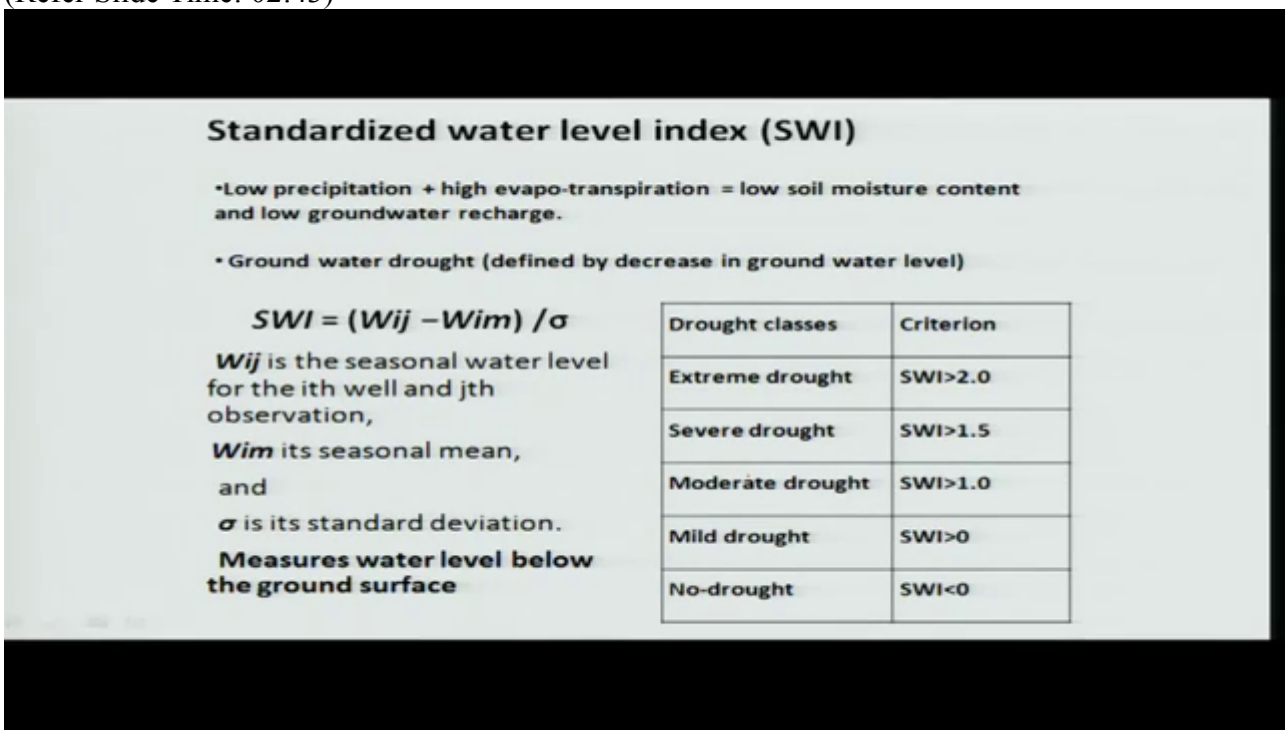

Another thing, this is about the surface water activities. Whereas when you come down to the ground water how do we classify those villages or how do you classify the locations, they are based on the standardized water level index. So here, even though it is mainly used for a drought situation whether and what we can use it for our water resources planning for agriculture use. Suppose if the fluctuation is more. In this criteria here it is 2 and it is between 0 to 2 in nature. So what is happening is, here that no drought means, the withdrawal as well as recharge in those wells are manageable or they are same. So there is nothing that you can afford to withdraw whatever you are we drawing for some more -- for further years you can continue.

Whereas here what is happening is your withdrawal is more whereas your recharged to the well or to the aquifer is less, that means, you cannot withdraw to this amount to this extent for a longer period otherwise there will be -- the aquifer will be different. So in between is the ranges and depending upon whether it is a 70 percentage more, 50 percentage more or it is 20 percentage more then what you are able to do between the recharge and discharge is the criteria. That could be used for in the management purposes.
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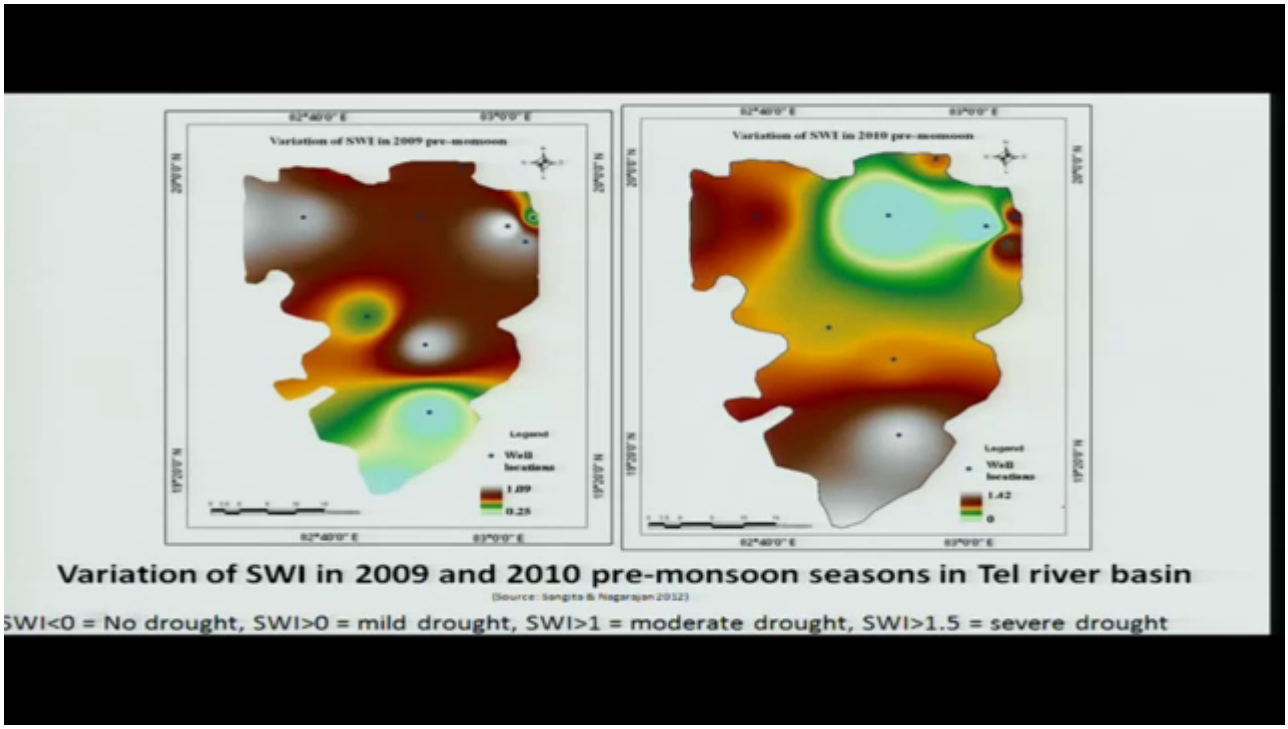

So, here it is nothing but the same calculation is being transformed into the space mode and these are all the two different years, one is 2009 as well as 2010. It is the Tel river basin which is located in the part of Odessa. And if you could be able to see that some portions it is the northern side, some portions in this southern side that ground water level is very significant. So this needs some amount of withdrawal, control or recharge methods to be improved up in this area.

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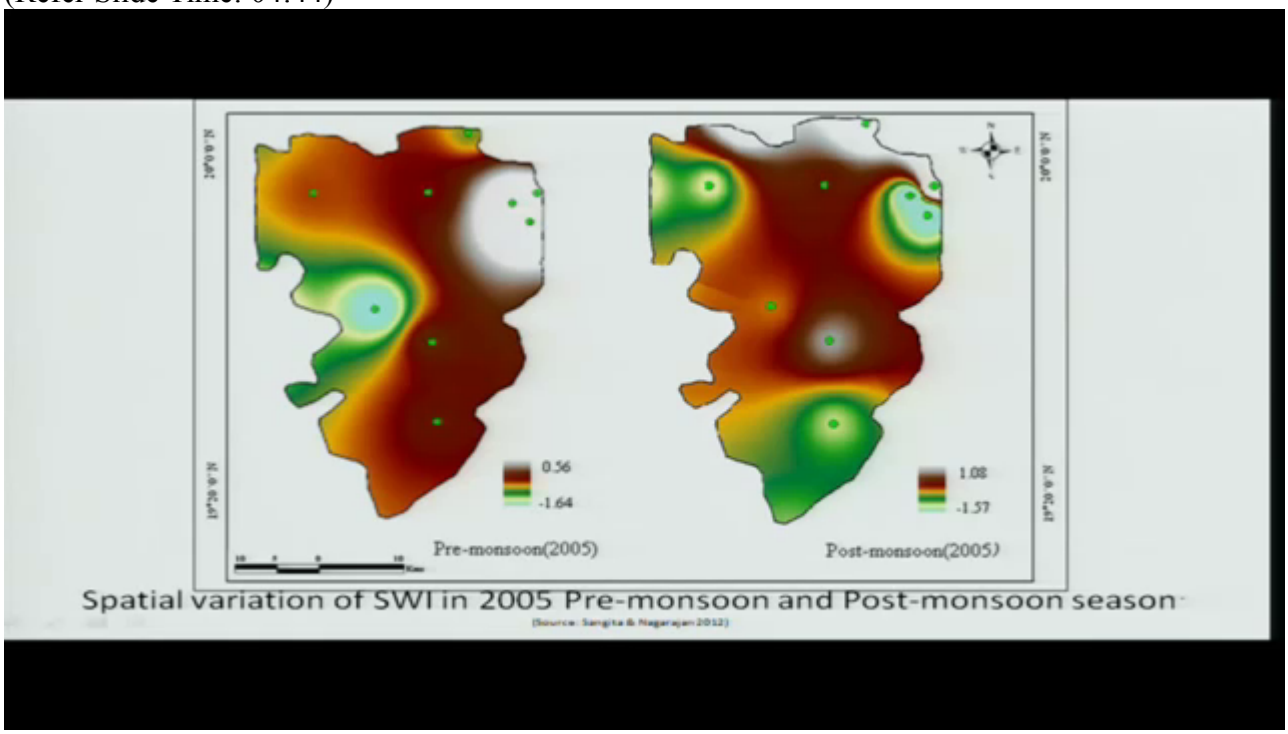

Same thing is about 2005, post-monsoon and pre-monsoon. See this post-monsoon and that is about two years information which we'll compared it between 2009 and 2010. Whereas here it is pre-monsoon and post-monsoon periods have been compared. That means what happen

is after the monsoon or after the rainfall how much improvement has taken place. So that is what is shown here. And here it is pre-monsoon and post-monsoon season that will tell you about what is the variations it has contributed because of the rainfall event. So this is also another way of understanding the groundwater availability in that area which can which we can do it.

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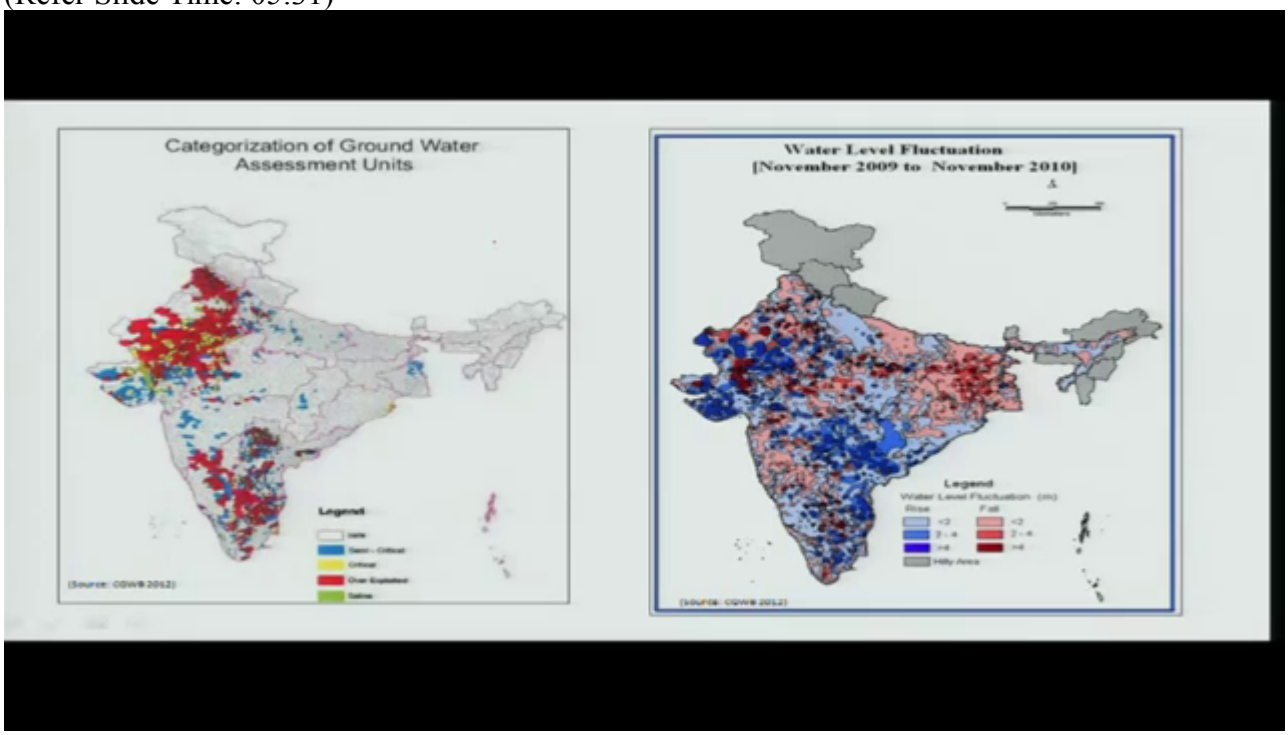

Now, this is the nation wise assessment units, which is done and what is the withdrawal and whether the withdrawal is more than the recharge. So that is how it is done. Whereas here some of the red colour areas what you are able to see, these are all the regions where the ground water withdrawal is more than the recharges. If this things continues then there will be a permanent non-availability of groundwater is possible. Whereas some of the areas this salin areas that ground water has gone for a salin. Salin is nothing but what is the salinity that salt content in the groundwater is higher than concentration is increased because the volume has decreased. And here what is shown is the fluctuations and how the fluctuations varies between November-to-November one yearly fluctuations during this period. So the fluctuation is more in these areas -- more in this peninsular area as well as here, whereas the fall is in these areas.

Whereas when it come down to here it is the bluish tinge which is given that shows what is the rise in the level whether it is a normal rise or whether it is a higher rise. So this type of information what you will understand as a nationwide is how best this regions can plant further next year's of agriculture decisions whether to develop or continued or it is hold on some more area is can be done by this uses. What we have seen about the in this lecture is about the fluctuations in the groundwater level and how it could be used for our agriculture decisions. Thank you.