agMOOCs
Water Balance Under Different Rainfall
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Now, our problem is irrespective of measurement, monitoring facilities how do you share ourselves, how do you relate ourselves with the rainfall. And the rainfall and the water stress of a region is of a prime importance, whereas people themselves can able to understand there is a low rainfall and there is likely to be a problem in these type of villages. So for that purpose what is needed is availability from the rainfall, then demand from that rainfall, if this type of amount of rainfall is there then my water needs maybe not be fulfilled for the year. So I had to be very cautious. So this caution can trigger their conservative approach or efforts to bring additional water for their survival is possible. That is what is being done in this slide.

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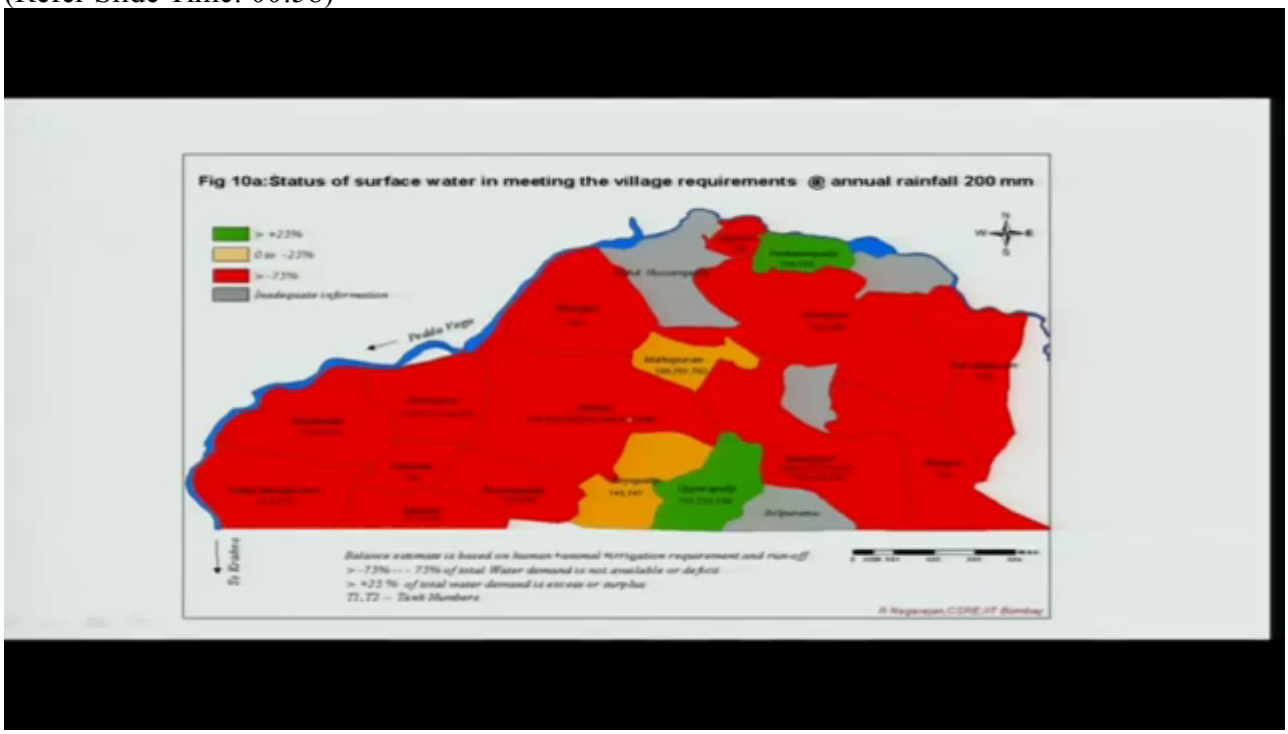


So what is done in this slide is if it is going to be a 200 millimetres of rainfall which falls over the entire area and having this area has got this many different tanks are there. Now what we try to do was, what is the storage possible, what is the water collection potential of this villages. Then what is the amount of storages which they can do it. So the left out is for their utility. Now it looks like that, based on the calculation, estimations, if there is going to be 200 millimetres of rainfall or there is going to be in the red colors area the adequacy will be 78 percentage of the requirements are not going to be filled up.

Whereas in this areas where the requirements are there only 25 percentage is not going to be filled up, whereas there is slight increase it is either requirements are felt or requirements are partly felt. That is another way of expressing that adequacy of a village under a particular annual rainfall conditions. This is 200 millimetres. Next approach is 300 millimetres. When you see this 300 millimetres the requirement and the rainfall amount so it goes on varies instead of a three classes we would be able to see more classes, it will be 50 to 60 and 25 to 50, these are the new classes, but this is nothing but it is -- your requirement availability is 100, your requirement is going to be 125 then there is going to be a 25 percentage of water

which is deficit. So this way this rainfall requirement of a village can be identified. Now this is under 400 millimetres. This will be under 500 millimetres.

So when you move from 200 millimetres towards 500 millimetres and 600 and 700, so you'll see majority of the villagers are just self-sufficient expect a few activities here and there. So these are all the local problems. So what did you understand by this. What we understand by this way is if there is going to be a 700 millimetres of rainfall collected by the entire village area and then stored in this tanks then the water requirements of this crops as well as human requirements are met, so that drought conditions will not be there in this areas.

So, this is how this study can give a relationship between the rainfall amount and the requirement amount which we have explained earlier about the requirements, about the supply and how much would be there. The only crutch in this type of study is, it is assumed the rainfall is uniform, one thing. Second thing is whatever the area which where the water gets collected within these large areas are available for storage. So there maybe some variation here and there, this can be done on a individual village basis and it could be further refined, further can be taken -- the management practices we'll be able to take it up further.

So, as you see 900 millimetres is the right kind of rainfall wherein everything is green or the shortages are less. So when you see that as you move up 800, 900 there is a additional greater than 25 percentage is a excess which can share it out with others. So what we can have including in a drier conditions or a semi-arid conditions we could able to store, collect all the rainfall whether it is a localized or it is where on a space it is going to vary, all that we can make efforts to collect the surface runoff, try to store it on the tanks and wherever it is storage facilities and then make use of it. If you try to do it on local level, local water self-sufficiency could be achieved if not for the crop and drinking water, at least drinking could be take care and if the rain crops are grown in those areas their water requirements can also fulfilled before they shift to the cash crops or water intensive crops. Thank you.