

agMOOCs
Monitoring and Warning
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Having device how do we go about vulnerability index formation and identifying the areas and the hole and identifying the regions. So we have come to then -- the next thing is one thing is a steady part, second thing is when you want to do it in the execution part. Execution part is based on the dynamic information collected on a dynamic scale and then that scale need to be collaborated on the ground level and the warnings need to (inaudible 00:00:31). So that is what in this lecture we are going to talk about the monitoring and the warning procedures which are there the problem.

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Color coding of Drought indicator			
Parameters	Jhod nadi, Tributary of Godavari River @ Nanded, Maharashtra		
	Status		
Period of difficulty PD	●	Perennial river flow PeR	●
Frequency of event Fe	●	Aquifer type AqT	●
Annual Rainfall ARF	●	Groundwater fluctuation GwF	●
Aridity index ArT	●	Population Density PoD	●
Palmer Index PDSI	●	Human+livestock HLG	●
Evaporation Eva	●	Agriculture labor OcAg	●
Vegetation cover NDVI	●	Farmer income InCo	●
Total crop area TCr	●	Storage facility Stor	●
Cash crop /cultivated CaCr	●	Medical facility MF	●
		Transportation network TrN	●

Advisory ●	Watch ●	Warning ●
Emergency ●	Disaster ●	

(anticipated drought situation, ref. table R.Nagarajan/IIT Bombay 2006)

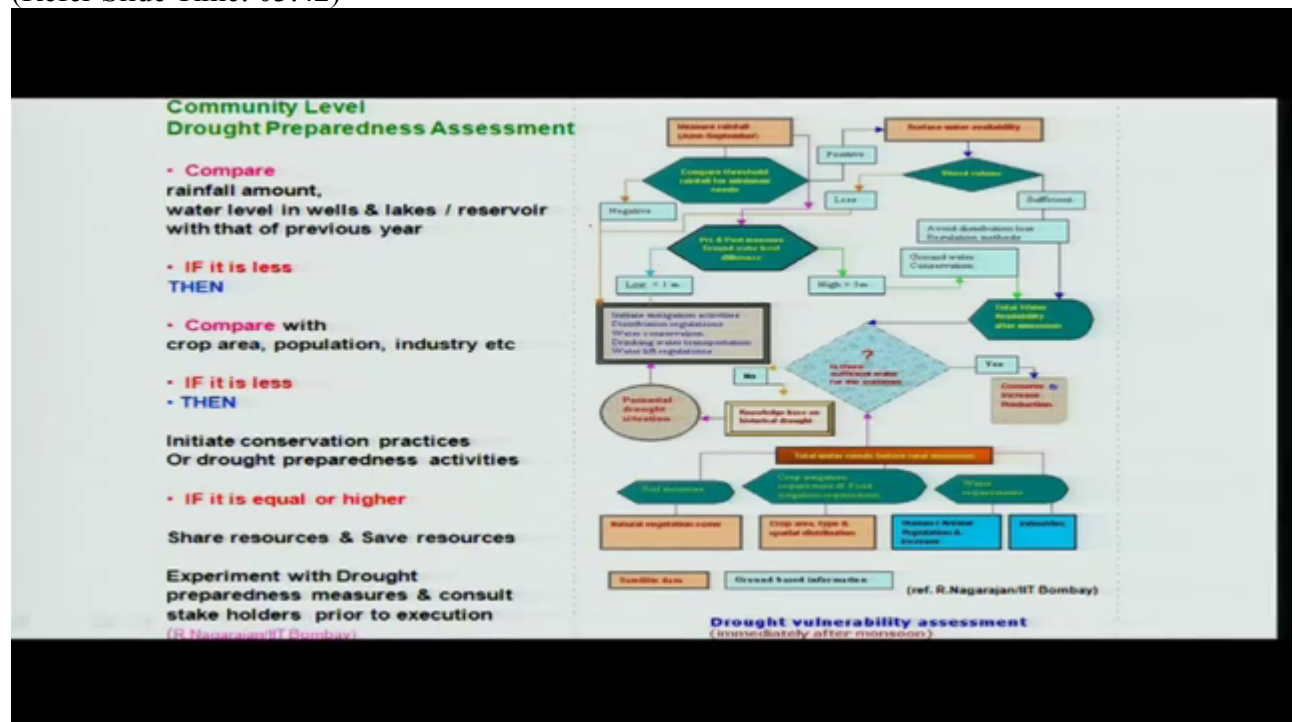
So, warning procedures normally you identify a threshold and if the measurements if it exceeds by big marginally or ten percentage, twenty percentage, 50 percentage then there is a classification. That classification is turned out to their warning level. So that is what we are trying to do is about the advisory that means there is a growing tendency of the less rainfall then in that case then you may have to watch the rainfall, how much it goes. If it goes beyond certain limits like assuming under the category that is a hundred millimetres is there is a 10 meters variation then we give advisory that there is a decreasing 10.

Whereas when it goes to nearly 30 to 40 percentage that we'll say that watch the rainfall and watch your storages and be prepared for that. Whereas when a warning is if it exceeds say more than 60 or 70 percentage then means then there is a warning is given, there is likely to be a shortage of rainfall of this nature in this over the next few days or few hours, few weeks, so be you are warned about water shortage or the that is likely to be onset of drought in this region. Then the emergency cases -- in the emergency cases already it has happened, so we have to do some crisis management to save ourselves or when it is after happening then we say that the disaster, it is happening, it is a continuous started, it will prolong till it gets a better thing.

So this is how you will be able to give a warning based on the measured or measured parameters from your side. So when you want to say what all the parameters which you want to do it is considering the area is the period then frequency which has been reported earlier then this is about the what is the meteorological information and if the -- then this is about the vegetation index, then this is about the water level, this is the ground water level, this is the population which are involved in that, then the facilities and medical facilities which are related and used in the mitigation aspect.

So this is one way of local level monitoring their own parameters of importance as well as taking their own preparedness, preparedness in the sense either it could be in executing certain storage capability facilities or preparing themselves for a different for the forthcoming events. So it can be how we can do it up and this same advisory, watch and emergency thing it can be a color coding, it can be given by the panchayat or local body and so that people will be able to do their own bit of preparedness in the thing.

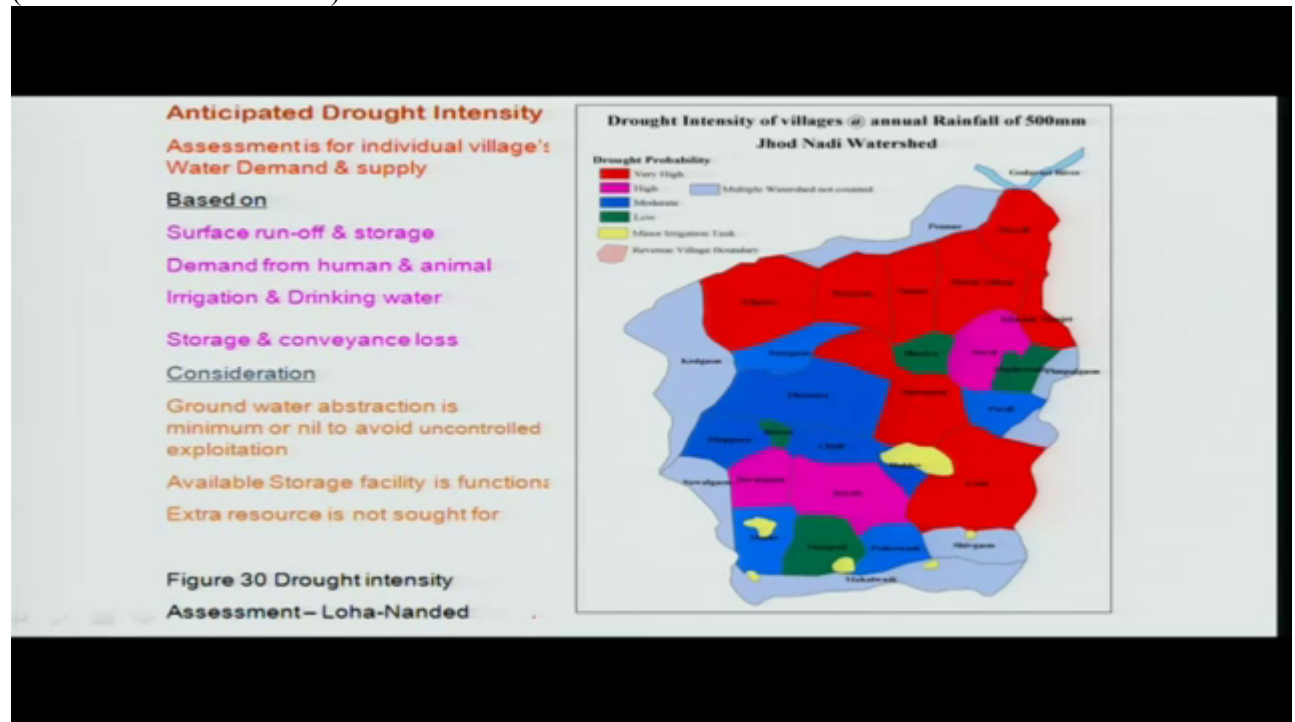
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Other way is community level participation is drought preparedness is also possible. So what is needed here is compare your rainfall as you are able to see that either it is quantitative manner or it is whatever the traditional knowledge which they have got. One thing is rainfall amount and another thing is water level amount. Compare it with the previous years, good years or bad years. If it is less then compare it with the crop and other areas. If it is less then initiate conservation practices of activities more. So this is nothing but in this area what is happening is rainfall compare it with the rest of the areas. If it is negative then you start your own activities. If the rainfall is okay, if the water levels are different then the storage level of different then different this is the supply side. The demands are going to be almost same every year our little bit more then compare whether this were previous year with this rainfall I am able to get away with the drought situation. Yes. Then that okay. And even otherwise you

start your own tightening of your belt by saying that drought is supposed to come and I am like I am expecting some 20 percentage of shortage of water or of that kind of category.

So this is how it is done. If it is equal or higher share resources and save sources. So this is one of the way where the entire stockholders can act together on a village level or a community level basis they will be able to do it themselves rather than with the external help or external advisories which they expect from. This is second method of doing it. (Refer Slide Time: 05:43)



Third method of doing is, it is like you have the villages what it is based on the water demand, water supply activity, the conveyance losses that. So this will tell you about under this particular rainfall amount and if it falls here in this area then this is the type of deficiencies which you are able to take it this deficiency may be two 50 percentage, 60 percentage of that category. And if the rainfall increases then the deficiency comes down. If the day rainfall is lesser than 500 then the vulnerability is or the drought intensity, anticipate drought intensity would be more. This is another way of doing things whichever way it is, this is similar to that. And if you have a storage system then you try to restrict how much I can store even during the hardship time.

So these are all different ways of monitoring the drought inducing parameters and then assessing or monitoring it as and when it progress, anticipating the drought event and start conserving water called preparedness for the drought events could be made on the ground level and so that the intensity of grief or intensity of losses could be minimized by this preparedness, drought vulnerability, drought preparedness could be made. Thank you.