agMOOCs
Climate Change and Drought_a global perspective
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Welcome to this talk on climate change and drought in a global perspective. This talk is part of the GIS course on agMOOCs. My name is Balaji. I work for the Commonwealth of Learning based in Vancouver in Canada.

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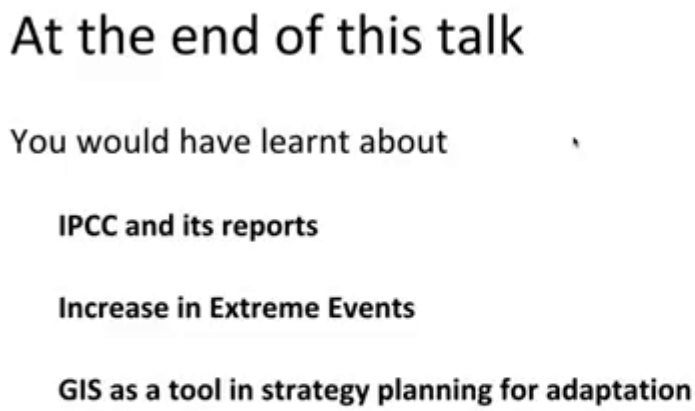

At the end of this talk you'd have learned about the Intergovernmental Panel on Climate Change and its reports. You would have learnt what the IPCC forecast about extreme events in particular about drought. You would also have learned that GIS can be an important tool in strategy planning and adaptation in relation to extreme events.

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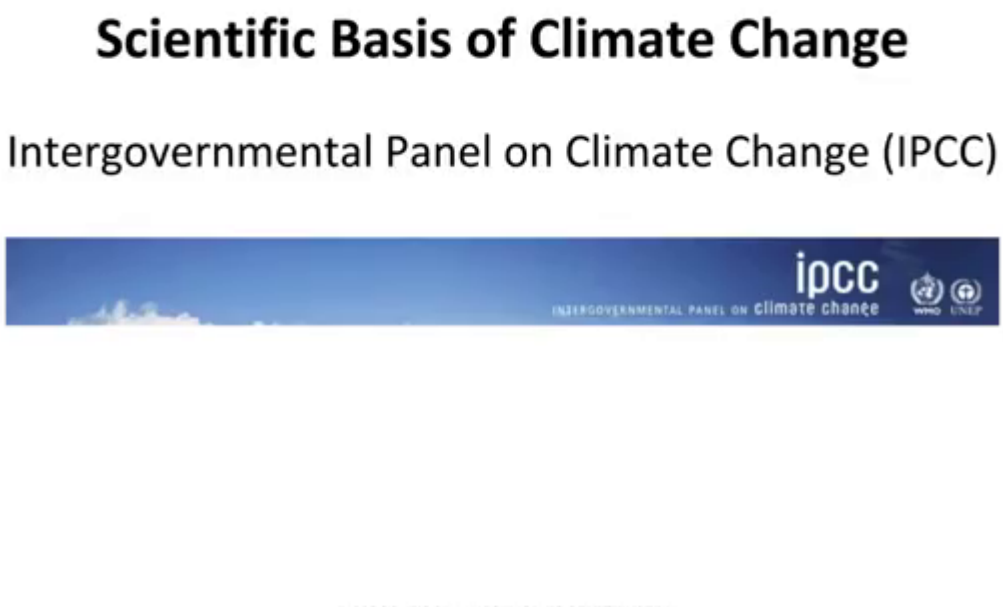

The Intergovernmental Panel on Climate Change by its very name, it's an association of governments which is hosted by the United Nations agencies. The IPCC provides the scientific basis for all statements about the impacts of climate change and their extent. IPCC also provides information on potential strategies, especially strategies for adaptation.

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IPCC's work is known to the world through its assessment reports which had published periodically. The last report appeared in 2014 it's called the Fifth Assessment Report. Now the report is actually a collection of many, many, many volumes. They all arise from the efforts of three working groups each of which will have hundreds of top level experts from all over the world.

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The working group too is important in our perspective. This group deals with impacts, adaptation and vulnerability. They report which is part of the bigger report of 2014 has a summary for policymakers which I would request all of you to read, study very closely. We are able to take home some very important statements from this particular report.
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Extreme Events Due to Climate Change

will have greater impacts on sectors with closer links to climate:

water

agriculture and food security, forestry,

health, and tourism

One is that extreme events due to climate change will have great impact on sectors that are linked to climate but are also very important to the survival of human's beings. One is water, the other is agriculture and food security, forestry which is also linked to agriculture and food security, health and tourism. In other words extreme events can directly impact human life.

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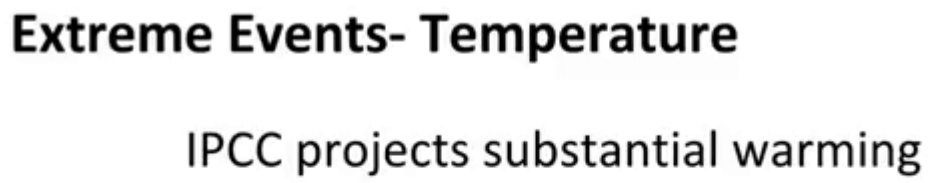

One extreme event is that temperature increases substantial warming will occur throughout he 21st Century. This is one area where IPCC experts have very high confidence in their forecasts.
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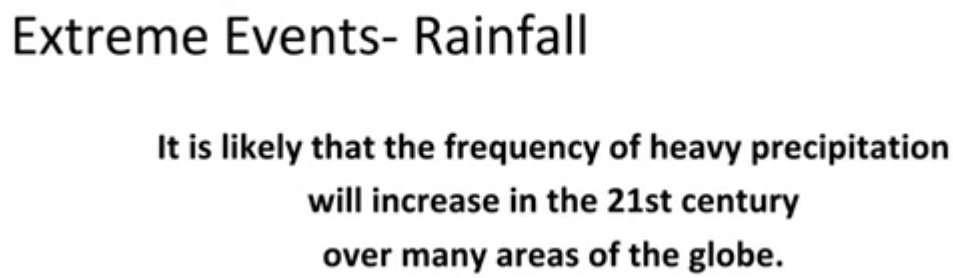

The other extreme event relates to rainfall. The IPCC forecast that frequency of heavy precipitation will increase in the 21st Century over many areas of the globe, although it is not scientifically established. We are able to see this pattern in many countries including India where back in September or December 2015 the certain city of Chennai experienced very

heavy rainfall something like 440 millimetres in a span of 24 hours leading to huge floods. That's about rainfall.
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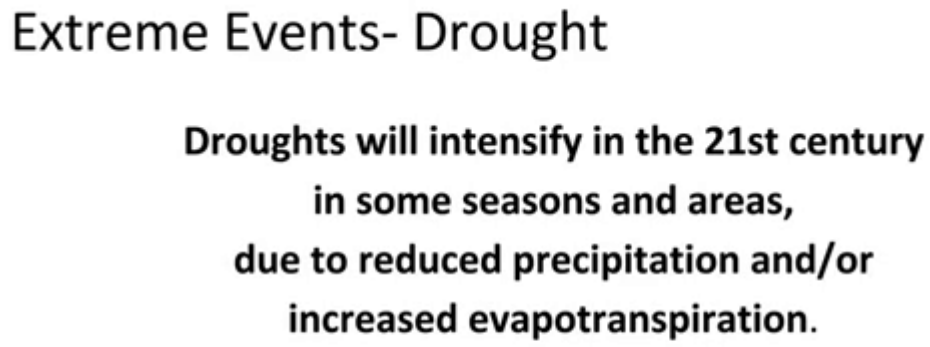

Extreme events now include drought and droughts will intensify in the 21st Century in some seasons and areas. This is of course due to reduced precipitation. We spoke about heavy rainfall but reduced precipitation is also going to occur. In other words we will have reduce precipitation as well as heavy rainfall quite possibly occurring in the same place if not at the same season.
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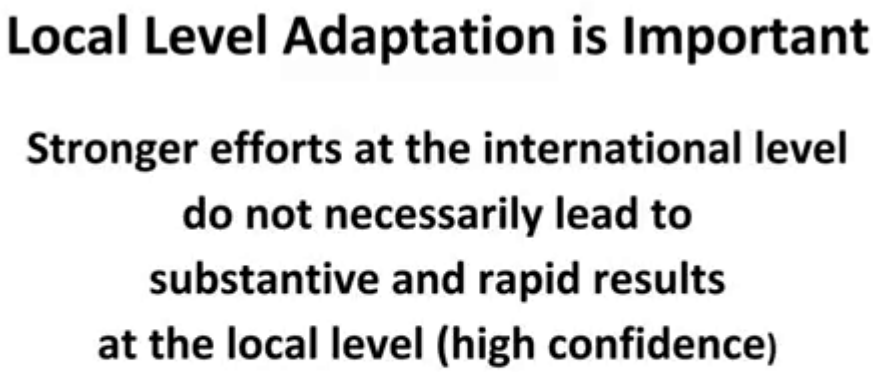

Now drought is important to us and we have been studying that in over several talks in this particular course, what the IPCC experts say is that local level adaptation is important. They point out that strong efforts at the international levels do not necessarily lead to substantive and effective results at the local level and they are very highly confident that international efforts alone will not translate into important local results.
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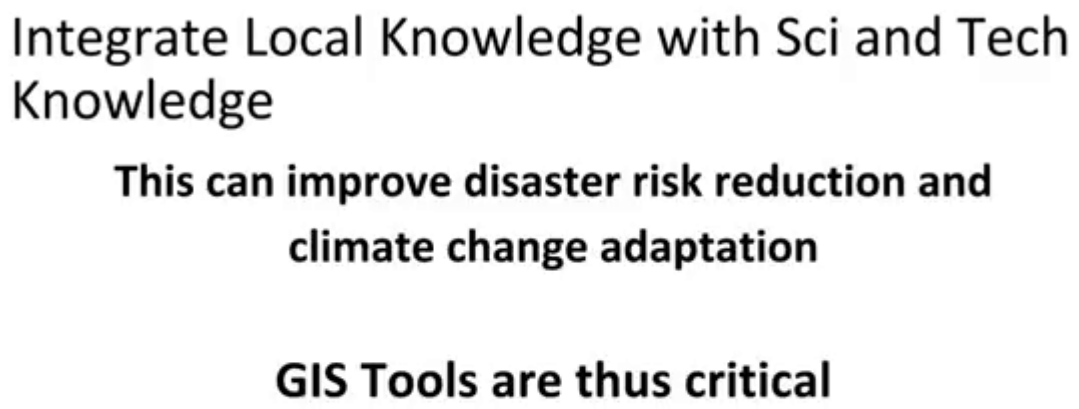

The IPCC experts also recommend that local knowledge should be integrated with scientific and technological knowledge to improve opportunities for reducing disaster risks and to speed up climate change adaptation.
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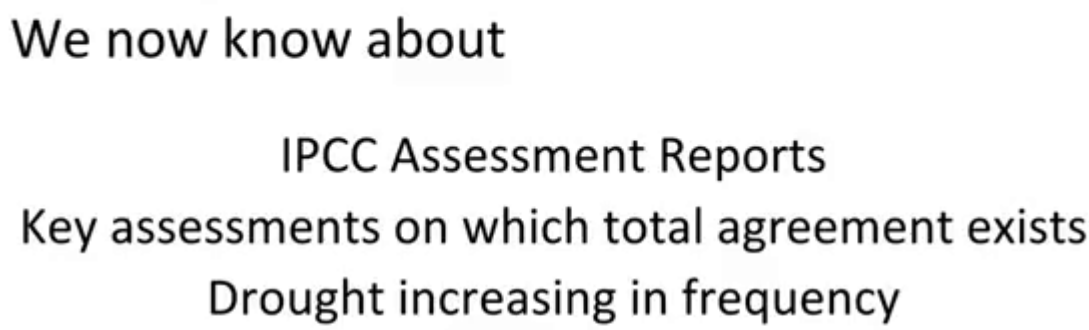

Now we are reaching the end of this talk. What do we know so far that there are IPCC assessment reports that provide the scientific basis for climate change and there are key assessments on which total agreement exists. Drought will increase in frequency and that local adaptation requires, integration of local information with scientific and technological information, that international efforts are not adequate to guarantee local adaptation. So local information is important, local adaptation is important. And this is the conclusion of IPCC experts who have been drawn from all over the world. Drought is at the center of our attention. Drought will increase in frequency. Drought mitigation, adaptation requires a number of local strategies and integration of local information, its scientific and technological information. Thank you.