

**Water Economics and Governance**  
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**Lecture – 12**  
**The Dublin Statement on Water Sustainability**

Hello everyone. So, in the previous lecture we started our discussion on to the water sustainability, we did talk about what sustainability is? And what essentially means as simple as ensuring the future needs. So, ensuring the ensuring that resources are available for future needs as well, so that is the basic underlying principle of sustainability we did talk about this, there are various viewpoints for sustainability involving or technological viewpoint, social viewpoint, ecological viewpoint, engineering viewpoint, financial viewpoint, so we will discuss this eventually.

But in today's class or this particular lecture what we are going to talk about is a Dublin statement on water sustainability, now this is internationally recognized in statement.

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**The Dublin Statement on Water Sustainability**

✓ **Background:**

- Scarcity and misuse of fresh water pose a serious and growing threat to sustainable development and protection of the environment.
- Human health and welfare, food security, industrial development and the ecosystems on which they depend, are all at risk, unless water and land resources are managed more effectively in the present decade.

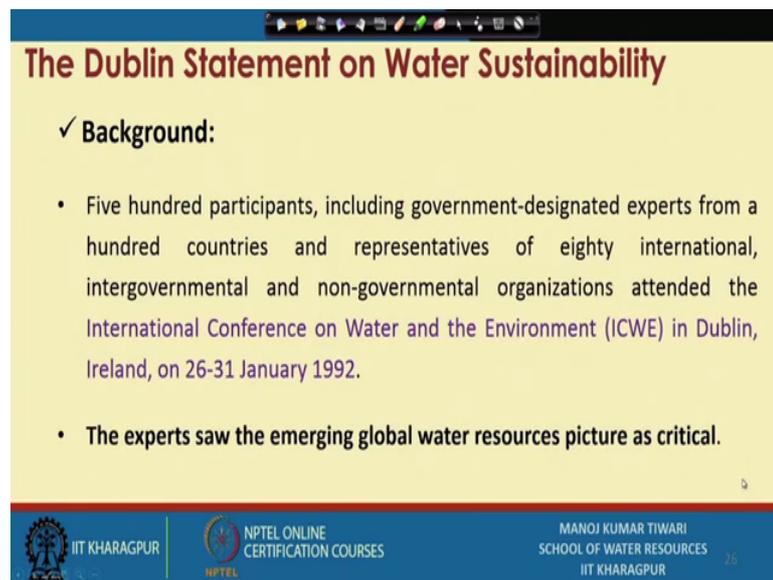
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So, to start with actually there was like there was various issues related to this scarcity and misuse of fresh water which poses a serious and growing threat on to the sustainable development and protection of the environment which is very common and realized with by everyone and our human health, welfare, food, security, industrial development and then ecosystem all depends on water and because of this unsustainable practices of water

uses or the unsustainable development practice, unsustainable practices for overall development of nation or country or cities all this aspect including; human health, food, security, industrial growth, ecological systems are all actually at risk.

So, this cannot be this cannot be mitigated until unless we have a sound system insuring towards the sustainable development. So, for that we need to manage our water and land resources in a more effective manner.

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**The Dublin Statement on Water Sustainability**

✓ **Background:**

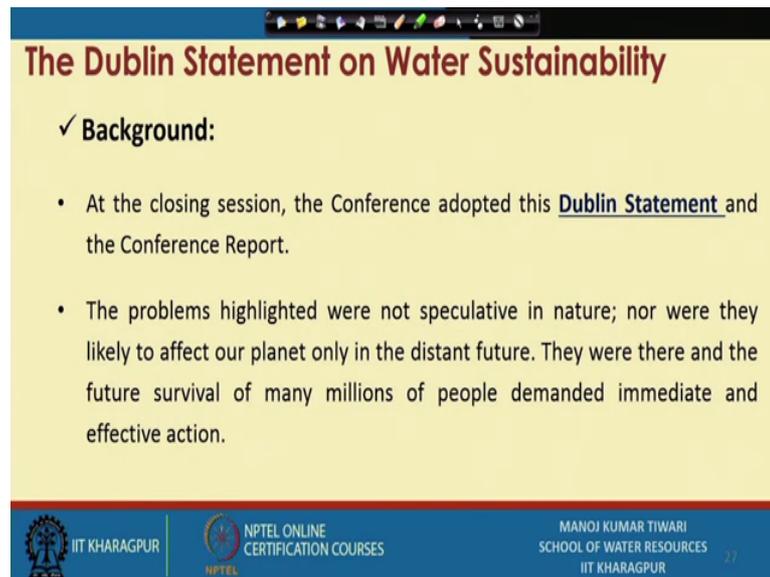
- Five hundred participants, including government-designated experts from a hundred countries and representatives of eighty international, intergovernmental and non-governmental organizations attended the International Conference on Water and the Environment (ICWE) in Dublin, Ireland, on 26-31 January 1992.
- The experts saw the emerging global water resources picture as critical.

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So, that is well understood by everybody almost. So, in actually a international conference on water and environment which is which was held in Dublin Ireland on 26 to 31st January in back in 1992, there were close to 500 participants involving government designated experts from a 100 countries various representatives from the international and inter governmental and nongovernmental organizations. So, all these people attended this conference which was actually onto the water and environment and the due focus was basically on to these sustainable development practices.

So, the experts there saw that emerging global water resources picture is very critical. So, that is what was realized in that meeting.

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## The Dublin Statement on Water Sustainability

✓ **Background:**

- At the closing session, the Conference adopted this Dublin Statement and the Conference Report.
- The problems highlighted were not speculative in nature; nor were they likely to affect our planet only in the distant future. They were there and the future survival of many millions of people demanded immediate and effective action.

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Then at the closing session the conference adopted this Dublin statement which is nowadays known as the Dublin statement actually what exactly is that Dublin statement we will talk about that? So, they adopted Dublin statement in the conference report, the problems highlighted were not speculative in nature the document they put through, so it was not just a speculative problem that this will happen that and that could happen all those kind of a speculations it was not just mere speculations nor basically they were likely to affect our planet only in the distant future.

Because if we take and come up with some policy and plan which is going to end so a result down the line 20 years after 20 years later it may not actually be serving the purpose serving the exact purpose. So, problems were there and it was the question of future survival for the basic human being as well as our ecological systems. So, the in conference outcome the people or attendees actually thought of that there is a need of immediate and effective action, so that is what was kind of felt that there is immediate and effective action needed.

Now, what this immediate and effective action could be in the form of? So, the conference participants basically called for fundamental new approaches to the assessment, so that we can actually assess the status, the problem or the if we are going to put some implementation measure some improvement measures that also need to be

assessed that how effective it is in sort of remediating the situation or bettering the conditions.

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**The Dublin Statement on Water Sustainability**

✓ **Background:**

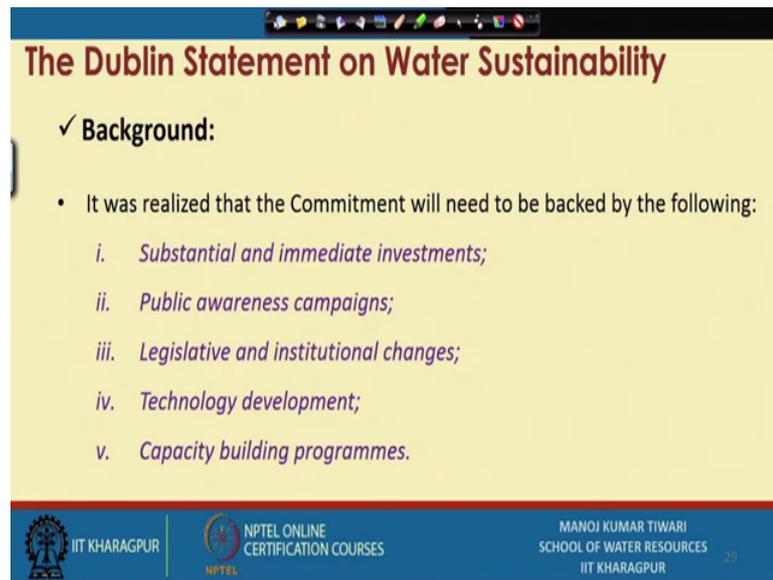
- The conference participants called for:
  - Fundamental new approaches to the assessment*
  - Development and management of freshwater resources*
- This could only be brought about through political commitment and involvement from the highest levels of government to the smallest communities.

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So, that kind of assessment is very fundamental for implementation of anything and that basically was what was things and then development and management of freshwater resources was felt essential. The participants also thought that this could only be basically bought through political commitment and involvement from the highest level of government to the smallest community, so all level of involvement was felt essential and sort of political commitment because that is one of the major issues in managing these resources, some particular political party has an agenda and they act based on that some parties will come they will basically increase the water tariff, some will come make the water free.

So, those sorts of political motifs should not be there should proper commitment to towards the development and management practices of freshwater resources in a sustainable way. So, it was realized that the commitment will be need did they'd to be backed by the following aspects. So, what was that? There is basically a substantial and immediate investment is needed, that was one of the points which were sort of pointed out.

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The Dublin Statement on Water Sustainability

✓ **Background:**

- It was realized that the Commitment will need to be backed by the following:
  - Substantial and immediate investments;*
  - Public awareness campaigns;*
  - Legislative and institutional changes;*
  - Technology development;*
  - Capacity building programmes.*

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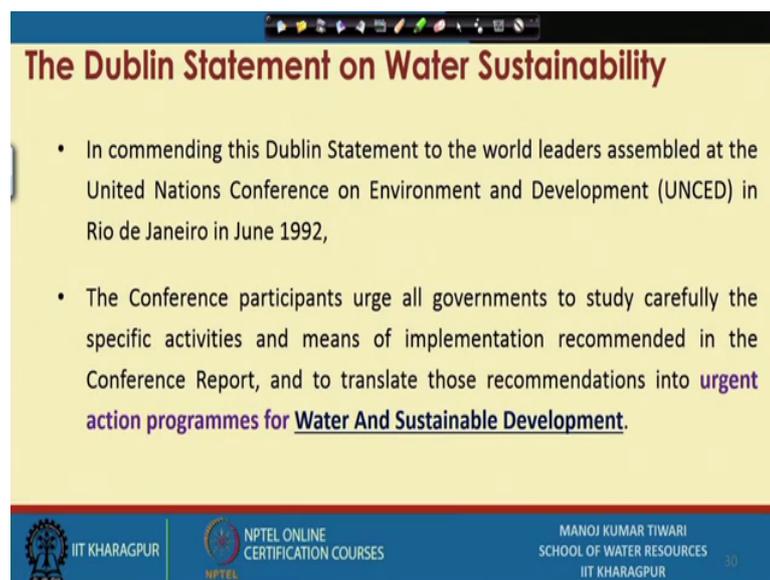
Then there needs to be public awareness campaigns, public must be aware with whatever is happening what is the situation of water? Because eventually the issues are related to the misuse of water as well from the public front or not giving due value or due importance to the water as we have been basically talking in our earlier lecture, then there is a legislative and institutional changes needed, because without proper legislative and institutes institutional changes it becomes not it will become impossible to force the people at times to adopt certain measures and certain this thing.

Of course there is a huge scope and huge demand for technology development, how we can put through the better systems? Or technologically improved system like for example; for the crop production, now if one particular type of crop is needing let us say huge amount of like for paddy the there is a huge requirement of water, if you can come up with a technology in terms of let us say new breed or in terms of new irrigation system or in terms of new cultivation techniques, which sort of cuts down the requirement of water that will be huge saving of water.

So those sort of this thing was or let us say our you our utility some of the utilities or some of the equipment's water intensive equipments like; we have washing machines, we have refrigerators, we have dish washers, so if we can get dishwasher or washing machine which can provide the effective cleaning in lesser quantity of water those sort of things can be developed by improving or improvising the technologies.

So, that there was a huge demand of technology development in the sector and there is a capacity building program means the; trained manpower, trained officials, trained managers needs to be sort of the capacity building program should be basically organized in order to in order to release these trained people trained manpower, so that it can actually be effectively managed. So, that was one of the aspects which is felt by the attendees that this is needed.

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The Dublin Statement on Water Sustainability

- In commending this Dublin Statement to the world leaders assembled at the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in June 1992,
- The Conference participants urge all governments to study carefully the specific activities and means of implementation recommended in the Conference Report, and to translate those recommendations into **urgent action programmes for Water And Sustainable Development.**

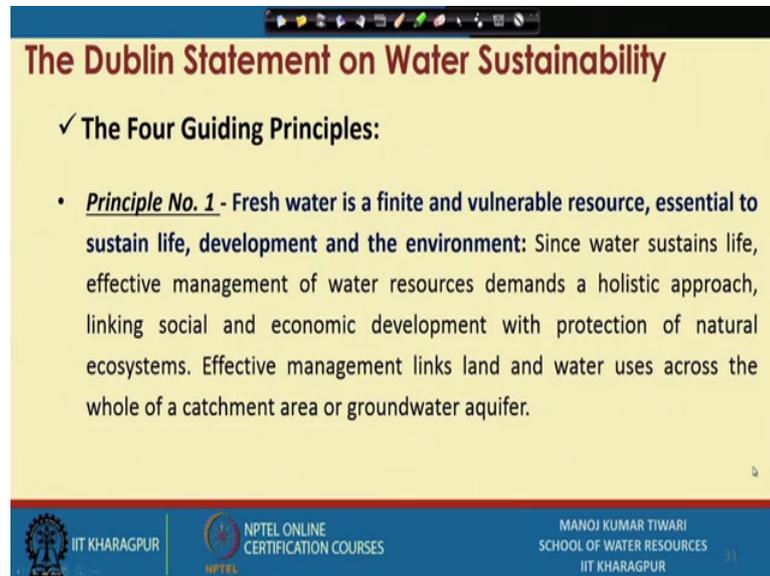
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So, in commending this Dublin statement to the world leaders, again there is assembly took place in the United Nations conference on environment and development in Rio de Janerio in 1992. The conference participants urged all governments to study carefully the specific activities and means of implementing recommended implementing sort of implementation of recommendations in the conference report and to translate those recommendation into urgent action program for water and sustainable development. This was basically done at a united nation level, so all the countries were asked to the most important point is that all the countries were asked to develop the urgent action programs.

So, there has been so much of talks like; this should be done, that should be done, but that was not happening. So, there it was sort of pressurized that you develop urgent action program that ensures water uses in a sustainable fashion.

So, the program onto the water and sustainable development linkages needs to be developed, that is what was sort of felt.

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**The Dublin Statement on Water Sustainability**

✓ **The Four Guiding Principles:**

- **Principle No. 1** - Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment: Since water sustains life, effective management of water resources demands a holistic approach, linking social and economic development with protection of natural ecosystems. Effective management links land and water uses across the whole of a catchment area or groundwater aquifer.

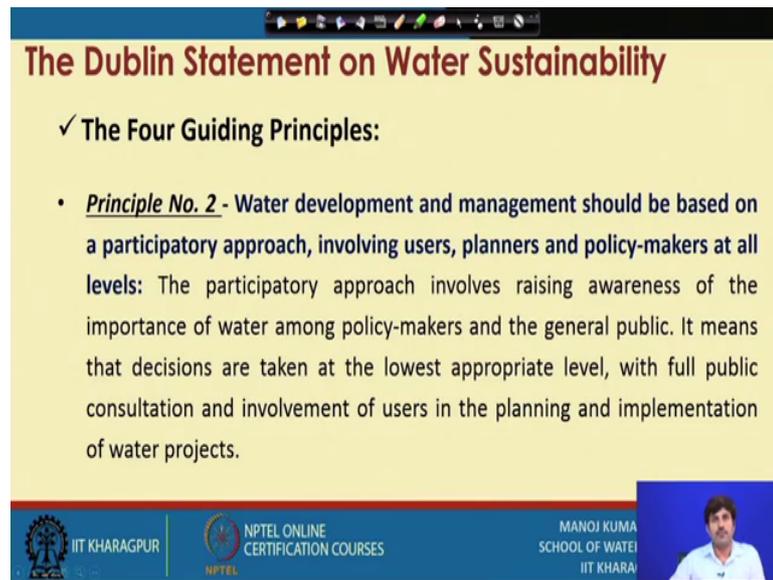
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Coming on to the particular Dublin statement, there are four guiding principle of that statement, so the statement that was released had four guiding principle for development of like programs onto water and sustainable development.

Now, these four guiding principle covers four different aspects. So, the principle number one: says that fresh water is a finite and vulnerable resource which is essential to sustain life development and the environment now this is nothing new, it is not that if you see we have been basically talking about this since the start of this course.

So there is no new as such things, but it was highlighted and recognized onto an international platform with over 100 government representatives from different 100 different governments was and that to back in those days. So, it was important from that perspective and since water sustains life effective management of water resources is needed in a holistic approach. So, linking of social and economic development with protection of naturally ecosystem, effective management linked land and water uses across the whole of the catchment area or groundwater aquifer is needed so; that means, management should be basically on a holistic approach that is what was pointed out.

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The Dublin Statement on Water Sustainability

✓ The Four Guiding Principles:

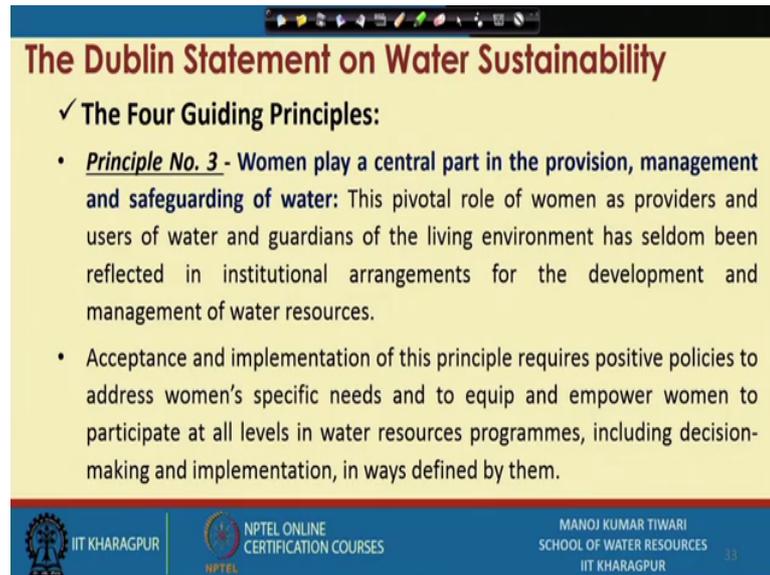
- **Principle No. 2** - Water development and management should be based on a participatory approach, involving users, planners and policy-makers at all levels: The participatory approach involves raising awareness of the importance of water among policy-makers and the general public. It means that decisions are taken at the lowest appropriate level, with full public consultation and involvement of users in the planning and implementation of water projects.

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The second principle: Was actually on to that says that water development and management should be based on a participatory approach involving; user's, planner, policymaker at all levels. So, that is again sort of we have already emphasized or highlighted that why this is important? Why the participatory approach involved like involving all these stakeholders is important? Because that will put forward the different the sort of need, requirement, funds, availability, technologies available.

So all these things will be put in into the single platform for; developing a policy, developing a implementation program, developing a implementation system for the ultimate benefit of the users. So, that basically the decisions are to be taken at the lowest appropriate level with public consultation involvement of the users in the planning and implementation of water project was felt essential.

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**The Dublin Statement on Water Sustainability**

✓ **The Four Guiding Principles:**

- **Principle No. 3 - Women play a central part in the provision, management and safeguarding of water:** This pivotal role of women as providers and users of water and guardians of the living environment has seldom been reflected in institutional arrangements for the development and management of water resources.
- Acceptance and implementation of this principle requires positive policies to address women's specific needs and to equip and empower women to participate at all levels in water resources programmes, including decision-making and implementation, in ways defined by them.

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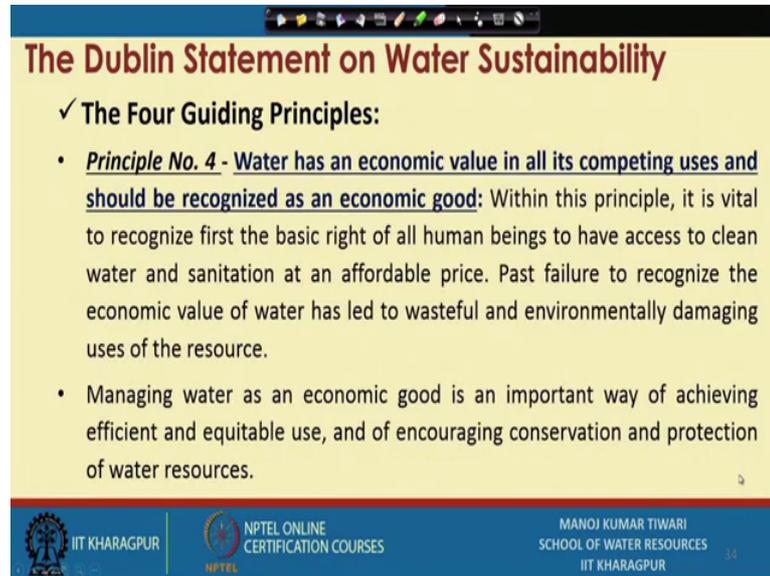
The third guiding principle or the principle number 3: Suggested that women play a central part in the provision management and safeguarding of the water. Now, this is again this is sort of a little different in a sense, that highlighting gender specific role into the management of water resources was sort of considered important in that statement. So, the pivotal role that women play as provider and users of water and guardians of the living environment has sort of seldom been reflected in the institutional agreements or arrangements for the development and management of water resources.

So, women who are the basic user of at least municipal water supply systems, because they are typically in developing countries as the practices the community is more involved in cooking the food in cleaning activities in various other water related stuff, so washing clothes, utensils, household cleaning then all these things, so they are the one particularly at household level who basically deals with water at larger part of the time as compared to the men.

So, they play a very central role they play a very central part in this aspect and it is said that they are basically acceptance and implementation of this particular principle involving like; involving women as a central part into the provision and management aspect would require positive policies to address women's specific need and to equip and empower women to participate in various level in water resources management programs.

So, they must be involved in the decision making, in the implementation, in all these aspects and they should basically be listened and given due attention in the policy making. So, that was the principle number 3.

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**The Dublin Statement on Water Sustainability**

✓ **The Four Guiding Principles:**

- **Principle No. 4 - Water has an economic value in all its competing uses and should be recognized as an economic good:** Within this principle, it is vital to recognize first the basic right of all human beings to have access to clean water and sanitation at an affordable price. Past failure to recognize the economic value of water has led to wasteful and environmentally damaging uses of the resource.
- Managing water as an economic good is an important way of achieving efficient and equitable use, and of encouraging conservation and protection of water resources.

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And the most talked about principle of the Dublin statement and the most vital principle one can say; is, that this probably the very early stage when water was considered as a economic good. So, that the under the principle number 4 in the Dublin statement; it said that water has an economic value in all it is competing uses and should be recognized as an economic good. So, what considering water as a economic good, which holds economic value was sort of not very frequent back then till like early till late 80's that way.

So, this was very important and within this principle it was recognized that the basic right of all human being to have access to clean water and sanitation at affordable price is there; however, means that time if you if you see that this Dublin meeting was held back in 90's early 90's and your this right to water and sanitation was accepted in the un general meeting in 2010, so before that they basically said that this you basic human right should be this water and sanitation services should be recognized as basic human right and it should be done on an affordable price, although it is not for free.

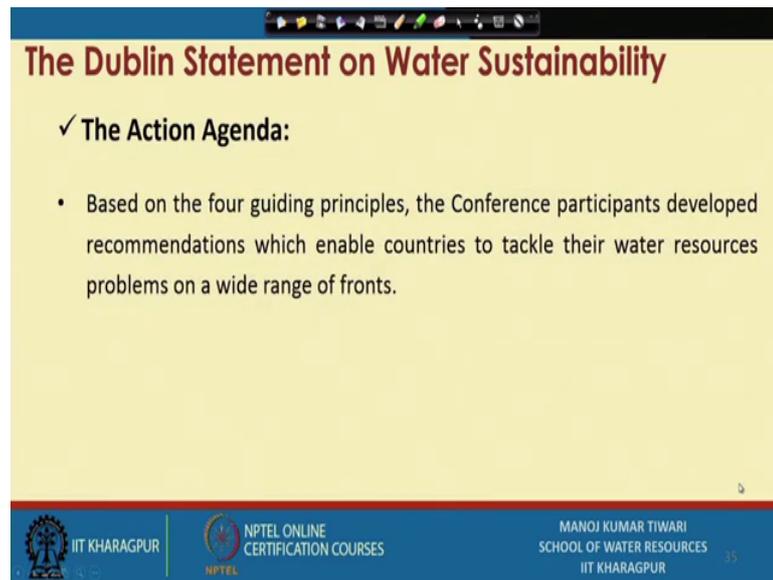
Because the earlier systems did not recognize the economic value of the water and that has led to the wasteful and environmentally damaging uses of the resources, because if you are not putting value to certain things people getting it for free will not value it. So, water can be valued only when people pay something for this and that was one of the very like path breaking concept was provided there and that way the managing water as an economic good figuring out this as an important way in achieving efficient and equitable use or towards the like better sustainable management was thought of and it was sort of encouraging concern it will encourage conservation and protection of water resources.

So, if let us say if you pay water like for example; we buy water, we buy bottled water at like in the railways stations, trains, markets and various places we do not throw that water we buy so because we are paying some 15 or 20 rupees for one liter of bottle we make sure that you will not even like to wash hand with that water because you have paid that high price, for washing hand.

If you are travelling in a train for drinking purpose you may buy a bottle of water because you know you do not trust the water which is being supplied in the train or which is being fed into the tap into the sink of the train, but for washing hands and all that you will go there you will not use your procured water for a cost of some let's say 20 rupees per liter for washing hands because that time you value that water, but the same value even if even if basically involves significant amount of penances at beforehand the same value is not given to the water which is basically supplied in our houses.

So, realizing water as an economic good was a very important aspect which was highlighted in this principle number 4 under Dublin statement and considering water as an economic good was suggested as one of the major approaches major ways for managing water in a sustainable fashion. So, or in a more sustainable way rather or making people realize that yes water has it is own value and we should not use it, we should not waste it as simple as that.

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The Dublin Statement on Water Sustainability

✓ The Action Agenda:

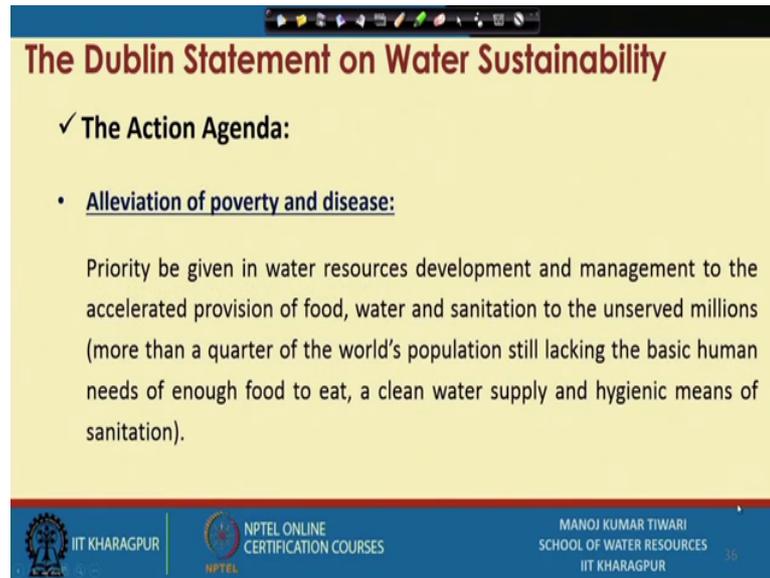
- Based on the four guiding principles, the Conference participants developed recommendations which enable countries to tackle their water resources problems on a wide range of fronts.

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So, these four was the basic guiding principle of the Dublin statement, but this the good thing about the Dublin statement was; that it did not end with just some guiding principle or some suggestive opinions, it proposed an action agenda as well. Because based on all these four guiding principle the conference participants developed recommendations which enable the countries to tackle their water resources problem on a wide range of fronts.

So they basically sort of developed certain recommendation which was called as the action agenda, so they develop action agenda or they developed recommendation that while for the sustainable development or sustainable management of water how these particular various aspect of sustainability and various aspect of water uses judicial water uses should be incorporated. So, that was put forward put forth into the action agenda of the Dublin statement.

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**The Dublin Statement on Water Sustainability**

✓ **The Action Agenda:**

- Alleviation of poverty and disease:

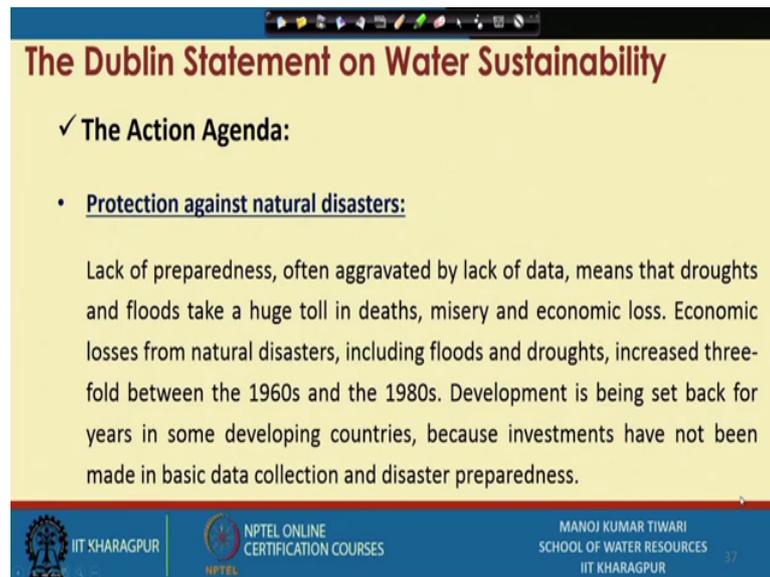
Priority be given in water resources development and management to the accelerated provision of food, water and sanitation to the unserved millions (more than a quarter of the world's population still lacking the basic human needs of enough food to eat, a clean water supply and hygienic means of sanitation).

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So, action and agenda is basically on to the various aspects. So, if like the there were on to the several accounts the recommendations were made which was termed as an action agenda and the first of them was on to the elevation of the poverty and disease, now one would think what is this need to do with the water? We are talking about water where does poverty and disease come; but it was thought, that priority to be given in water resources development and management to the accelerated provision of food water and sanitation to un served millions. So, those basically more than a quarter of world population if you see was found to be lacking in basic human needs of enough food to eat a clean water supply hygienic means of sanitation.

So, they said that the basic or the first attention should be given to them and with the adequate amount of like with the sustainable development reaching their, reaching the most needy section will sort of sort out or serve the purpose of not only serve the purpose of providing them the clean water, but would work towards the elevation of their poverty and to some extent disease because most of the waterborne disease and all that happens in these areas the deprived people because they lack with the proper health facilities or proper management practices.

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**The Dublin Statement on Water Sustainability**

✓ **The Action Agenda:**

- **Protection against natural disasters:**

Lack of preparedness, often aggravated by lack of data, means that droughts and floods take a huge toll in deaths, misery and economic loss. Economic losses from natural disasters, including floods and droughts, increased three-fold between the 1960s and the 1980s. Development is being set back for years in some developing countries, because investments have not been made in basic data collection and disaster preparedness.

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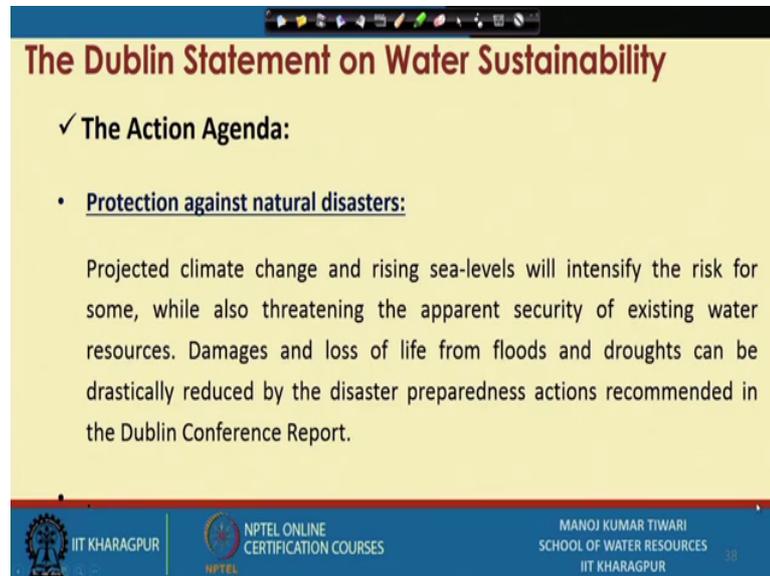
Then there was basically a point put forward onto the protection against natural disasters. So, they said that lack of preparedness often due to the aggravate often aggravates or often aggravated because of the lack of the data, means that draught and floods whenever it arises it takes a huge toll in number of deaths. So, the people are not prepared they do not have a set mechanism to deal with these situations ok, now for putting forward a mechanism to deal with these situation one needs the data.

So, when there is a lack of data you cannot be sort of design a good mechanism for dealing with these situation in advance. So, once you like that is one of the issues related to the not having a good mechanism and that leads to the basically lack of preparedness and when you are not prepared to deal with natural disasters like; flood and draught and these kind of things, so that results in huge toll in death misery and various economic losses.

So, economic losses from natural disasters including flood and draught increased threefold between 1960's and 1980's that is; because of the population increase, because of the development, because of the more investments. So development is being set back for years in some developing countries, because investment have not been made in the basic data collection and disaster preparedness, so you can prepare a let us say nice water management or water supply system, but if it is not having the provisions adequate

provisions to deal with the extremities the system might fail, so that is one of the points which was sort of considered.

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The Dublin Statement on Water Sustainability

✓ The Action Agenda:

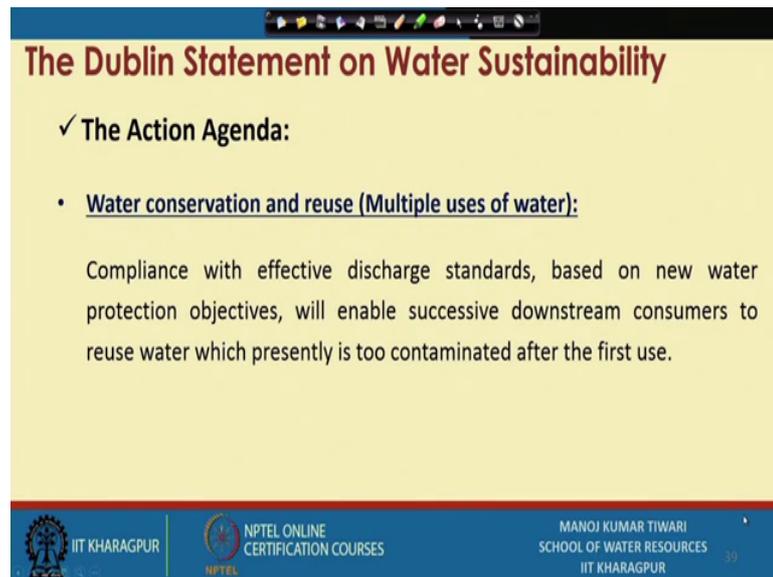
- Protection against natural disasters:

Projected climate change and rising sea-levels will intensify the risk for some, while also threatening the apparent security of existing water resources. Damages and loss of life from floods and droughts can be drastically reduced by the disaster preparedness actions recommended in the Dublin Conference Report.

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The projected climate change and rising sea level will sort of further intensify the risk for some and while also threatening the apparent security of existing water resources. So, the damage of loss of life from flood and draught can be drastically reduced by the disaster preparedness action recommended in the Dublin conference report. So, they sort of; in that conference, they put through some set of some set of recommendations which should enable the various countries or various states in order to be more prepared towards dealing with the disaster managements and climatic changes climatic actions.

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The Dublin Statement on Water Sustainability

✓ The Action Agenda:

- Water conservation and reuse (Multiple uses of water):

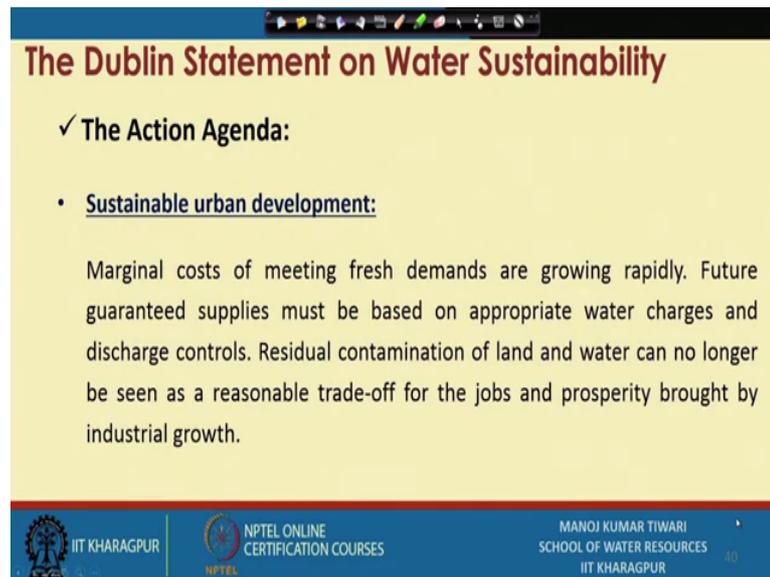
Compliance with effective discharge standards, based on new water protection objectives, will enable successive downstream consumers to reuse water which presently is too contaminated after the first use.

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Then there was water conservation and reuse which is on to the multiple use of water that was another point. So, compliance with effective discharge standards based on new water protection objectives it was felt that that sort of successive downstream customers should reuse water with presently is too contaminated after the first use. So, with adequate treatment or this thing is to be provided and water should be under multiple use, so that way like the waste water or used water should also will also be converted to a form of resource, now this will provide twofold benefits; one is, that you are getting an alternative resource which eventually is leading less stress onto the water resources.

So, if you are let us say able to meet half hour of your demand by the recycled water you will pump only 50 percent of the water usual water which otherwise you would have pump from natural resources. So, you are taking less water from the nature, so that is some sort of water conservation you are doing in terms of quantity whereas, if you are basically recycling your water not putting the used water or wastewater or on pure water into the natural resources we are protecting them in terms of the quality as well.

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**The Dublin Statement on Water Sustainability**

✓ **The Action Agenda:**

- **Sustainable urban development:**  
Marginal costs of meeting fresh demands are growing rapidly. Future guaranteed supplies must be based on appropriate water charges and discharge controls. Residual contamination of land and water can no longer be seen as a reasonable trade-off for the jobs and prosperity brought by industrial growth.

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So, there was quantitative as well as qualitative prospective. Then there was a point on to the sustainable urban development where marginal cost of meeting phrase demands are growing rapidly, future generation supplies must be appropriate must be based on appropriate water charges and discharge controls. So, that is like when you develop a policy for sustainable development, you because every stuff has some sort of water footprints. So, they there is a requirement of water there is a cost associated in forms of water charges or in forms of basically wastewater treatment that is being generated.

So, those cost should be incorporated and residual contamination of land and water can no longer be seen as a reasonable trade off for the jobs and prosperity bought by the industrial growth which has earlier used to be in practice, like our industries are sort of; saying that, although we are utilizing land resources we are disturbing natural ecology, we might be basically sort of putting some residual contamination also in the nature back into the soil or water, but in result we are bringing jobs and prosperity in the reason by the industrial growth.

So, the Dublin accent agenda suggested that this is not a reasonable tradeoff, one industry cannot say that because I am bringing the prosperity and jobs in the reason I have license to put through residual contamination into the nature. So, those sorts of things were pointed out and it was felt that the development should be in a more

sustainable way and the footprint water footprint particularly should be more judiciously estimated and incorporated into the cost marginal cost of various supplies.

There were quite a few more points on to this which we will discuss in our next lecture as we will be taking a break here today. So, in the next lecture we will continue discussing rest of the points related to the Dublin action agenda and various other aspects on to the sustainable water uses.

Thank you.