

Water Economics and Governance
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Lecture – 44
Elements, Dimensions and Principles of Water Governance

Hello, friends. We have started discussing Water Governance this week and in earlier session we talked about the basics of what is governance, what is water governance, why we need water governance. We will continue the discussions over the need of water governance and then what are the various elements, dimensions and principles of water governance.

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Need of Effective Water Governance

- ☛ Water Governance capacity is a nation's level of competence to implement effective water management through policies, laws, organizations, regulations and compliance mechanisms.
- ☛ *Without clear policy... difficult to establish coherent laws.*
- ☛ *Without clear laws... difficult for organizations to know how to operate.*
- ☛ *Without effective organizations... implementation and enforcement will be lax*

Sources: Tanik (2013), Searching Solution to Water Issues: Water Governance , Regional Workshop on "Water Resources Management: Needs & Prospects" APRIL 22, 2013, Amman, Jordan

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So, water governance capacity is basically a country's level of competence to implement effective water management through policies laws institutions organisations agencies and regulatory and compliance mechanism, but need to understand that without a clear policy it is very difficult to establish coherent laws. If we do not have a policy to follow one how we can make how we can basically convert or conference into a good laws, then without clear laws it is very difficult for organisations to know how to operate. If there are no set guiding laws or guiding principle for operation of agency or organization how they will make the decisions how they will take these steps so, it becomes very difficult until unless we have a set clear laws.

So, in the absence of laws we will not have effective organizations or effective agencies and when we do not have effective organizations it is very difficult to implement and enforce the reforms or the field level decisions that needs to be in put through in proper place if we let us take an example first. So for example, in Delhi the state of Delhi 20 kilo litres of water is being supplied for free.

Now, this has came through a clear policy clear governments policy, whether it is good policy or bad policy we are not debating on that, but there was a policy and that eventually was converted to a law. Without policy one cannot without having this thing in mind ok, we need to provide basic quantity or basic slab of water free to all consumers without this policy how one can make a law.

Now, if there are no laws made on to this if let us say somebody says we will give free, but there is nothing in return no law nothing such has been made. So, then the Delhi Jal Board or the municipal corporation of Delhi how they will operate because if there is no clear law how they will charge for the water whether to charge or not to charge if to be charged at what rate to be charged. So, all these things there has to be a clear law for organizations and agencies to operate. So, this clarity in law is needed then only the organizations will have a guiding principle on how to act under given set of circumstances.

And, if DJB or sort of municipal corporation of Delhi knows how to deal under such and such circumstances how to charge whom to charge whom not to charge what level of water is to be given free thereafter how to price water. So, if all these set guiding principles are there they can implement it into the field, but if it is not there if there is no written law, nothing, so, then the efficiency of the Jal board operators or efficiency of the municipal corporation personals will also be decreased, they will not have any accountability on themselves.

So, they like efficiency of the organization or agency as a whole goes down and if we do not have an effective organization how we are going to implement and in enforce the decision or the policies into the field it is going to be very relaxed, ok. So, that is why we need good governance practice on all stages.

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The slide is titled "Elements of Water Governance" and is presented in a yellow background with a blue header and footer. The main content is a table with two columns: "Formal elements" and "Informal elements". The "Formal elements" column lists: Legislation, Property and water use rights, Concessions, and Formalized agreements such as contracts. The "Informal elements" column lists: Nonformalized agreements, Customary law, and Tacit understandings. Below the table, there is a small text source: "Sources: Schneider and Homewood (2013), Exploring water governance arrangements in the Swiss Alps from the perspective of adaptive capacity, Mountain Research and Development, 33(3):225-233." The footer contains the logos of IIT KHARAGPUR and NPTEL ONLINE CERTIFICATION COURSES, along with the name "MANOJ KUMAR TIWARI" and "SCHOOL OF WATER RESOURCES IIT KHARAGPUR".

| Formal elements | Informal elements |
|---|--------------------------|
| Legislation | Nonformalized agreements |
| Property and water use rights | Customary law |
| Concessions | Tacit understandings |
| Formalized agreements such as contracts | |

Sources: Schneider and Homewood (2013), Exploring water governance arrangements in the Swiss Alps from the perspective of adaptive capacity, Mountain Research and Development, 33(3):225-233.

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Now, if we see what are the various elements of water governance there are formal elements and there are informal elements. The formal elements are one which formally exists and abiding there are written legislations, or laws a constitutional binding laws then there are property and water use rights, ok. So, if I own a property I am the owner of water resources beneath it are all the resources beneath my property. So, all these sort of specific formal laws and legislations are there.

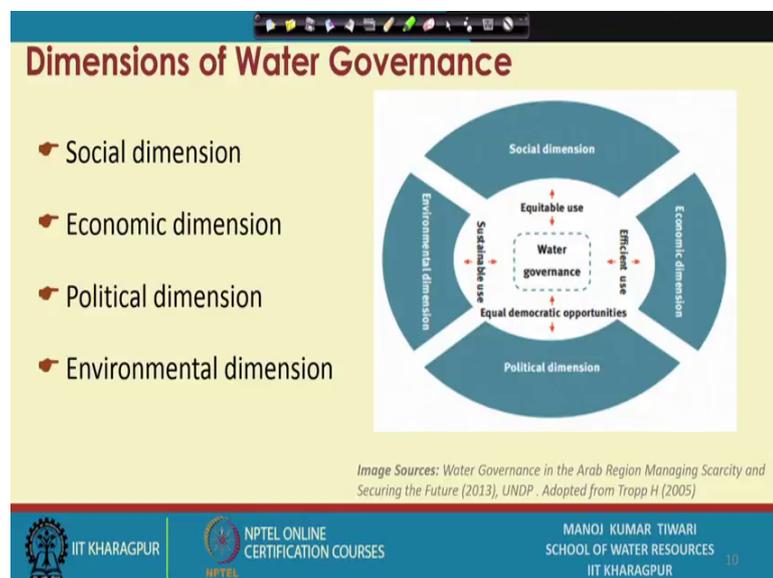
So, this right to water or right to property that I own these are the formal elements then consensus building is another formal element in the water governance further consensus at a formal level, ok. So, if two people agree two people say that we will adopt this policy we will go by this and they formally agree to certain consensus so, that is with that that is a formal element of the governance while there are formalized agreement and contracts where consensus may not be there, but still because it is formalized contract or formalized agreement it is law abiding and that will be sort of considered as a legal entity.

And, that is why that is also a formal element there are informal elements where are non formalized agreements let us say two people verbally saying, let us let us withhold these conditions or let us sell the water like these or let us take this decision into this particular dispute or this such and such case there are certain customaries law, which are again not as per legislation, but generally believed for example, if there is a pond, who owns that

particular pond or there is a municipality is allowed to use that pond for withdrawing water and supplying water for domestic purpose even without formal authority on that plant that pond or that lake.

So, those kind of some customaries law or customaries trends are there which are informal elements of governance practices and there are tested understandings, which are again not law abiding the general kind of understanding. The two people or two parties or two agencies have regarding the governance or management of any resources in this case let us say water.

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Then if we see the different dimensions of water governance we have our United Nations Development Programme suggests that there are four distinguished different dimensions of water governance there is a social dimension, there is a economic dimension, there is a political dimensions and environmental dimension, ok. Now, the each dimension has it is own importance, ok. For example, the social dimension will see how the water is being distributed or is being used or is being managed on a social scale whether their distributions are equitable or not whether the deprived population are getting water or not whether it is all being allocated to just let us say the well to do or richer class of people only or it is being distributed judiciously to all the sections. So, that dimension is very important.

Unfortunately, we do not give too much emphasis to social dimensions while water distribution. Ah, in many cases even in Delhi let us say you have some posh localities where water distribution or water demand and consumption is as high as 400 – 500 litres per capita per day while in some other section it is as low as 30 to 40, 50 litres per capita per day. So, this is certainly not equitable distribution equitable distribution does not mean that each and everybody should get equal water. So, equitable distribution does not ensure that everybody gets the equal quantity of water the demands could be different because of the living standard as well.

Now, somebody having a large house or lawn or large family will have different water requirements based on their living standard somebody will have very small family small sized area. So, their requirements would be different, but still a fair all these points need to be considered, but still a fair distribution policy is to be devised so that the it is not that those who cannot afford too much or those who cannot pay too much does not get water. So, those kind of social dimensions needs to be taken care while devising of water governance mechanism.

Then, there are economic dimensions which primarily relies on the efficient uses, ok. So, one need to when we go for let us say policy decision or policy making or making a governance law or practice or principle we need to understand this that the water in different use has different values here. We discussed this earlier, but just to recall that water in a domestic use has different value. Value does not necessarily mean the value or the price it is fetching value incorporates everything. So, there is a social component also to the value.

So, what is the net value of the water for a particular use for ah, let us say industrial use for a agricultural use for municipal uses domestic uses a horticultural uses. So, what is the different values and which one is the most efficient use and whether there is a possibility of prioritizing that used without hampering social or environmental causes is need to be seen and evaluated while setting up governance principle.

So, the economic dimensions is again a very important dimension of the water governance. Without economic sustainability without economic efficacy it is very difficult for any policy to withhold for large period of time without additional burden. Then there are political dimensions, ok. Now, the political dimensions is in like in a

democratic manner how people are whether people are able to participate in the governance mechanism or not, how much freedom the different stakeholders in getting how much role and responsibility the different stakeholders are getting in the governance devising governance policies all this will come under the poly under the political dimensions. So, by and large the user community the citizens whether they have any say into the policy making or not that will be sort of based on the political dimensions, ok.

And, then there are environmental dimensions one need to see one need to look for the different environmental regulations, environmental protection measures how the resource hampering could be avoided, what are the minimum environmental flow of our streams or minimum groundwater availability is to be ensured, how much abstraction can be permitted from ground water, how much withdrawal can be permitted from running stream river or lake or those kind of water bodies.

So, the sustaining ecology sustaining the aquatic ecology also needs to be considered while making or guiding the policy decisions under water governance and that the environmental dimension makes one of the very one of the very important dimensions of the water governance.

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Dimensions of Water Governance

- Social dimension → the equitable use of water resources.
- Economic dimension → efficient use of water resources and the role of water in overall economic growth.
- Political dimension → democratic opportunities to citizens to influence and monitor outcomes.
- Environmental dimension → sustainable use of water resources and ecosystem integrity.

Sources: Tanik (2013), Searching Solution to Water Issues: Water Governance , Regional Workshop on "Water Resources Management: Needs & Prospects" APRIL 22, 2013, Amman, Jordan

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So, the social dimension will basically work on the equitable uses of water resources economic dimension the economically efficient use of water resources and the role of the water in the overall economic growth is to be considered. in political dimensions the

democratic opportunity to the various citizens various stakeholders to influence and monitor the outcomes into the water governance and management policies and sustainable use of water resources and ecosystem integrity needs to be ensured under the economic dimensions for water governance.

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Principles of Water Governance

The Dublin Water Principles bring water resources firmly under the State's function of clarifying and maintaining a system of property rights, and, through the principle of participatory management, asserts the relevance of meaningful decentralisation at the lowest appropriate level.

Sources: Effective Water Governance by Rogers and Hall (2003)

Image Sources: Akhmouch and Clavreul (2016), Stakeholder Engagement for Inclusive Water Governance: "Practicing What We Preach" with the OECD Water Governance Initiative, Water 2016, 8(5), 204

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Now, if we see the principles of water governance there are there are multiple objectives multiple principles through which the good water governance is ensured. Ah, The Dublin Water Principles bring water resources under the State's function primarily that the overall responsibility is the government is the state and then for maintaining the system maintaining the water resources and priority rights.

Again, maintaining does not means managing day to day operations maintaining means having ownership of the water resources in general, . And, having a role of let us say regulatory agencies or regulatory bodies where the principles of participatory management asserts and all that meaningful deliberations are taken care under the umbrella of the government, although the operation can be sublet to the public or private entities.

So, then the there has to be sort of again the accent agenda of Dublin Water Principle also suggested that whether we should go for a meaningful decentralized system at the lowest appropriate level. So, because there are lot of issues related to management in large centralized system which could be avoided at least to some extent in the

decentralized system, but having decentralized system of very small scale again will need for multiple systems and there are going to be huge cost involved and maybe not sustainable as well. So, what would be the lowest appropriate label for decentralization all these needs to be considered.

Now, if you see the various principles of governance. So, there is three major principles the effectiveness, the efficiency and the trust and engagement. Now, this is under the efficiencies you see that there has to be the data and information available there has to be a financing mechanism, a governance structure for financing the water systems water utilities there has to be a regulatory framework, ok. So, there has to be a policy regulatory framework for ensuring the efficiency of the water governance, we are not talking about efficiency of water services here we are talking about the overall water governance.

So, the efficiency of the entire policy making system needs to be a certain and there has to be innovativeness in the governance means adopting for any good suggestion any good practices which could improve the water services. So, in an innovative fashion like for example, you have treatment. So, it is not the use you are stick to a conventional treatment technology. Now, there are advanced treatment systems available, but you are stick though that, no, I am fine with the conventional water systems, that is not a efficient way to manage resources or to manage water services. So, instead if you see that there are innovative solution or innovative government governance policies are available one should actually opt for those in order to in order to take the system towards more better efficiency.

There has to be trust and engagements, ok. So, there is to be monitoring and evaluation that is one of the very important aspect the resources or the water services need to be monitored and evaluated one should have a clear cut idea of how we are doing in terms of let us say securing sustainability of resources that can be assessed only through monitoring if you do not monitor the water quality regulate regularly how would you know that whether the quality of my resources are good or not. If you not monitor the let us say water supply regularly how would you know that whether I am controlling the demand or meeting the demand in appropriate fashion or not if you do not monitor the revenue recovery systems how would you know that whether I am getting the expected whether I am generating the expected revenue or not.

So, monitoring is essential at each and every step. So, all the different aspects of water services or water resources management needs to be monitored properly and that data needs to be analyzed and the outcomes are to be evaluated.

Then, there is trade off across different users rural and urban areas and generations. So, while discussing the sustainability aspect we did discuss that there are conflicts in the different sectors different type of approaches and that conflict needs to be managed by a fair trade off, ok. So, that trade off can only be done with proper trust and engagement. So, if we are doing, let us say if you are putting a polluter pay principle which is a trade off between the social concerns and financial concerns.

So, we are charging industries for polluting river, right this cannot be this should not be done without taking industries in the trust or without engaging industries we should make industries aware in a good governance principle the industries should be made aware that ok, since you are releasing pollutant to the river which are deteriorating the quality which are deteriorating the environment or ecology this needs to be treated since you are not able to provide treatment we will charge you this much and we will take care of the treatment systems, we will take care of the pollution in a larger aspect.

So, that polluter pay principle or for in for that matter any such trade off needs to be done with proper engagement of both the parties if they involved and there has to be a trust made. So, the trade off could be across different sector of users, across rural and urban areas, across different generations. Then stakeholder engagement we have talked a lot about this that all these stakeholder need to be participates then integrity and transparency will eventually lead to the build up of trust.

If we know that the system that we are getting water from or the system which is providing water services is transparent one can see every scale what is happening how these decisions are being made how much is the revenue being generated how much subsidies are being given and it is done in a fair and with adequate fair and integrity. So, that means, that those trust will automatically build up. That is another set of principle of the good water governance.

And, then there is a effectiveness of the system where we see what is the capacity, what is the policy coherence, how much coherent policies one is able to make, what is the appropriate scale within the basin systems and then what are the role and responsibilities,

of the different stages involved in the overall water governance including from the policy making to the implementation stage because water governance has all these different levels involved and incorporated with it. So, that is how this different aspect of water governance different principle of water governance need to be seen.

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Principles of Good Water Governance

- **Participation:** All citizens, both men and women, should have a voice representing their interests in policy- and decision-making. Broad participation hinges on governments following an inclusive approach.
- **Transparency:** Information should flow freely within a society; processes and decisions should be transparent and open for public scrutiny. Right to access this information should be clearly stated.
- **Equity:** All groups in society, both men and women, should have equal opportunities to improve their wellbeing.
- **Accountability:** Governments, the private sector and civil society organizations should be accountable to the public or the interests they are representing

Sources: Water Governance in the Arab Region Managing Scarcity and Securing the Future (2013). UNDP

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So, there is a participation whereas, as per united nation development programme they have some 8 to 9 guiding principle of water governance. So, there is participation means all citizen both men and women should have their wise representing their interests in policy and decision making. The participation depends and hinges on the government how inclusive approach it is following.

If government is receptive to the suggestions to the involvement of the various stakeholders there will be there will be more cases of participation, but if government is reluctant to have this kind of participation in the system people will eventually because if nobody listens to them why they will go again and again to voice their concerns or opinion. So, they will also slowly and slowly sort of move away from their involvements.

Ah, transparency, where information should flow freely within the society, these processes and decisions should be transparent and open for public scrutiny. There is equity, so, equity in all groups of society both men and women. there is accountability. So, government, the private sector and civil society organization who saver is involved

and have some role in the governance has to be held accountable as well for the decisions.

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Principles of Good Water Governance

- **Coherence:** Because of the increasing complexity of water issues, policies and actions must be coherent, consistent and easily understood.
- **Responsiveness:** Institutions and processes should serve all stakeholders and respond properly to preferences, changes in demand or other new circumstances.
- **Integration:** Water governance should enhance and promote integrated and holistic approaches.
- **Ethics:** Water governance must be based on the ethical principles of the society where it functions—for example, by respecting traditional water rights.

Sources: Water Governance in the Arab Region Managing Scarcity and Securing the Future (2013), UNDP

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There has to be a coherence in the decision so, the because of the sort of increasing complexity of water issues policies and action must be coherent consistent and easily understandable, easily deployable in the field. So, that is another guiding principle of the good water governance. There has to be responsiveness so, organization and institutes that are managing that are dealing with the water services should be responsive to all the stakeholder should serve the stakeholder and respond properly to the sort of preferences or changes in the demand or any new any fresh circumstances appearing.

There has to be integration; so, water governance should enhance and promote integrated and holistic approach in a larger section. So, that the different aspects different stakeholders, different aspects, different opinions are integrated and the governance principles or the policies are designed keeping view in all keeping view in all the different inputs. Then there has to be ethics, ok. Because, we are dealing with water services here and water cannot be considered as a profit making good or profit making entity. So or there is another like social concerns and all that are also involved.

So, there has to be a proper ethics in the water governance. The ethical principles of the society where it functions needs to be considered, needs to be accounted for devising water policies or water governance principles. So, like the traditional water rights need to

be respected the allocation is to be done to the poor and deprived people as well it should not be basically at very high prices in which makes them unaffordable there has to be ethics let us say a company operating a some factory I should have that ethics that I should not pollute water, I should not release my wastewater untreated directly to the river bodies. So, those kind of some professional or corporational ethics is needed in the water management as well and when the principles are being laid for a good water governance these points must be considered and must be taken into the proper measure.

So, we will end this session here and in next session we will talk about further about the various other aspects of the various other aspects and practices good practices of water governance.

Thank you.