Sustainable River Basin Management

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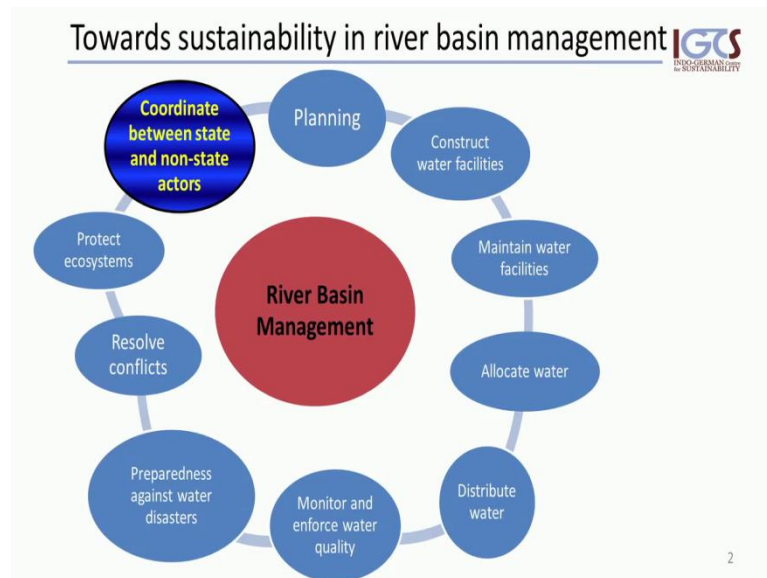**Indian Institute of Technology, Madras**

Module – 4 – 2

Lecture - 35

Part 5

Welcome everybody to sustainable river basin management; module 4- 2, part 5.

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We have been talking about sustainability in river basin management and the techniques towards it. This time I want to focus on the aspect of coordination between state and non state actors as one of the river basin management functions.

Let us first start with a definition of stakeholder engagement. What you mean by stakeholder engagement is persons or groups, who are directly or indirectly, affected by a project as well as those who may have interests in a project and or the ability to influence its outcome, either positively or negatively. This definition comes from international finance corporation. It shows us already in which fields stakeholder engagement has been perceived and considered as very relevant, very important, which is in business and economics.

What you also see is that there are various aspects to the stakeholders engagement first that somebody may be affected by a project, not really be related to project or benefiting from it specifically, but being affected directly or indirectly. The other relationship could be that somebody may have an active interest in this specific project. Again, that may not come especially, from living or being affected by the project, but simply having an interest in it by contributing, may be in one way; financial way or a kind of meeting knowledge of project; that interest may arise or the ability to influence the outcomes of a project.

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Again, that influence could be directly or indirectly, it could be positive or negative. So there are various aspects which bring together reasons for stakeholder engagement, which have to be understood.

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It does not explain stakeholder and that is why, you want to define what stakeholder is. The stakeholders may include locally affected communities or individuals and their formal and informal representatives, national or local government authorities, politicians,

religious leaders, civil society organizations and groups with special interests, the academic community or any other businesses. So, those are all stakeholders, which may be interested or affected or may have influence on your kinds of projects, and at some stage, will influence the outcomes, the success or the reputation of an undertaking.
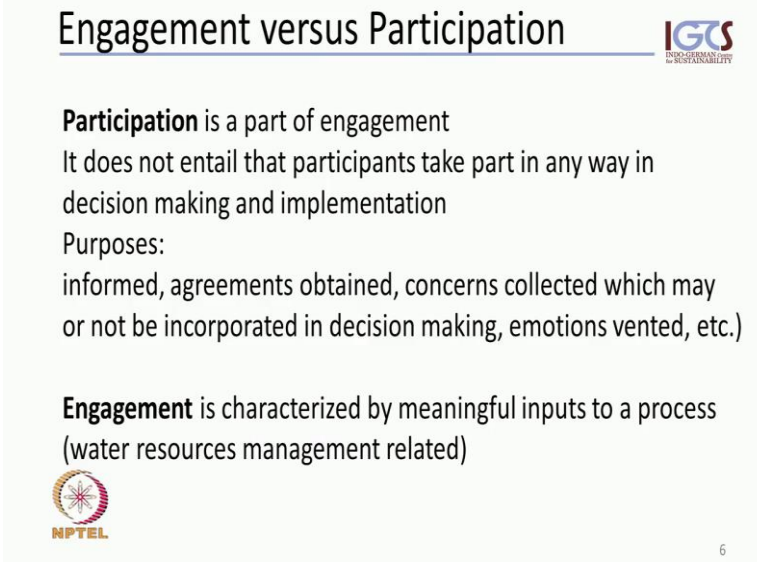
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Now, stakeholders in water resources have become very important in the success of water resource management. They will classify or differentiate it in a slightly different way. We group them into core stakeholders into so called new comers in the water sectors and so called under-represented groups, where we have our generic stakeholder definition. Some of these under-represented group may not even be be accounted for properly, if it comes to larger projects, larger undertakings in a specific region whereas, in the aspects of water we know that water is important to all living beings, humans, ecosystems, economies and that it matters to bring under-represented groups to the table and consider them as stakeholders, and make sure that those stakeholders are involved at their respective levels of the stakeholder engagement.

The other group which is also usually, not taken up so seriously, and has become very important in water resources are the so called new comers. Those are, for instance, property developers or long term institutional investors or new comers in terms of economic activities in a specific region, which have a substantial influence on what is

happening in the water sector, over this happening through the water demand in a specific region.

Then we have the usual known and expected in this so called core stakeholders, governments, service providers in water, the river basin organizations businesses, civil society farmers, legislators and trade unions. Those would come along and are fairly well established or well visible also, and constitute the so called core stakeholders, but those alone are not sufficient to make sure that all of the aspects in related to water resource management, will be covered and taking care of properly. This comes from OECD studies on water, very recent document of 2015, where the stakeholder participation, stakeholder engagement in water resource management analyzed.

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Let us reflect upon engagement versus participation. Very often, we hear about public participation. Participation is just a part of engagement. It does not entail that participants take part in any way, in decision making and implementation. Participation may be simply to inform or to obtain agreements or to collect concerns, which may or not be incorporated in decision making. It is also a way of venting emotions. So, very often participation is just an opportunity, where people can obtain more information or they may even express an opinion, but that opinion may not really, influence the outcome or the pathway of the larger project, for instance, in water management whereas, on the engagement side, it means that we expect the stakeholders to contribute in a meaningful

manner to the inputs of the process; in this case, the water resource management related projects on the way to the implementation.

So, very often these public participation processes being very received is not very satisfying to people, because very often, they feel they are wasting their time or they have been made aware of something that has been decided somewhere else already or what I have ever they say is just to make something to sign it off, to have a long list of people who have been stakeholders and have been heard, have a list of signatories, which at the end is, which has been attached to a final report, but not influencing how the reality is going to change and influence. So, that is why this has been a matter of reflection especially, in the water sector and the water management sector.

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So, it is essentially shifting from the response to water supply issues, towards a collective decision making. Very often, public participation is also considering only with receiving complaints, managing complaints, in various ways and this is changing right now, towards a more collective decision making in water management issues.

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So, the reasons for the stakeholder involvement were manifold. First of all, remember that water governance is a highly fragmented sector. So, it makes it very hard to implement projects in a very efficient way, unless we involve the various stakeholders. Moreover, there is a growing complexity of water challenges, including multi stakeholder demands, which have to be brought together to enable a project to function at the bare end. Still, there are financial constraints of the public sector and forced as an increased demand from the citizens. You should not forget that the citizens are very often, should be most of the countries, tax payers and such they are holding the governments accountable for; how these payments are applied towards public services? So, very often, people or citizens are asking for an engagement and, because they want to know how public decisions are taking and how advancements are made.

Growing complexity: Example Jordan River

So, just an example on the growing complexity; this is the Jordan river, which is showing you the geographical location of the Jordan river, the Jordan valley. You can see here and the river flows through this lake, which has changing names. Here this is called sea of Galileo and other places or other maps, it Is called lake of (refer Time: 11:54). This has a head water catchment in those mountain areas here, and is a major tributary coming from this side and then, this flows south parts in a rift structure to the Dead Sea here, and then this south.
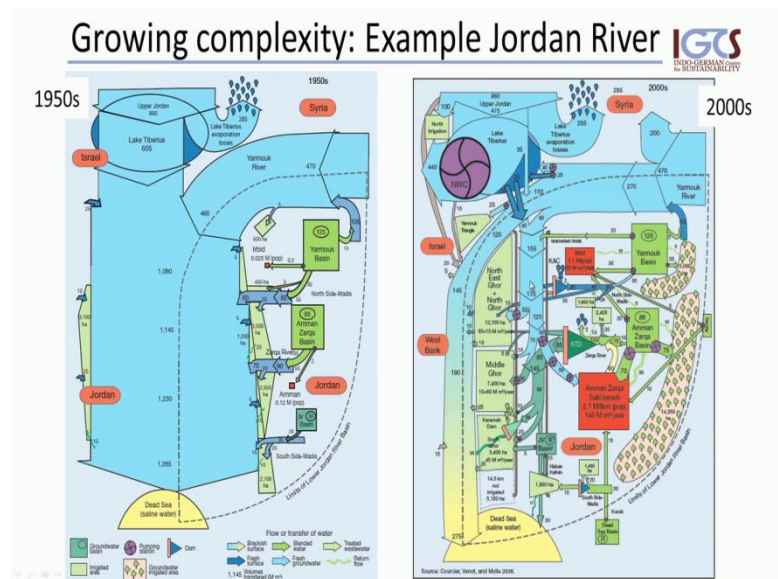
Looking at this from a water management perspective, we have again, the same map here, in a simplified, in a sketched way. We have our lake here on this other name and we have in the south, our dead sea and we have here, first of all, the different countries. You can see that we are having here three different countries, sharing this river and sharing the catchment of the Jordan River. This was in the 1950s and then, we have here water amounts measured in the waste parts and portions; upstream, midstream and downstream portions of the river Jordan.
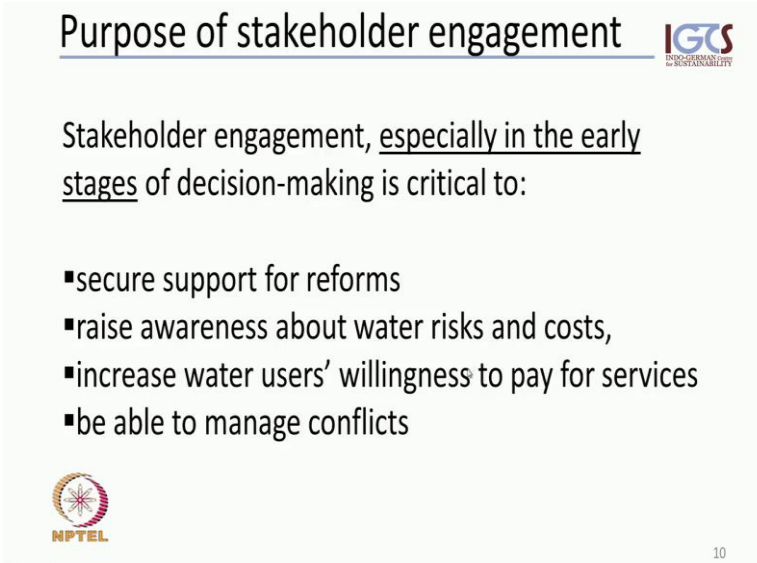
What we can see is that the major amount of water is reaching here, the dead sea, in the form of fresh water, and about two third of the river water comes from this lake area and the move, and the rest comes from this tributary river, joining the Jordan river here. Then we see that first of all, the river forms a country border here, between those two countries here, and we see some development happening; some development in the form of irrigation systems, plantations, agriculture, production taking place, irrigative fields being developed in one part here, on both sides of the Jordan River here, and a specific sub catchment development taking place in just one part of the river. So, now, this picture now changed automatically, from the 1950s to nowadays, 2000s and it is not stopping.

What you now see that we have more countries involved. There is a new country that came into being and now, also shares the river as a country border on one hand side and

then we see that major pumping station was installed on the lake and land development here, took place in a very large scale, abstracting water from the river and the tributaries at various stages to use and reuse intensively, this water in various projects and agriculture production and plantation, forest plantation or food tree plantation of large scale. What you can see is that only a very minor portion of water is still, reaching the Dead Sea. A minor portion is in the form of base water, is reaching the Dead Sea and all of the fresh water has been diverted and used in various fields.

What we can see is that a major portion of that water is being taken up by just one country of the four countries here, and as a major uptake of water from the lake, by just another one single country and it essentially, has interrupted the outflow, the discharge from that lake that use to contribute quite substantially, to the Jordan river. This does not exist as such anymore, as a fresh water release of remaining water from the lake, which is being so, I mean, taken to maintain some outflow from this lake into the Jordan, but most of it has been used and diverted into the country. So, this is just an example of first of all, how very complex water allocation, water management can be, water budgets can be visualized, may little bit more transparent. It also shows how complexity grows with time, with economic development, also with the change in the increase of the number of stakeholders, and that very often; this relates to water security issues and stability issues in entire regions like in this example here that we see here.

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Let us look into the purpose of stakeholder engagement. Why do we make efforts to involve stakeholders, and as a special emphasis on the stakeholder engagements in the early st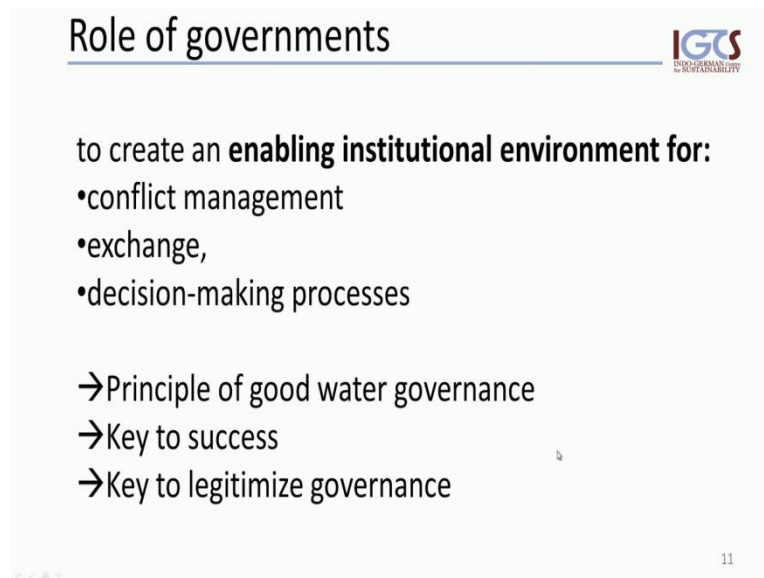ages of decision making? This is considered as being very critical to secure support for reforms, to raise awareness about water risks and costs, and to increase water users' willingness to pay for services, and the ability to manage conflicts. So, those are essentially, the purposes of why we bringing stakeholders to the table; why we involve them and why this should happen at the earliest possible stage of a water management project, a water undertaking.

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Now, what is the role of governments in this? Government should create an enabling institutional environment. It does not mean that governments are suggest automatically, that governments should play or do the job of running these stakeholder engagements. What is important is that governments create an enabling institutional environments and those should include conflict management. They should create space and the institutional environment for exchange of knowledge, exchange of data, information and the institutional environment for decision making processes to take place. So, in general, those are principles of good water governance. They are simply keys to success, but they also, key to legitimize governance. You remember that governance comes along with a constant, continuous proofing of the capabilities of implementing and achieving good governance, and delivering services to the citizens.
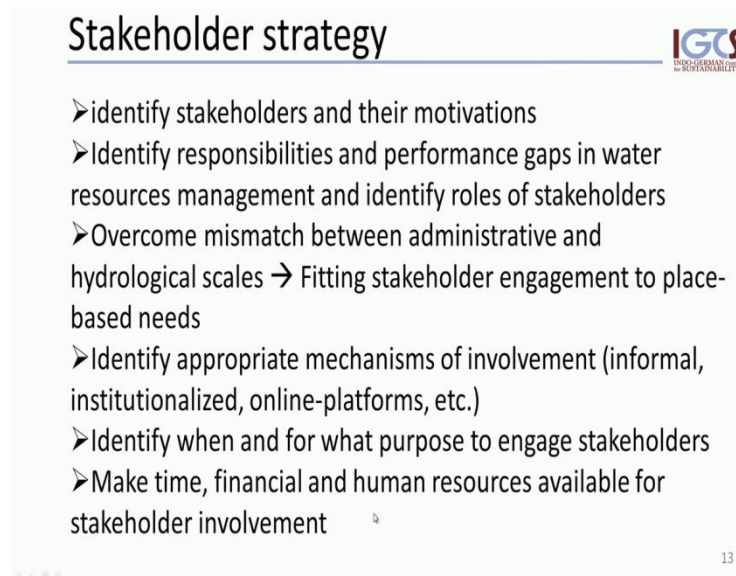
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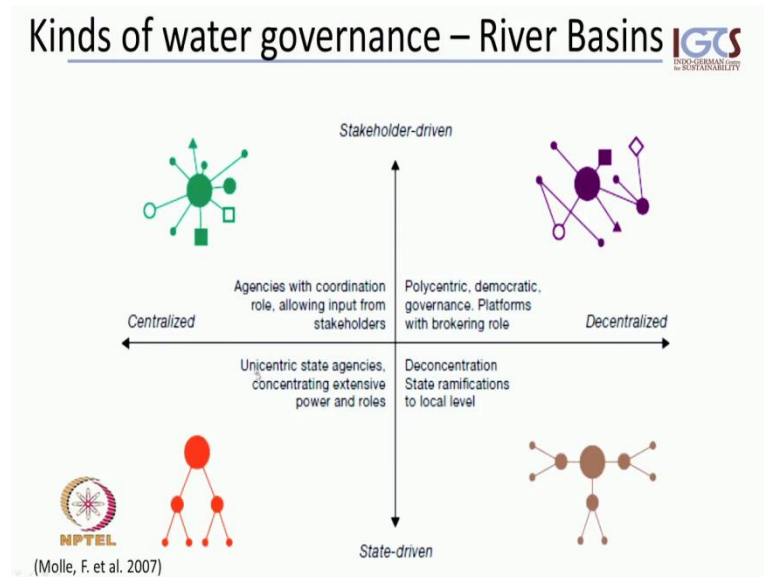
Now, the kinds of water governance that we can see in river basins were plotted here in this figure. We can see it for extreme examples, but very often, see transitional setups in river basins, but we can see on the four axes. First of all, the stakeholder axis here and then have a stakeholder driven is one of the end members and the state driven on the other side as an end member and then, we have centralized on one side and decentralized on the other side of this axis. Then we have representation here of the government, the different institutions, different stakeholders in this zone. In this case, example is stakeholder driven and decentralized.

So, we have a polycentric so called democratic governance, platforms (refer Time: 21:07) in between. We have, if we move to the part of decentralized and state driven. Then we have the government body, represented with links into to the, from the national to the regional to the local levels, all represented. So, it is a deconcentration of the state ramification from the central, from the national to the local levels. In some countries, they exist at horizontal as well as the vertical levels. Then when we move to the centralized and state driven portion of this representation, we would have a single central government, state organ, which represented into the various levels around, at administrative levels from the state to the province or union territories to the districts or the down to the both levels. So, those are uni-centric state agencies, concentrating extensive hours and holds in these individual arms here, and could reporting back to the single state agency responsible for that.

We now, go into the fourth of these acquaintances. We have centralized and stakeholder driven and that case we have again, government in the center here, and coordinating all these activities, overseeing those activities that are handing over various aspects to different state agencies, but also different stakeholders, other stakeholders in that specific region. So, they are, may be agencies, which coordinating, holds, allows inputs from the stakeholders.

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Now, let us look into the stakeholder strategy. How would we engage stakeholders? For that, we need a strategy. First of all, we have to identify stakeholders and their motivations. We also have to identify responsibilities and conduct performance gaps in the water resources management sector itself, and from that performance analysis, we can identify the various roles of the stakeholders. We can also, from this, departing from this analysis, overcome the mismatch between administrative and the hydrological scale, which means we can fit stakeholder engagement to a place, where it needs. As we have seen, the river basin can be very large, can be very complex, can be can include various states, various national trans-boundary issues, national issues and can affect many different levels within river basin from an administrative point, but also from a stakeholder impact point of view.

So, in many cases, the administrative matter will be dealt in at one level, may be even far away from the actual river basin whereas, the hydrological issues of allocating water or

water scarcity or water pollution, are linked to the actual river basin and linked to the people, who are everyday affected and having to deal with the situation locally so, which may not have the connection to that administrative stakeholder at some, which is sitting outside the basin. So, district wise adjustments and this requires (refer Time: 25:49) and strategies; how to engage all of them at the appropriate level and in the appropriate environment? We also have to identify appropriate mechanisms of involvement and those mechanisms could be informal. They could be institutionalized. They could be also including online platforms or some other more modern meaning of involvement.

We have seen one of the examples of online platforms, earlier when I talked about decision support systems. Now, we also have to identify when and for what purpose, to engage stakeholders, as we have seen in this example of the Jordan river, the number of stakeholders can be, become very complex and this has to be managed appropriately so that, needs of all the stakeholders can be addressed in the appropriate way, and to have a proper stakeholder strategy that also works, we have to make time available.

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Stakeholder engagement takes more time and we have to make financial and human resources available for that stakeholder involvement. Now, why would we do that? There are certain benefits from the stakeholder engagement, which were brought together by UN water for life, an initiative and sharing of stakeholder experiences on water. They came up with set stakeholder engagement leads to be adapted and more effective

solutions. It also brings together experts, implementers, end users and policy makers, which enables a knowledge exchange and enhancement.

Remember that very often, it is the end users, for instance, in the case of the women caring water, safeguarding water that they have the knowledge of what works locally, which technologies work, where the water actually is and what the water quality is and then, we have on the other hand, experts and scientists and engineers, implementers, constructors, the politicians, who can mobilize funds, who can create the enabling environment for things to improve, for things to change. It is important to bring these tools across together in appropriate ways and in that way, enhance the knowledge and the success of such projects. It also was perceived at as a benefit that can be social inclusion, achieved and that social inclusion is a success factor for sustainable water management. Also was observed that once in cases, where changes were achieved; those were the result of cooperative efforts and that bundled knowledge or concentrating knowledge and resources can increase the effectiveness of many small initiatives. In that way, much more can be achieved from smaller scarce resource base that we have usually, available today. At this point, I want to stop on the stakeholder engagement and the coordination of various stakeholders in the river basin management and I see you next time again.