Water Economics and Governance
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Lecture – 45
Principles of Water Governance

Hi, everyone. In earlier lecture, this week we were discussing about the Basic Principles of Water Governance and we will continue talking about some more aspects on to the various principles on water government governance.

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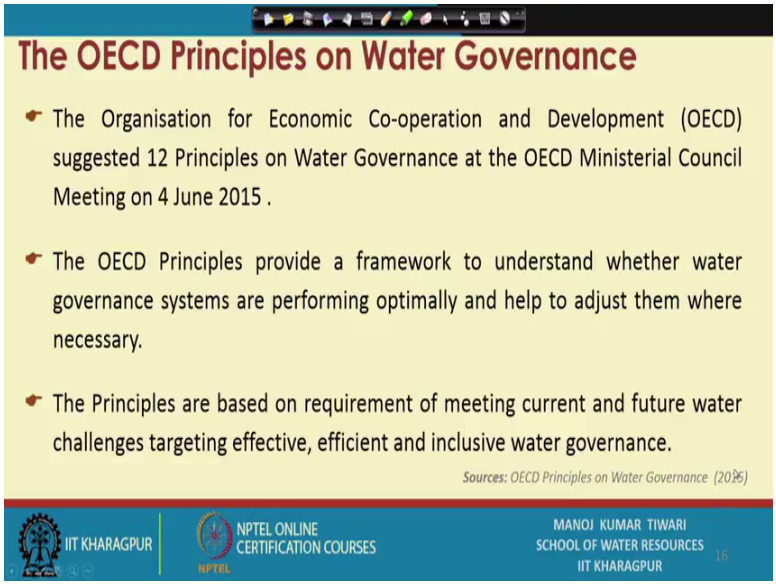

So, the OECD which is the Organisation for Economic Cooperation and Development has suggested 12 distinct principles on water governance in its ministerial council meeting in June 2015. These principles in a kind of provide framework to understand the basics of water governance system and how the overall governance can be framework, can be designed in order to get optimum performance of the water systems.

Optimum performance not only we are talking about let us say urban water utilities or irrigation systems, but in overall governance structure when we say that the optimum governance scheme we must encounter the various other aspects of resource management as well.

The these principles are based on the requirement of meeting current and future generation water challenges and target effective, efficient and inclusive water governance. So, we will see these 12 principles one by one.

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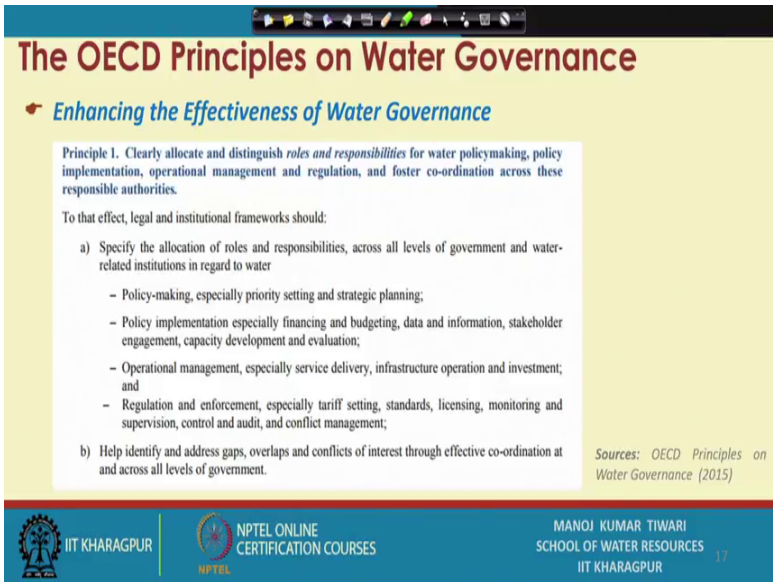

Now, they have categorized these 12 principles into three sub classes again the first class is the aimed towards enhancing the effectiveness of water governance, so, how the water governance can be more effective. Then the next class which is having another 4 principles are targeted towards enhancing the efficiency of water governance. So, we will talk about the basic principles on governance targeted towards enhancing the effectiveness and then next set of principles targeting towards enhancing the efficiency, then the next set of principles are suggest the approaches that can be used to enhance the trust and inclusiveness in the water governance. So, these are the sort of three distinct categories for these water governance principles.

The first one the first set of four principles which talk about the enhancing the effectiveness of water governance. So, out of those the first principles actually says that allocate and distinguish roles and responsibilities of water policymaker, policy implementation, operation and management, regulation and foster coordination across these responsible authorities.

So, the OECD clearly emphasize that in order to achieve effective water governance or in order to enhance the effectiveness of water governance the different managerial

sections including the policy makers, implementers then operation and management and the system regulators they all should have clear role and responsibilities distinguished from each other.

So, a set of clear role responsibilities needs to be assigned for different set of people, what is the role and responsibilities of a policymaker, what is the role and responsibility of the implementation guy, what responsibility comes on to the person who is looking for operation and maintenance and daily regulation of the water systems and how nicely one fosters coordination across these responsible authorities will decide the effectiveness of the water governance system. So, for this purpose there is legal and institutional framework should clearly specify the allocation of duties, allocation of various responsibilities across all level of government and water related institutions for policy maker implementation agency.

Then operation and management person and overall help and identify the different issues among the core these different set of authorities and sort of what gaps is there what is the overlapping between the responsibilities of the two different groups and if there is some overlapping there is likely there could be a possibility of conflicts as well. So, what are the conflicts that are arising, so, for example, if you give the same sort of authority to two different units two different institutions or two different persons there is a likely chances of conflict arising.

Ah for example, if you say that this is the pond and the public health department has the authority to utilize the pond water for the domestic application, ok, supply of domestic water municipal water supplies. You also say that irrigation department will have the right on this pond for withdrawing water for irrigation fulfilment.

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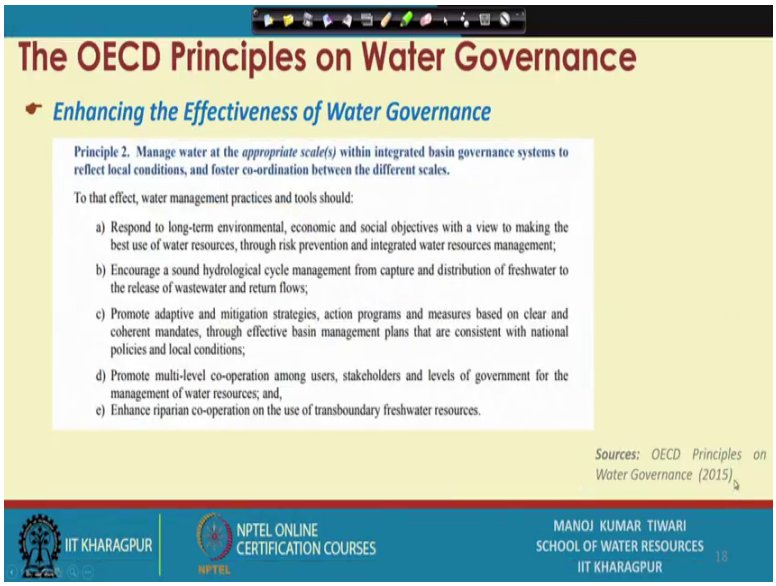

So, then there is a possibility of conflict arises that who will be basically withdrawing how much water and who will control that how the interest of one party is affected by the action of the other parties. So, all these things may come if it is not properly taken care off and the key management system should have a mechanism of distinguishing the responsibilities clearly and having a mechanism if there is any such conflict or conflict of interest arises, through effective coordination across all level of the management, so, that is the first principle.

Then the second principle which is again targeted towards the enhancing the effectiveness of water governance is managed water at the appropriate scales within integrated basin governance systems to reflect local condition and foster coordination between the different scales. Now, when we say that we need to manage a system in a, for let us say river basin system or such systems that reflects the local condition. Now, this is very important because water issues are very localized at time, ok.

Some city may have problem with the quality of water, some other city may have the problem with the quantity of water, ok. They have limited quantity of water available of good quality while other city may have the plenty of water available, but of very bad quality, some other city may have adequate quantity and quality of water. So, there could be various cases and these many times these cases are very localized.

So, for that purpose there has to be when we plan for policymaking or when we plan for going for the governance scheme we need to observe and clearly respond to the long term environmental economic and social objectives. We have already discussed that the overall holistic management of water or sustainable management of water has it is own different dimensions there will be environmental dimension, economic dimension, social objectives. So, we need to basically look at all these in a long term with a view of making best use of water resources the most socially beneficial use.

Now, socially beneficial means incorporating all the social benefits and social cost. So, not only social means when we consider the total benefit cost. So, it needs to be like how much investment is being made what is the net return expected in terms of finance, what is the net return expected in terms of social improvement or life improvement the improvement of the quality of life. So, all these needs to be considered through proper risk prevention and integrated water resource management. Then there needs to be a sound hydrological cycle management from capture and distribution of fresh water to the release of wastewater and return flow.

So, all these things to be considered for a river basin or for any catchment we must do a proper water balance. As we discussed in our earlier lecture that when we go for a proper water balance we have a clear cut idea that how much flows or how much water is incoming into our region and how much flows we are sending out and what one quantity as well as qualitative aspect also needs to be seen that from let us say rainfall we are getting some water, from a stream inflow we are getting some water, then how much waste water is being released how much return flow is being released, how the level of water table is changing in the reason what is the ground water consumption level fresh water consumption level.

So, all these different distinguished entities needs to be demarked clearly and one should basically go for a comprehensive mass balance on the regional scale or on the local scale whatsoever is our of our area of interest for the entire hydrological cycle management prospective.

Further one should promote adaptive and mitigation strategies, different action programs and different measures based on clear and coherent mandates through effective basin management plans and those plans should be consistent with national policies and local

conditions. So, reason with water scarcity what is the plan, how the let us say one want to reduce the per capita consumption in domestic sector one want to encourage the less water intensive crop production in the agricultural sector, where the irrigation water could be saved. So, all these mitigation strategies, management policies, action programs should be promoted in adaptive fashion so that the locals or the ultimate end users adopt these policies adopt these practices and bring in their system so that the targets that are set are actually achieved at least partially achieved and these should be consistent with national policies as well as local conditions.

Then there should be promotion of multi level cooperation among users different stakeholders, level of government for the management of the overall water resources and the riparian cooperation on the use of trans boundary freshwater resources should also be enhanced. So, this, these are the approaches towards managing water at a at a sort of given scale, using integrated management policies, for effective water governance.

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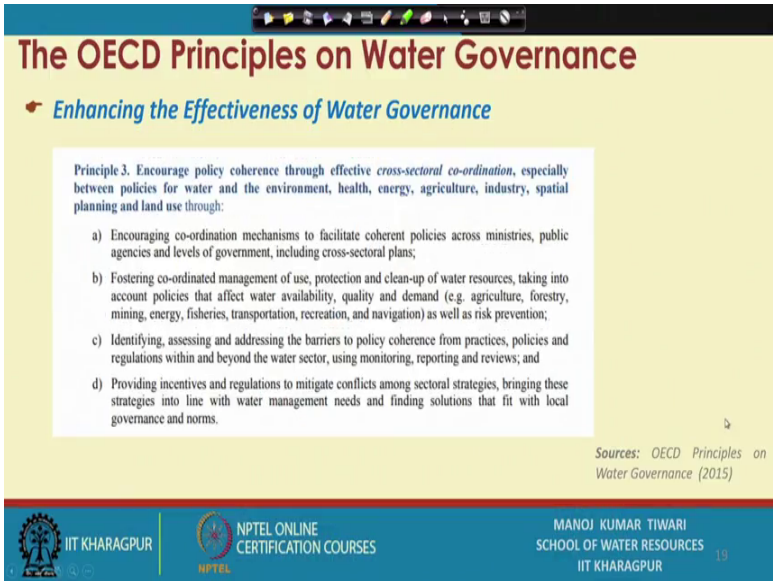

The third OECD principle suggests that the policy coherence should be encouraged through effective cross sectoral coordination especially between policies for water and the environment, health, energy, agricultural, industry spatial planning and land use. Now, this is again a very important aspect because when we when we sort of try to devise a policy let us say for water management prospective or for water governance purpose if we are devising a policy just focusing onto the water and ignoring the needs

and implications on the other sectors, there is a high likelihood that we may not come to a sort of conclusive and coherence program.

So, the policies which are being made, even if for water sector has to be in coherence through the cross sectoral coordination through the different sectors involving different sectors. So, there has to be basically coordination mechanism that facilitates the coherence policy across different ministries, across different public agencies and different levels of government ok, including cross sectoral plans as well. So, we are going to devise a water policy what would be the implication of this policy on health, what would be the implication of this policy on energy, what would be the implication on agriculture sector on industrial sector for example, we have let us say a water resource or river.

Now, we are coming with a policy that this much of water is to be withdrawn for agricultural purpose if we just focus the water used for agriculture what is what is going to be it is implication on the environment what is going to be it is implication of on the public health what is going to be it is implication on the industries may not get water if we are getting water to the industries what is going to be it is implication on public health industries which are releasing the wastewater let us say untreated or partially treated wastewater they are going to be the public health implication of that.

So, these the sort of there is different cross sectoral issues are involved particularly in the water which is again a very basic requirement for the development in any sector. So, that is why there is a lot of cross sectoral implications and that should be basically seen the if for the effectiveness of the water governance these managements should foster coordination of use protection and cleanup of water resources and there one should consider the policies that affect the water availability water quality and water demand. So, what is the total availability of water how much is the total demand of water demand of water could be from different sectors.

As we say it could be industrial demand, agricultural demand, energy demand, transportation, relocation, navigation ok. So, all what are all these demands what is the quality of water, what is the total availability of water at the resources or at the entire basin scale and what are the risk and uncertainties involved.

Now, they are after the identifying assessing and addressing the barriers to policy coherence from practices policies and regulation within and beyond the water sector must be considered and this can be done through proper monitoring, reporting, reviews and sort of knowledge exchange across the different sectors.

So, that is again a very important point. Thereafter providing incentive and regulation to mitigate conflicts among sectoral strategies; remember, we already discussed earlier that there are going to be the conflicts in the when we seek the sustainable management there could be the conflicts between let us say social requirements and financial sustainability.

So those sort of conflicts who you are allocating water to one sector there is the other sector may actually get suffer, particularly when there are limited resources or when there are financial aspects involved to a great deal in to the management of water. So, on those specific times it becomes very difficult. So, sort of these all the strategies polish it should be bought in line for the water management need and finding solutions that fit with the local governance, local government state agencies and the national norms as well.

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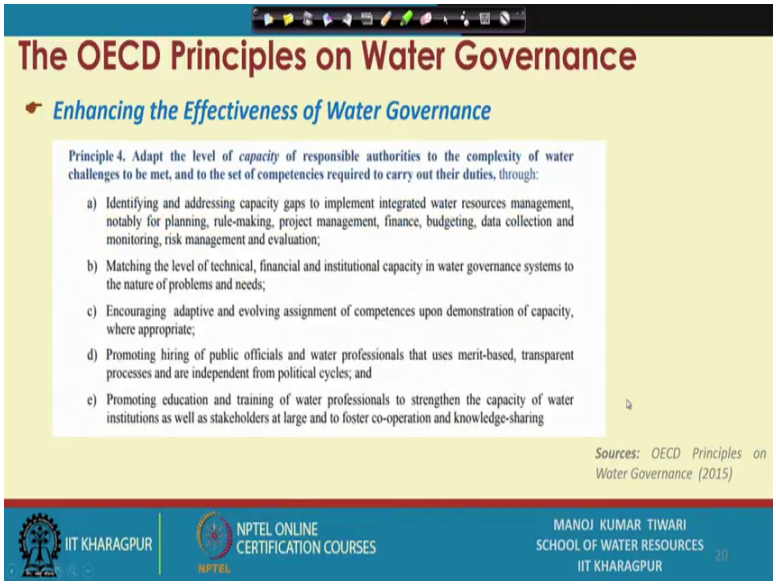

The fourth principle on enhancing the effectiveness of water governance talks about the adaptation of the level of capacity of responsible authorities to the complexity of water challenges that are there and that needs to be met and to set the competencies required to carry out their duties, ok. So, for this purpose one need to identify and address the

capacity gaps, ok, what are the capacity gaps ok. Capacity gaps the basic implementation targets right and in other sectors like in the planning, in the rule making, in the project management the budgeting data collection monitoring data assimilation, and risk management then when these capacity gap let us say you capacity gap, primarily we are talking about the human resources ok. So, if for the certain purpose we need the person at a scale of planning we need person at a scale of policy making, we need trained and skilled person in the project management, in the finance, in the budgeting the data collection operation and maintenance of the water systems.

Now, these needs to be matched the level of technical financial and institutional capacity in the water governance system. If there are not people we need those sort of training we need to encourage adapting and evolving assignments of competence upon demonstration. So, all these things needs to be incorporated. Ah, then the hiring of public officials and water professionals that uses the merit based transparent process through transparent process is to be done and such hiring or such inducting the people the officials for designated duties should be independent from political cycles, these are very important and very relevant particularly for our country.

Further there should be promotion of education and training of water professionals to strengthen the capacity of water institutions as well as stakeholder. So, that one can actually get the skilled and trained, people skilled trained and educated people to manage these issues that is one of the very important and key aspect and. In fact, if you see the one of the objectives of running this course because in our in our country if you see most of the water utilities are not managed by people specifically trained and specifically those have acquired knowledge or acquired some sort of training in that field in the water sector or in such field.

What eventually happens that anyone who is with the basic education may not actually be specifically skilled and trained in this sector is joining those positions and then with limited understanding devising making policies making operation and maintenance programs routines and changes and that is why we often see these issues arising. So, that is one of the very key issues and throughout needs to be basically discussed assessed and as the one of the guiding principle of OECD suggests that this is one of the very important aspect in enhancing the effectiveness of water governance, ok. So, one cannot have an effective mechanism for water governance if there are not trained or skilled

people over there. So, these four principles were actually about the enhancing effectiveness of water governance.

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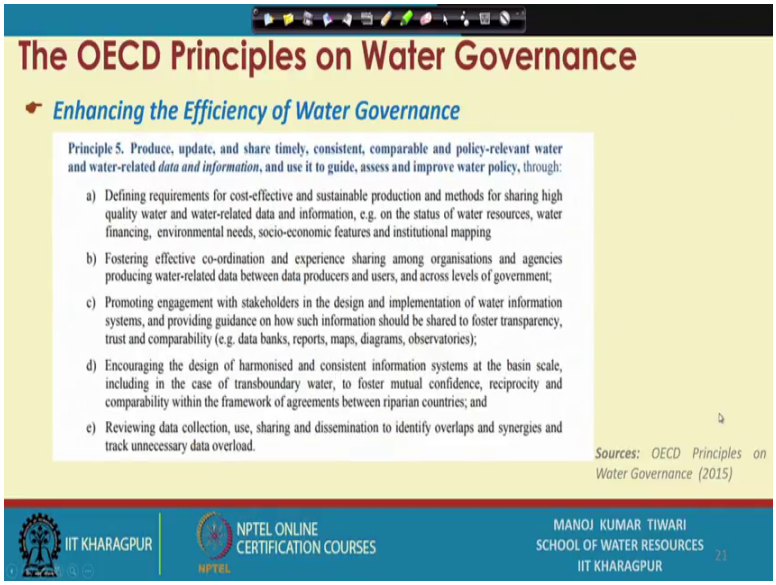

Now, the next set of principles talk about the enhancing the efficiency of water governance. So, for the enhancing efficiency purpose the principle which is fifth principle of OECD with the four already we discussed the four earlier which were targeted towards enhancing the effectiveness now for enhancing the efficiency the fifth principle suggests that produce update and share timely, consistent, comparable and policy relevant water and water related data and information and use it to guide assess and improve water policy.

Now, this basically says about the acquiring, managing and revealing the data and information about the water related services. For estimating efficiency of any system we need to know the input, to know the output, to know the lapses or losses so, all this thing can be only accounted in the form of data. So, it is of very high importance and very high relevance that we must measure monitor and sort of acquire the data and information we have a river system we are making policies for cleanup of that river or we are making policies for enhancing flow in that river.

But, if we do not have data that actually suggests what is the existing quality how far it is from the desired quality or what is the existing flow what should be the requirement of flow, what is the adequacy of the channel to carry certain amount of flow, all the policies

we make without this solid quality quantitative information is actually waste. We can set our design a treatment scheme only when we know what is the input quality and what is the desired output without that it is not of any meaning. So, the data and information is of very high relevance in also.

Now, defining the requirement of cost effective and sustainable production and methods for sharing high quality water and water related information the, which could be the status of water resources, water financing, environmental needs, social economic social economic features and institutional mapping. So, all these data should be acquired there has to be faster effective coordination and experience sharing among the different organization and agencies which produce water related data.

Then there has to be sort of engagement with different stakeholders for the design and implementation of water information system whether there has to be a website displaying the key relevant information of the water system for example, for urban water utility, ok. If they have that entire information system available the data collection and data monitoring and data displaying system intact.

So, a general stakeholder can actually see on their go to on their website or go to their office and figure out, how much water they are getting, how much losses are being incurred, what is his own consumption, at what rate it is he is being charged, whether it is sustainable or not, whether he is overcharged or whether he is under charged, so, all these informations would be accessible to him and then one can actually assess all the efficiencies how efficient is the water system, how efficient is my own consumption, if I am having all that data. So, all this information would be of very high relevance we need to review the data collection, use, sharing and dissemination policy to identify overlaps and synergies across different levels.

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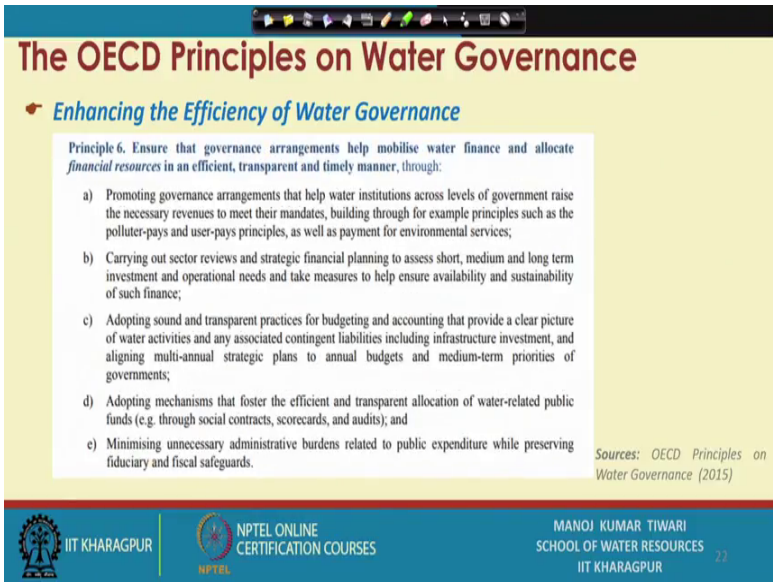

The next principle says to ensure the governance agreement that helped mobilize water finance and allocate financial resources in an efficient transparent and timely manner. So, this says to ensure the efficiency or the sort of best possible utilization of the financial resources more efficient utilization of the financial resources again in transparent and timely manner. So, this says that the government should promote the governance and agreements, governance arrangement to help the water institutions across different level of government to raise the necessary revenue to meet their mandates, their objectives, building through the sort of example principles such as polluter pay principal or user pay principle.

The utility should charge users based on this based on their consumption pattern this we have already discussed earlier. So, all those things would fall under this category. There is need to be carrying out a sector review and strategic financial planning in order to overall holistically manage the short medium and long term investment and operational needs. So, how much is to be invested where and what would be the source of that investment what is the possible likely recovery of the investment whether that investment is worthwhile or not.

So, we need to basically use the earlier discussed budgeting approaches or the project evaluation approaches project evaluation mechanisms to see that whether it is financially

viable or sustainable or not. So, those things should be basically incorporated and as we were just discussing that they need again the trained and skilled manpower.

So, adopting mechanism that foster the efficient and transparent allocation of water related public funds particularly, so, the government money where is being invested how much is being invested that decision making and minimizing unnecessarily administrative burdens related to public expenditure while preserving the fiscal safeguarding is also of very high importance.

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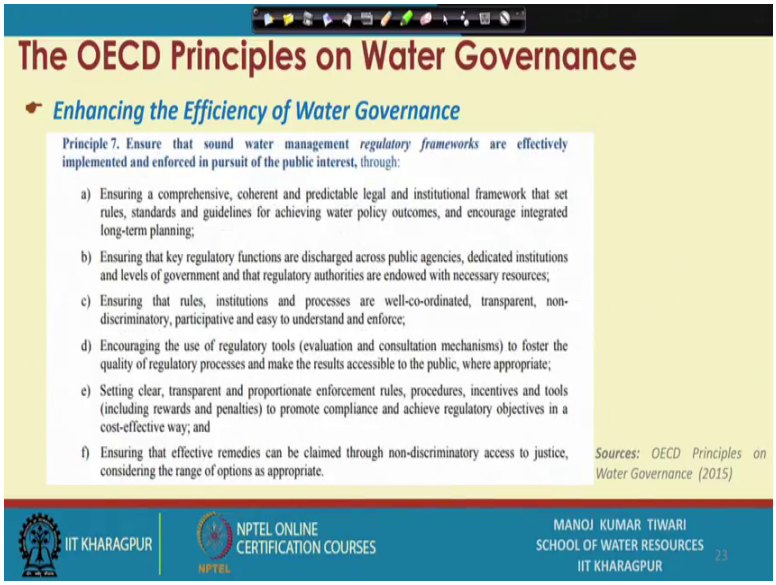

The another principle for enhancing the efficiency of governance system is to ensure that sound water management regulatory framework and effective implementations are enforced in pursuit of public interest and this would be enforced through ensuring a comprehensive coherent and predictable legal and institutional framework should be there which basically sort of set these things up. There has to be key regulatory function that discharge across public agencies, ok, the rules that are there. So, it should be ensured that rules institution and processes are very well coordinated in transparent and non discriminatory fashion.

There has to be encouragement to use the regulatory looks the all the regulatory tools for evaluation and consultation mechanism, so that the quality of regulatory process could be fostered. Then there is setting clear transparent and proportionate enforcement rule and procedures and one need to ensure the effective remedial measures that can be claimed in

a non-discriminatory assess to justice considering the range of the available range of the available setups.

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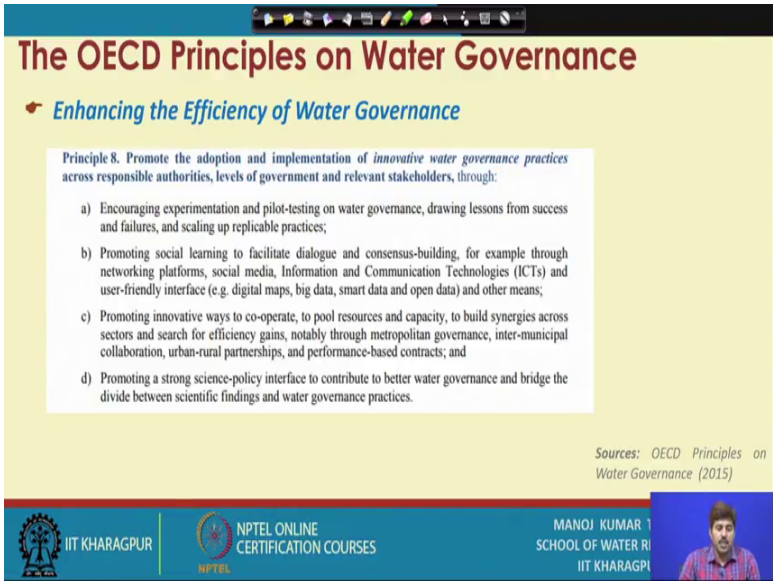

The last principle for enhancing the efficiency is to promote the adoption and implementation of innovative water practices across responsible authorities level of governance and relevant stakeholders. So, this in a sort of considers encouraging experimentation and pilot testing on water governance drawing lessons from success and failures. So, there has to be basically a very important role of research, a very important role of experimentation in the management of water services, ok. For example, a treatment set up; so, which treatment option would be better should be basically experimented and the best one is to be adopted. There has to be a sort of promotion of social learning to facilitate dialogue and conscious building through various networking platforms.

Then the innovative ways for the cooperation the pooled resources and capacity to build synergies across different sectors for efficient gains and sort of the governance inclusive governance structure should be devised and promoting a strong science policy interface that contributes the better water governance and bridges they divide between scientific finding and the water governance practices needs to be worked out.

So, in general overall this principle suggests that there has to be a continuous betterment process scientifically betterment process should be going on through the research,

through the experimentation, through the testing of the management practices, testing of the certain policy decisions and then thereafter the best or the most suitable one is to be adopted for the enhancing the efficiency or for the better efficiency of the water governance.

There are four other principles of the OECD guidelines or the OECD principles which talk about as we said which talked about enhancing the trust and inclusiveness in the water governance. We will talk about those remaining principles in the next session.

Thank you.