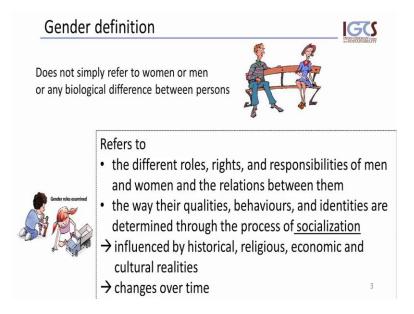
# Sustainable River Basin Management Dr. Franziska Steinbruch Department of Civil Engineering Indian Institute of Technology, Madras

Module 3-1 Lecture - 19 Part – 04

Welcome everybody back to Sustainable River Basin Management, module three-

one, part four. Today, I am going to talk to you about Poverty and Gender.

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Now, let us start with the definition of the term gender and you may be asking yourself, what are we going to talk about this while we are, listening or learning about a course on sustainability in river basin management. Now, the misconception on the term gender is that when we talk about this, we are not talking about simply or referring simply to women or men. That we also are not emphasizing the biological differences between people in general.

What we mean by the term gender is how each of those different roles, rights and responsibilities of men and women and the relationships between them are defined. We also refer to gender when we mean the way their qualities, behaviors and identities are determined and this process is called socialization. It is our environment, that shapes how

our qualities are and our behaviors are valued and this is influenced by the historical, also the religious, economic and culture realities in which we are invaded as individuals. Now, we should keep in mind, that those definitions of what is typical, what our roles are in a society change over time.

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## Changing gender roles

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"..in the past, women were only responsible for fetching water and taking care of household chores. It was **taboo** for them to be seen getting involved on issues to do with borehole repairs and maintenance as it was considered a men's job. Now, that **migration from rural to urban** areas has increased in Zimbabwe, and particularly in Gwanda where men seek greener pastures in neighbouring South Africa, women have been left to fend for themselves."

(http://practicalaction.org/blog/author/marthamunyoro/ "Water problems know no gender", Harare, Zimbabwe, Harare, November 1st, 2012)

So, one of the examples of these changing gender roles, I want to show you here in the context of photo and this comes from publication on water problems, no gender, recently published. And what it says, in the past women were only responsible for fetching water and talking care of households. This is what the usual notion is, that this is the role of woman and it keeps on saying, that it was a taboo for them to be seen getting involved on issues to do with bore well repairs and maintenance as it was considered a man's job.

So, there were clear roles in the society of what women is supposed to contribute in terms of water and what men is supposed to be doing in the context of water provision. Now, things have changed and let us explain in the following way. Now, that migration for rural to urban areas has increased in Zimbabwe, particular in Gwanda, the village this story is talking about where men seek greener pastures in neighboring South Africa, women have been left to fend for themselves.

So, there is a change taking place, has been forced to happen to do a particular situation, which is in this case the migration from rural to urban areas of mostly the men of that village for various reasons. So, this is one of the examples of how changes can be imposed big ticket and naturally takes place and show that repair jobs or maintenance of

bore wells and pumps are not biologically linked to the role, the possibilities of what a women or men is able to contribute to this society.

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Gender and water	
Human bonds with water reflect cultural values and social differences embedded in societies	ABILITY
<ul> <li>Significant differences observed between men and women in terms of:</li> <li>Access to water</li> <li>Use of water</li> <li>Management of water</li> </ul>	
Converted into <b>gender discrimination</b> : Placing restrictions in the autonomy of men or women resulting in <b>inequalities</b> → legally, culturally ('women should not'; 'men take care of')	5

Now, let us look in to the gender and water, how these, those two are linked to each other beyond the water, the example that I just brought up. We can generally say, that human bonds with water reflect the cultural values and social differences embedded in societies. By studying water, how a water is reflected, we also can understand societies better and that we have to take note that our significant differences observed between men and women in terms of first of all access to water, the way water has been used and the way water has been managed. And just by those differences of how women or men deals water in different ways, that has become an issue, that has been converted into what we call the general discrimination, which out of this places restrictions on the autonomy of men or women resulting in inequalities. And those have been structured legally or culturally in various ways, in also the way we express ourselves, the language that we use, what a woman should be doing or man should be taking care of certain thing, what we expect somebody to do.

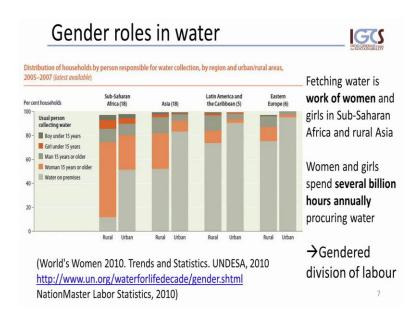
# Gender discrimination Inequalities often favour men in opposition to women and can be found in: Uneven distribution of income control over property Control over income access to productive inputs (such as credit) Access to decision-making resources Access to water resources, rights and entitlements Bias and social exclusion from labour markets Results in: Self-perpetuating often unfair impacts and overall reduced benefits, reduced development options, marginalization, reduced contribution to society

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Now, let us move on into the issue of the general discrimination little bit close on. What we derive from this is, that the inequalities very often favor men in opposition to women and this can be found in, for example, uneven distribution of income, the control over poverties, who controls this and the control over income. The access to productive inputs, such as credits or even the possibility to open individual bank accounts may be restricted to a married woman rather than an unmarried women, a single woman for instance.

The access to decision making resources often in favor of men, the access to water resources, the rights, the entitlement, the end way of we see a bias or social exclusion from labour markets. Now, the result of those favors, which add up become self perpetuating of unfair impacts in general and all this takes on a negative self-reinforcing loop, which reduces benefits. It reduces the development options, it marginalizes women especially and it reduces the possibility of these women to contribute to the society in general. So, this is what is the result of this very small entry or difference in, for instance, how water has been used and managed, which takes up such large far reaching consequences.

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Let us look into the gender roles and water and this is the statistics and the summary of various sources, which I suggest you to pick up and to attain additional information and more data on that. This is an example, which shows us the percentage here of households. And here a separation into rural households and urban households per region, and this is sub-Saharan Africa, this is Asia, Latin America and Eastern Europe here. So, what we can see is this orange block here and the dark orange are those women below and above 15 years and the grey, light grey and dark grey are showing the percentage of households where men and the boys are responsible for collecting water usually.

So, now, we see some interesting differences between those regions, for instance, in Eastern Europe and Latin America. The responsibilities are closely, almost equally, distributed between men and women or girls and boys. It means, that the factor of being woman or being man does not play the major role on who actually collects the water. Then, probably come additional points in it also means, that boys or girls are not preferentially leaving school, because of missing education, missing school, because of their application to collect water.

Now, when we look into the situation on an Asia and Sub-Saharan Africa, we see, that unequally women are involved or responsible made responsible for the collection of water. In Asia, we see, that compared to the Sub-Saharan Africa, almost equally boys and girls are responsible, made responsible in rural areas and urban areas as well. Whereas, the women later on are much more are usually responsible for water faster than man at a later stage. This is much more predominant as been in Sub-Saharan Africa where mostly women and mostly girls are collecting water spending most of the time ((Refer Time: 11:06))

So, we can summarize, that this is a women's work collecting water in at least Sub-Saharan of Africa and rural Asia. And we can also say it from that by looking into the population numbers, that those women and girls spend substantial billions of hours annually in procuring water. And this now takes us to gender division of labour. So, we are in a discrimination pathway and gender division of labour, moreover.

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Gender based water knowledge	IGGS
Conventional science and engineering separates between <b>technolog</b> and <b>technology users</b> , especially when those users are in under-ser	
Common division of labour leads to a division of knowledge	
Experience and problem-solving knowledge will be concentrated wi performing the same task all the time	th the person
<ul> <li><u>Women</u> often have specific knowledge that is important to water in development -know water source areas, water quality-, if tapped in</li> <li>helped to improve the efficiency of water projects</li> <li>re-engineered water supplies and sanitation infrastructure</li> <li>has also improved school attendance of girls</li> <li>→helps to break the cycle of poverty</li> </ul>	

Now, there are various ways of interpreting this in towards the positive and towards the negative impact that gender based labour division. It takes us to the fact, that there are, is, water knowledge being developed. Traditionally, in conventional science and engineering, we clearly separate our technology development from the end user, from that technology user and this becomes more predominant when the technology is being developed for a user in underserved each region. That is when the technology developer assumes, that anyway the user will only be the user and not understand anything about what goes into these technologies.

Now, when we look into the division of labour, then we can actually draw the conclusion, that this leads to a division of knowledge as well, which in itself means, that there will be a lot of experience and problem solving knowledge concentrated in this person that is performing one and the same task all the time. And if you take this along this means, that women have specific knowledge on an important, which are important to

water infrastructure development. They know where what sources are, they know where good water is, they know where, at what times there will be a water available and that knowledge can be tapped into.

Now, let us keep in mind, that when you talk about women, we talk about 50 percent of the population, so it is not a minor group. We are referring to, we speak about 50 percent of our global population, that actually heads by collecting day by day water in a quiet, by accumulates that knowledge, which if tapped into have to improve the efficiency of water projects. This is because women are more serious about good use of funds, for instance, towards improving water supply or water condition in the area. And that also has resulted in reengineering of water supplies and sanitation and infrastructure and for that reason, those infrastructure have become more valuable and been taken up by population and have been better maintained as well. And as a result, also the school attendance especially of girls has substantially improved by building in those experiences this knowledge into how infrastructure will design as a consequence. So, this overall has to break the cycle of poverty. We will come to this.

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# Gender aspects to engineering solutions - Examples

"Why India's sanitation crisis needs more than toilets" (BBC, India News 6 October 2014)

"Women could possibly be persuaded to help with education efforts - studies show that they are likely to use toilets more than the men."

# Use of Pumps for Irrigation – technology alone does not improve decision making power

- Larger fields can be brought under production
- Large assets are owned by men and Sales are controlled by men
- Technology is more labor intensive

 Technology is culturally inappropriate, therefore not taken up by women (Gender, Agriculture, and Assets: Learning from Eight Agricultural Development Interventions in Africa and South Asia, GAAP NOTE, Nov 2013)

Now, let us look into examples of how gender matters in aspects of engineering solutions and water knowledge especially. And I have picked one publication, one recent article in the BBC India news, the title was why India's sanitation crisis needs more than toilets. And what is stated here I am quoting here, that women could possibly be persuaded to help with education efforts. Studies shows, that they are likely to use toilets more than the men. So, this is an example of how water infrastructures have been put in place. Engineers have done their best to develop good model, which are economically viable, which keep water clean, keep soils clean. But it is from a social perspective and cultural aspect was not taken up by the other 50 percent of the population, which in this case are the men. In other example here, from a publication on general agriculture and assets, where pumps for irrigations were promoted, subsidized or the infrastructure is been put in place to manufacture pumps for irrigation. And what the outcome was, that technology loan does not improve decision making power, it does not improve the status of women in compared to men farmers. This is because by introducing pumps for irrigation, larger fields can be brought under production, but those fields are not automatically, the land is not automatically been owned by a women. Although women may be working on those fields. They probably will be employed by men or household sizes will increase.

Simply, it is not changing the position of women in this context. Also, large assets are owned by men and the sales are also controlled by men. So, whenever there is a pump for instance, an asset that is usually being owned by men and what the outcome is, the surplus is, the value addition will also be controlled by men. What we also see from this survey is that technology is very often more labour intensive, it does not automatically improve working condition or efficiency perceived by the small scale farmers.

Yet another aspect, that technologies are, like in this case of the pump, were considered as culturally inappropriate and for that reason women did not take that technology up. So, there is simply started somewhere nicely and when some officer or some extension is passed by, they will take it out of the store somewhere and maybe even able to demonstrate how it works, but they will not actually be using it for cultural reasons. So, those things are very important and are showing that the differences, engineering solutions are ending up on both sides of the men and women in general.

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Now, let us look into water and women specifically. There are two ways of how this is usually being simplified and both have their positive points and both of their topics. One of the ways of seeing the women in a context of water is, that they play a central role as you remember from that Dublin principles in the provision management and also, the safeguarding of water. And women know where the water is, how would you actually know where to dig for water, how deep you have to go and you have to, where water as far as possible, as close as possible to your house as an example here, extreme.

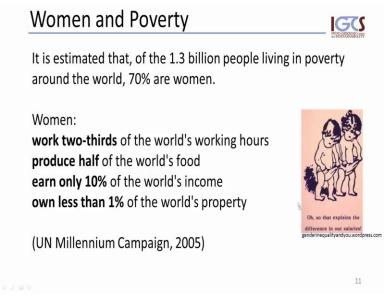
The other part of how women and in the context of water often seen is to put them alongside other marginal and vulnerable groups. This is putting 50 percent of our human population into the category of the marginal or a vulnerable group or special case group that has to be treated separately. So, it is in a very, very extreme as well, but it also has its needs, just to reflect on this an example that you really see.

You can see this sometimes, which actually shows the opposite where in this case, men, children and disabled people or differentially abled people are clubbed together and the women are separated out as a group. So, this is a way of calling attention to exactly this way of categorizing people just on their sexual or biological background to certain groups.

Now, the water needs, if you take this together, are socially and culturally constructed rather than ordained by biological, technological and our market imperatives. So, this is

to just emphasize this again, that the water needs have nothing actually to do especially with the gender or women or men discussion.

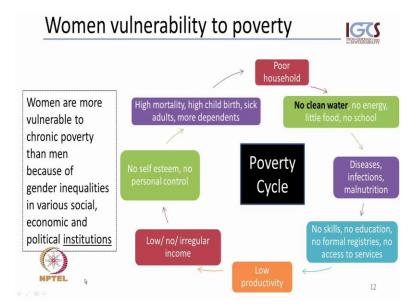
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Now, but also very strong relationship women and poverty, which we need to keep in mind and analyze our projects against these criteria. It is estimated, that of the about 1.3 billion people living in poverty globally, 7, 70 percent are women. This is remarkably high number of people living in poverty and especially women in poverty. And this is in addition and this is globally two women work about two-thirds of the world's working hours, they produce half of the world's food as famers or in industries. They earn only 10

percent of the world's income and own less than 1 percent of the world's properties.

So, this is sort of indicative to his huge number or huge percentage of women affected by poverty and caught in this situation. Now, not especially a friend of these cartoons, but this actually brings it down quite well, that when we talk about gender, it is exactly not, what is meant.



Now, let us look into the context of women and their vulnerability to poverty and let us just reflect the point, the poverty cycle, what do we mean by this. We can bring together those different fears. We could start anywhere here. What we could start here was on household, which is living under poor conditions, poor household. So, this often comes along no access to clean water, no access to energy to produce food, for instance. There will be only little amounts of food available and however, we know many way of attending school.

Then, beside of that diseases infection, malnutrition and so on. So, following from this will be the there is no skills, skill development, no education, no formal registry. People may be in no system registered as existing or in need or to be able to access some formal subsidies or some formal support and there will be automatically no access to public or private services to service in general.

This also has its consequence on very low productivity, very low or no or irregular income. That irregularity is actually very important factor to the poverty cycle. Its, there is little meaning in earning once every time a large amount of money. If that is happening only in very sporadic fashion, then the consequence very often is, that there is no self-esteem and there is no personal control over your personal life. The decision that you can take are very much limited or taken by the outside world. There is usually high mortality in such conditions connected to a very high child birth, sick adults, children taking responsibility of adults or the elderly taking the place of adults and also more dependence, more mouths that have to be fed or looked after. So this is a circle very hard to break and which in itself very often is self-reinforcing.

Now, women are more vulnerable to these, chronic poverty. Chronic is when this is continuing over generations, simply passing on to the next, next generation here. And this is simply because of in the gender inequality in which, occur in various social, economic and political institutions and the term institution means, that could be a marriage, that could be a work arrangement, that could be arrangement of sharing resources or working on a farm or sharing a piece of land. Those are institutions in this context.

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Mainstreaming Gender	S
Integrating women in water agenda →transforming this agenda to better reflect women's needs →include equality and equity in water rights	
Requires gender-specific activities and affirmative action whenever women or men are in a particularly <b>disadvantageous position</b>	
Gender-specific interventions cari target women exclusively, men and women together, or only men	
<ul> <li>Shall enable them to participate in development and management effor</li> <li>Shall enable them to benefit equally from water</li> </ul>	<b>ts</b>

Now, look let us see how these things can be changed and the term for that in especially the water management sector is main streaming gender. This main streaming has nothing to do with the stream or a river. In this case is this simply saying streaming or streamlining certain thoughts, certain decisions along specific line. And in this case, we speak about gender. We are not speaking about mainstreaming women's issues or main streaming child issues or so. We are speaking here about mainstreaming gender and this means, that priorities to indicate women in general in water agenda. That means, these agendas have to be transformed to better reflect the needs of women and they also have to include aspects of equality and equity concerning water rights for women. But, it also requires a gender specific action, gender specific activities and especially affirmative action and this whenever a woman, women or men are in a disadvantageous position.

So, although statistically and globally, women are more affected in some local or some region men out of the cultural context may be in a disadvantageous position in terms of access to water or decisions on water resources management. So, when we talk about mainstreaming gender, both of these sides should be part to same opportunities and same opportunities to rights and decision taking.

So, that means, that there should be general specific interventions, which should target women exclusively or they should target both or they should target men depending on who actually is in disadvantageous position. What shall overall be achieved is to enable the participation in development and management effects and the benefits should be equally accessible gained from the water resources management. So, this is what we want to achieve is mainstream agenda.

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Suggestion
Reflect about the following in your environment:
Gender blindness: questioning of gender relevance and failures to recognize gender discrimination
Gender neutrality: Assumption that policies, legislations, budgets, etc. are gender- neutral or gender issues are automatically taken care for while this hides actual realities
Cultural stereotypes: Are cultivated and misleading (e.g. men earn the money and women take care for the family)
Lacking self esteem or powerlessness: Lacking involvement, explicit education and training
Policy evaporation: Good talk and insufficient action, "paper tigers"

Now, before I stop on this module, I want to suggest you to dig into some aspects of the gender and poverty issues. We should reflect about the following in your specific environment, where you live, where you work, where you learn, where you have been growing up and specifically look into first the gender blindness, we call it, that is, meaning questioning of gender relevance and failures to recognize gender discrimination. Can you see this in your environment or what has been going on about this?

The second is gender neutrality, which means, that it assumes, that our policies and legislations or budgets are actually gender neutral or those issues are automatically been

taking care for. When you look into these in detail you actually see, that things in reality are quite different. So, it is not automatically happening, although our legislations suggest so.

The third what I want you to look into is the cultural steel types, which are cultivated in way by our media by a way of using language and which are very often quite misleading our jokes that we may use. That for instance, it is, consider it for instance, men ((Refer Time: 31:50)) or women take care for the family, things that are simply cultural steel types. And may be, could be viewed in a quite different way and the force of this that I would like you to look into this is the lacking self-esteem or also call this powerlessness, which means, the lacking involvement. The lack of interest to get involved or the lacking targeted or explicit education or training in these issues.

The final, we would call policy evaporation. On these issues, we are, there is a lot of good talk may be going on and insufficient follow up or insufficient action. There may be something like paper tigers that some in situations are specially created or some agencies been set up, which have no power in itself and as such any good intention will be evaporated in this context.

So, let us take this home and you should read literature on this and try to see and sharpen your eyes on these points here and analyze this for yourself. So, at this point want to stop this module and I will see you next time again.