United Nations Sustainable Development Goals:
17 Goals to Transform Our World
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Module 14
SDG6: Clean Water and Sanitation

Hello everyone, I welcome you all to this module 14 of course UN SDGs. So, in this module we are going to cover SDG 6 that is Clean Water and Sanitation.

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So, let us see, 2.2 billion people around the world still lacks safety managed drinking water, safely managed drinking water point to focus 2.2 billion and the world's population, just few

days back it was declared by UN that we have crossed 8 billion number including 785 million without basic drinking water.

So, the other two different categories they mean differently. So, safely managed drinking water 2.2 billion that means more than one fourth of the human population is not facilitated with the supply of safely managed drinking water you can see the picture here and basic drinking water 785, million. Well, why it matters again in the chain of if you see these SDGs, the way we are progressing, from the 12345.

So, very much, basic survival, necessities then survival, they do some good, health and wellbeing and in a good futuristic, scope, education then, equality, gender equality, and then comes right next to this is clean water and sanitation, because after food, health and education and gender equality, this is water and sanitation. So, that is in the line, you can see from the basic necessities, portion.

Well, so, what do we understand, about the goal in this context? Well, very simple, to ensure access to safe water sources and sanitation for everyone. So, if you, if you kind of read, in the history, you will see some incidences when microbial, life was not kind of discovered, properly. So, in the streets of London, it used to, like, flow, you often sewer, several times, and they used to contract cholera and other dysentery and other, such a, diseases. And they were not aware, like, why is it happening? How is it happening and all. While drinking water also, they used to see, it is, it looks clear, it is nice.

So, just by looking at the water, they used to kind of understand that it is kind of a clean water, it is potable water, but that was not, so just remember, is the situation of a London, we are talking about, us, I think a two centuries back or so. And well slowly, it was discovered, even if the water looks, clear, it looks, transparent and there is no visible, issues in the water, but it might, contain, other microbial presence and you things, which can prove fatal also, in most of the cases in this became a kind of, pandemic kind of a situation and a lot of people actually died, and the whole place was affected very badly.

Well, so, this, ensuring, this thing of potable and wholesome, safe, source of water is essential. Because otherwise, it is going to put you in a very dangerous and, an uncomfortable situation. Well, why access to water sanitation and hygiene is a human right. So, you see, like, this has, listed down under human rights, it is so essential, so basic, it is considered so fundamental. So, that is the, point over here.

Well, this has water, sanitation and hygiene. So, three factors, three things are there. The demand for water has outpaced population growth and half the world's population is already experiencing severe water scarcity at least once a month year, that is one month a year so, what is essential not only to health but also to poverty reduction, food security, peace and human rights, ecosystems, education, etc.

Well, it is just kind of theory and this has been doing the rounds for quite some time that if third world war might happen, it might happen over, water well I God forbid should not happen it must not happen at any cost there should be no reason to go for the World War 3 definitely, but yeah it proves the nature of, our vital, the importance for the survival of the society for the, our communities people countries, the water is so important.

Even if now if you see lot of countries they have disputes a lot of states also they have no disputes over, sharing of water resources or sharing of waters from rivers, lakes and so on. So, yes it is a cause of friction at several places. And the thing is if this is viscosity is going to grow and if the demand is going to also increase, the situation is going to be grief. Why? And who knows, it may kind of destabilize the peace and security. So, coming down, from that, very much at the global level, at the country level to the individual households level.

A safe supply of water is very essential for maintaining health and hygiene of the family, every members including kids and elderly. So, it is very much important and of course, for the ecosystem. So, the planet Earth, has such a sustainable life, because of, presence of water right in the water, those hospitable and comfortable, kind of environments and actually got generated and life began from single cell, life forms to multi cell life forms, and the whole thing has evolved.

Well, that is our understanding till now. And even with any organic matter, if you see our human body or maybe vegetables, fruits, cereals and grains, they all are possible because of water and a huge percentage in our bodies is also water. So, water is so essential, we cannot live without water. So, well, I hope this is a common fact we all know. So, I am not going to, emphasize on (())(7:20) that part, why water is essential, we all know, but what can be done and how and all that.

So, we will be discussing, more, from that perspective target perspective. So, let us proceed. Nevertheless, countries face growing challenges linked to water scarcity, water pollution, degraded water related ecosystems and cooperation over transboundary water basins. So, we were discussing, because in nature elements are not bounded by human, control, nature's have

their own… Nature elements have their own ways of, transversing across, the planet water, cycle.

It kind of takes the form of steam from the vapor, from the oceans, then it goes back to the sky then cloud then, it in the form of different types of precipitation falls down, again, it travels. So, that ecosystem if you see is, very much balanced and kind of sustain, an ecosystem for millions of years.

So, if that also gets disturbed, the all of the life forms and all the things which are coming from the nature are also going to affected. So, that thing and these, water systems, they work actually transboundary, situations you can see over here transboundary water basins, that means, this boundary is drawn by humans, but these elements are transboundary, they cannot be bounded by boundaries, you cannot say this much of air is mine, that much of air is yours. We cannot divide that. So, that is why it is essential, it is a common global resource. And we have to see it, from that perspective.

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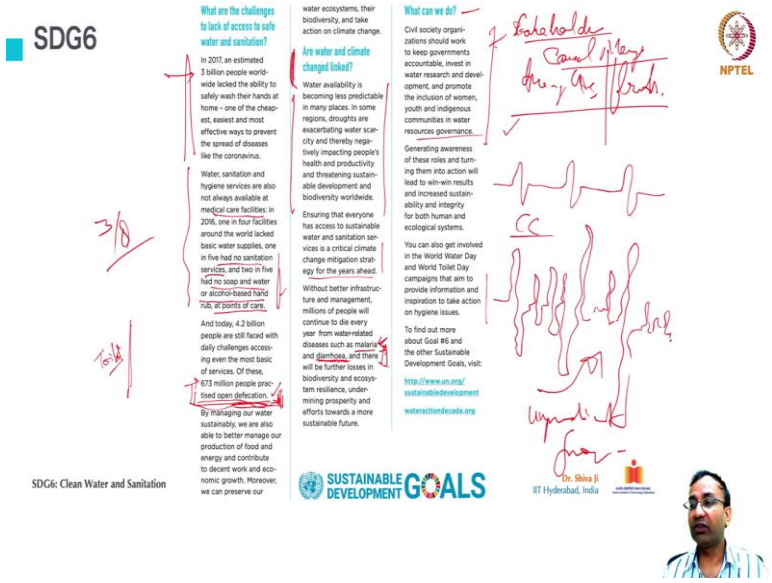

What are the challenges to lack of access to safe water and sanitation in 2017 and estimated 3 billion people worldwide lack the ability to safely wash their hands at home, one of the cheapest easiest and most effective ways to prevent the spread of diseases Coronavirus, so we knew we came across these measures since the beginning itself of this pandemic COVID-19 that maintaining clear clean, hygiene personal hygiene is very essential for, keeping distance from this virus.

So, even if you have contracted by, touching, some object or maybe coming in contact with somebody. It is likely that if you wash your hands clean yourself, if you take a whole-body wash and all that bath, after coming from outside, so you will be very much likely that you will wash off that virus also because that virus could not sustain the, soupy, that environment.

So, that was an essential, so having no supply of water, at least for handwash was going to be a crucial thing. And a big number of people households, they were deprived of even this basic, need. So, we see, that figure stands at 3 billion people, 3 billion out of 8, lack the ability to safely wash their hands at home. So, water sanitation and hygiene services are also not always available at medical care facilities in 2016, one in four facilities around the world lack basic water supplies.

So, even medical care facilities were also inadequate. 1 in 5 had no sanitation services 20 percent and 2 in 5 had no soap and water or alcohol-based hand rub at point of care, 40 percent. So, these are the, realistic numbers, coming from across the world. These are global numbers. And of course, there are some well-equipped countries, but there are some very badly managed and resource deprived countries also.

So, it is an average and today 4.2 billion people are still faced with daily challenges accessing even the most basic of services of these 673 million people practiced open defecation. So, maybe because they do not have, water closets, facility at home or toilets and your stuff. And that is the reason they are forced to go for, open defecation otherwise, nobody would to, but majority of this group actually families, they do not have such resources.

If you may remember a few years back there was this big drive at national level to construct toilets, for families households, who do not have, this as a indoor in house facility. And a millions of, toilets were constructed, across, the country to, kind of get rid of this practice of open defecation and similar kind of situations are there in many other countries, Sub Saharan many African and other South Asian countries.

By managing our water sustainability, we are also able be to better manage our production of food and energy and contribute to decent work and economic growth. Moreover, we can preserve our water ecosystems, their biodiversity and take action on climate change, our water and climate change linked. So, this connection, what do you think? Are they linked? Definitely, water availability is becoming less predictable in many places. Well, why is that happening?

Let us see, in some regions, droughts are exuberating water scarcity and thereby negatively impacting people's health and productivity and threatening sustainable development and biodiversity worldwide. So, you may be aware the droughts and floods are not new to the, planet right they have been occurring, but from before also, but there was a kind of pattern.

A regular pattern a predictable sort of predictable, pattern, but in the recent years, when the whole phenomena of climate change has happened or is happening. During this time the frequency of these occurrences have gone like, high plus now there are more, the frequency has increased and now this has become unpredictable sometime, sometimes you look at okay something very bad, in both the dimensions and things that.

So, now, this kind of pattern has become, unpredictable plus the frequency has increased. There are more number of severe conditions where there is too much of water or there is no order at all. So causing floods and droughts. So, this frequency has increased and its magnitude has also, that actually issue is bringing lot of miserable, condition, for places.

Ensuring that everyone has access to sustainable water and sanitation services is a critical climate change mitigation strategy for the years ahead. Managing this water resource and supplying and ensuring this supply is a big challenge, without better infrastructure and management millions of people will continue to die every year from water related diseases such as malaria and diarrhoea. Yeah very common most common waterborne disease or water caused diseases if not waterborne.

Well of course diarrhoea is a condition which is caused by amoebic dysentery and look at all of those things. So, when they go in your digestive tract, they create issues, malaria again is, mosquito, borne, disease and those mosquitoes are actually bred in the, standing in a stagnant, water decaying water. So, both of these actually are the biggest, killers of humanity even, today.

So big challenge related to water and there will be further losses in biodiversity and ecosystem resilience and remaining prosperity and efforts towards a more sustainable future. Well, what can be done? Civil society organizations should work to keep governments accountable, invest in water research and development and promote the inclusion of women youth and indigenous communities in water resource governance.

So, if you see there are mention of women indigenous communities and including all of those who people who are in stakeholders, in some way and bringing governments and

accountability in this management and supply and resource role fulfilment. So, all of these if you see are the important data stakeholders. So, if you draw if you draw a causal map of these water, related, issues, related to maybe your place your particular place, you will be able to identify those important stakeholders nodes actors and their interrelationships, who is, able to conduct, or play their role nicely effectively, with the accountability. And where there is, some improvement needed. So, accordingly, you can, propose your interventions and suggestions.

Generating awareness of these roles and turning them into action will lead to win win results and increase the stability and integrity for both human and ecological systems. You can also get involved in the World Water Day and World Toilet Day campaigns that aim to provide information inspiration to take action on hygiene issue. So, well at local level, definitely you can look for opportunity to associate yourself with the different bodies or you may also take the lead and take a responsibility and, begin, with some initiative with your own hands.

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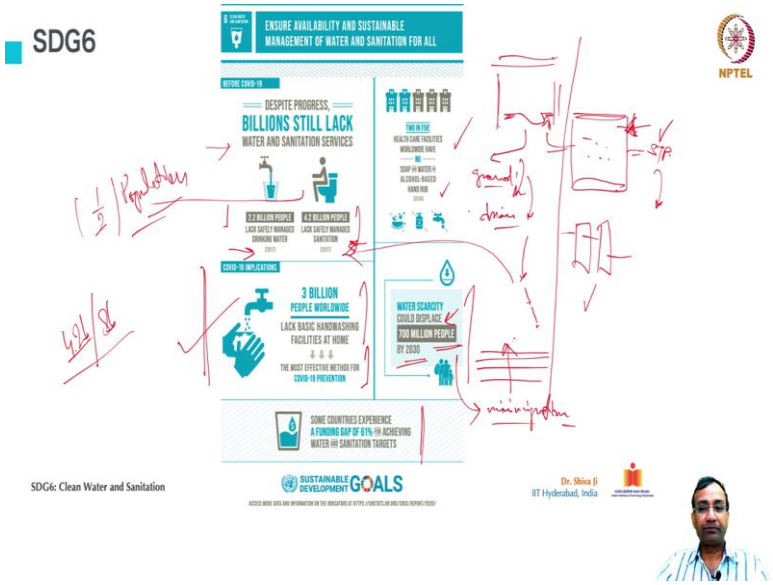

Let us see some numbers. So, before COVID-19 despite progress billions still lack water and sanitation services, 2.2 billion people lack safely managed drinking water, we saw as per 2017 and 4.2 billion people lack safely managed sanitation. So, twice almost, twice off this. So, almost half of the population you can easily conclude is 8 billion.

So, almost half of population of the world lacks safely managed sanitation, well what do we mean by safely managed sanitation? One may ask, so whenever there is this new toilet facility, in your place. So, how this thing is kind of getting discharged, through to may be a septic tank over here or maybe it goes to Serious Treatment Plant STP and then from there it

goes to, other things for recycling of water or solid waste segregation and treatments and all of those things.

Or it is just getting kind of discharged in the ground loosely or maybe down the drain loosely without any control, without any treatment, drain sewer etc or maybe it is just going in the open drain, perhaps in your village in a town or place wherever you are, causing you a lot of issues and smell stench and harbouring, mosquitoes and spoiling the soil, spoiling the water bodies and things that.

So, of course all of these, are the causes which you can definitely say are not safely managed solutions, if it goes to a proper, septic tank and with the new twin chamber, for segregation, filtration and treatment. Then it is alright, if it goes to the STP is wonderful. But if not, definitely this qualifies for not safely, managed sanitation solution.

So, it means, half of the population, perhaps a little level half of the population because we have just reached 8 billion and this is 4.2 billion. So, just a little over 50 percent, population is not in good shape. So, and further aggravation because of COVID. So, 3 people, who are 3 billion people worldwide lack basic hand washing facilities at home, the most effective method for COVID-19 prevention.

So, how much this has been propagated to the people? 2 in 5 healthcare facilities worldwide have no soap and water or oil based, hand rub. So, 40 percent again, here also, water scarcity could displace 700 million people by 2030. So, migrations, even mini migration and things like that. So, in the summer months, it becomes so bad like there is no water at all, from any sources that people are forced to, flee. So that is the thing we are talking about over here displacement of that people communities, some countries experience a funding gap of 61 percent for achieving water and sanitation targets.

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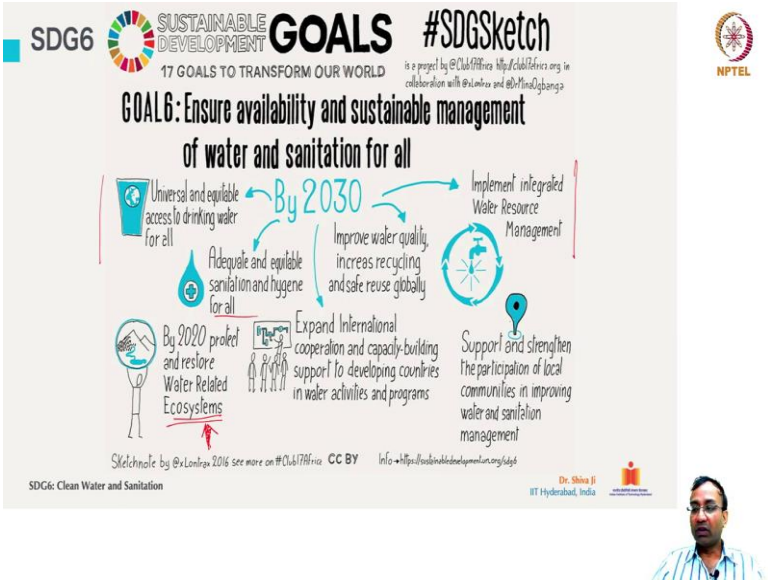

Yeah, so, what does it say, if you see inside, goal 6 its targets. So, universal and equitable access to drinking water for everyone by 2030, adequate and equitable sanitation and hygiene for everyone, 2030 protect and restore water related ecosystems. So, this restoration, approaches should have been completed by 2020.

Expand international cooperation with capacity building support to developing countries in water activities and programs implement integrated water resource management, support and strengthen the participation of local communities improving water and sanitation management.

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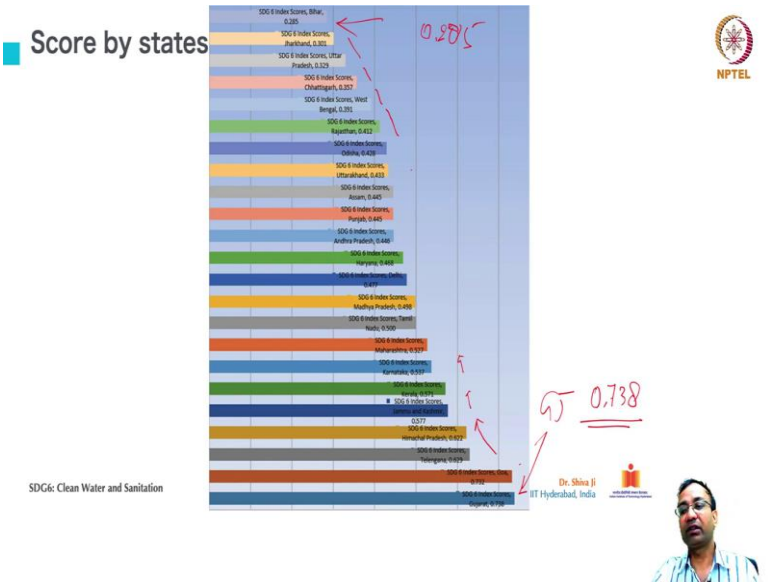

So, here we can see the, score, by different states. So, different Indian states how they have scored. So, it is relative comparison over here given on SDG 6. So, it is best topped by Gujarat. And the value is around 0.738. And this is the lowest it is found in the state of Bihar with 0.285 and then Jharkhand then Uttar Pradesh, Chhattisgarh, Bengal, Rajasthan, Odisha, etc and then hear from the top is Gujrat then Goa, Telangana, Himachal Pradesh, Jammu Kashmir, Kerala, Karnataka, Maharashtra, Tamil Nadu, Madhya Pradesh, etcetera.

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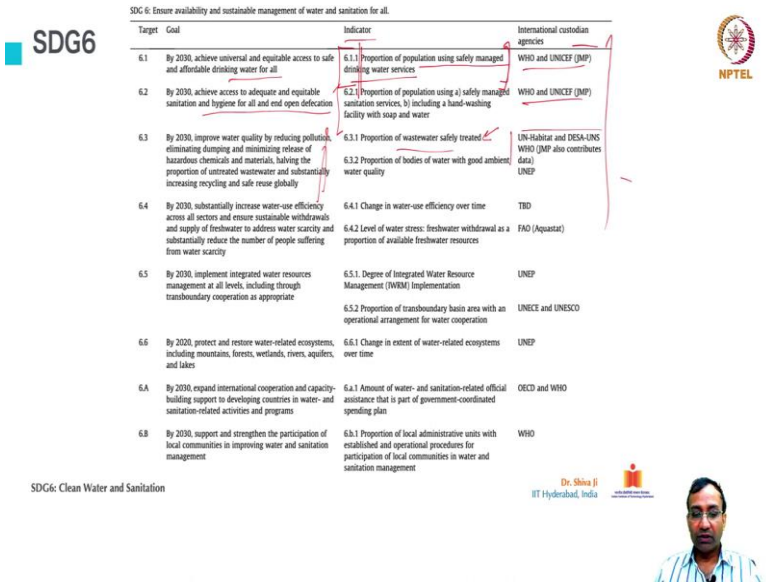

So, this is the score, achieved by these states and some detail, goals, targets and indicators. So, and custodian agencies also you can see on the right side, which agency majorly controls, this. So, we will see in this table the goal and the indicators in custody and agencies, international agencies by 2030 achieve universal equitable access to safe and affordable drinking water for all and proportion of population aging safely managing water services. So, you can check through these facts.

And it is monitored by WHO and UNICEF these are the custodian agencies, regarding equitable, sanitation and hygiene for everyone proportion again by checking the proportion again managed by the same, improve water quality by reducing pollution, eliminating dumping etcetera, so, proportion of wastewater safely treated.

So, total to safely, treated with that volume you can compare and it is monitored by UN Habitat and DESA UNS, WHO and so on. So, you can see all of these, targets are listed on over here and the indicators have given how do you assess it and who is going to take care of this.

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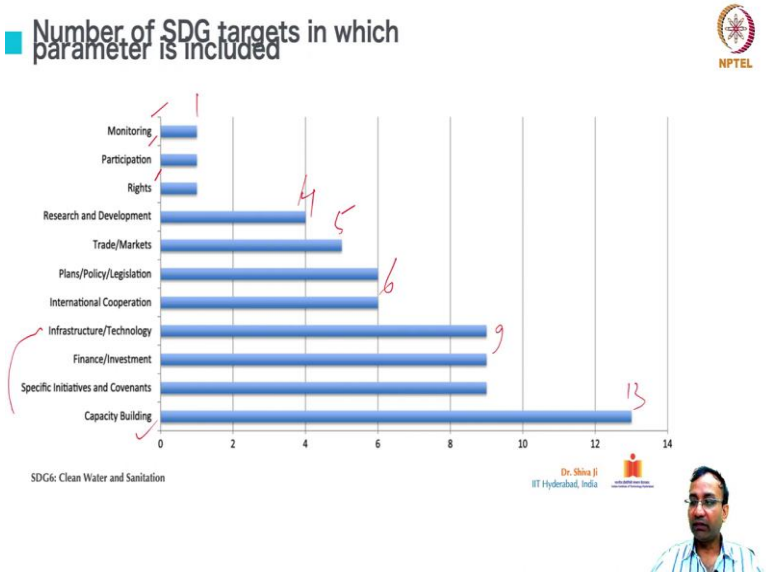

And number of SDG targets in which parameter is included. So, those targets you can see for monitoring participation rights, and then, is closed 1 and then we have research and development 4, Denmark is 5 then these two plans policy legislation international cooperation at 6 and here we have at 9, and these are infrastructure technology financial specific initiatives and capacity building are 13.

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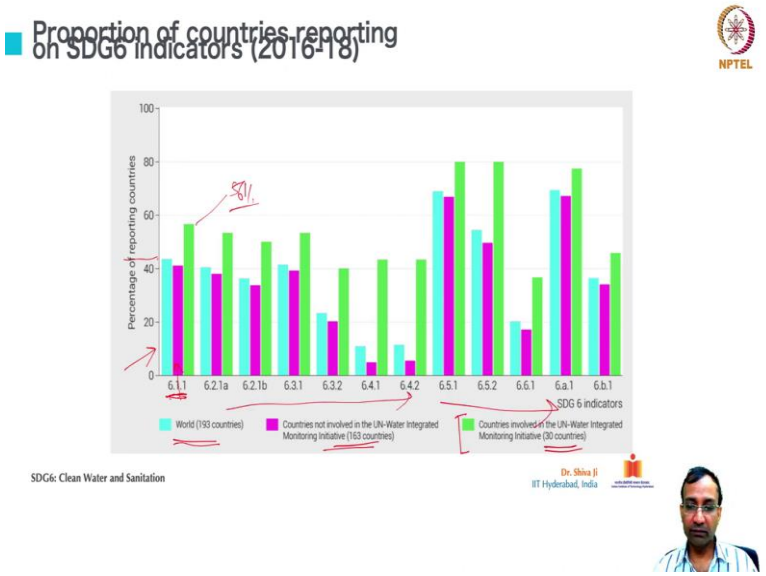

Again proportion of countries reporting on SDG 6 indicators so, percent is of are reporting countries you can see over here, this is the world's 193 countries, countries not involved in UN water integrated monitoring initiative 163 and involved in UN water integrated monitoring initiative 30 country only, this is shown by green.

So, here you can see 6.1.1 that target and this is the percentage average of the world we have around 43-44 and then red not involve 163 countries representation is close to 41, then 30 countries who are involved in this integrated monitoring initiative, for them the actually this percentage stands at around 55-56 percent or something that. And relatively you can see for all of these, indicators.

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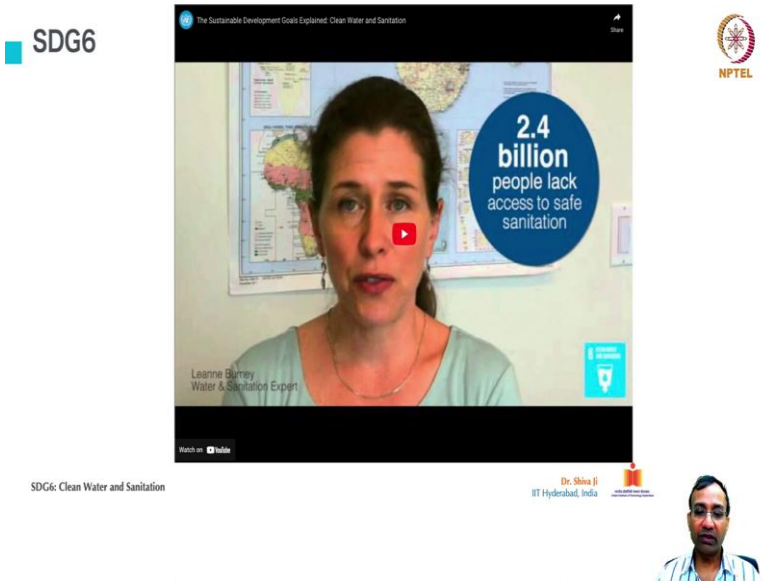

I would recommend to watch this video, when you can watch it in your free time, so, if you see this is a picture of a girl closes a pit latrine in a small village between Gabu and Bafata regions, which had just been declared open defecation free. So, very recently this has happened you can see this is a source.

And so, now, what that means just before this in earlier the society used to have an open defecation, pattern. And recently they have changed, but this also looks very crude and not so well managed and all. So, but still at least it is now, placed at one place and I am sure they are, even have management or things for this discharge treatment.

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Now, there is another video I would recommend for everyone to see please have a look. It talks about the importance of this SDG and what can be done about it.

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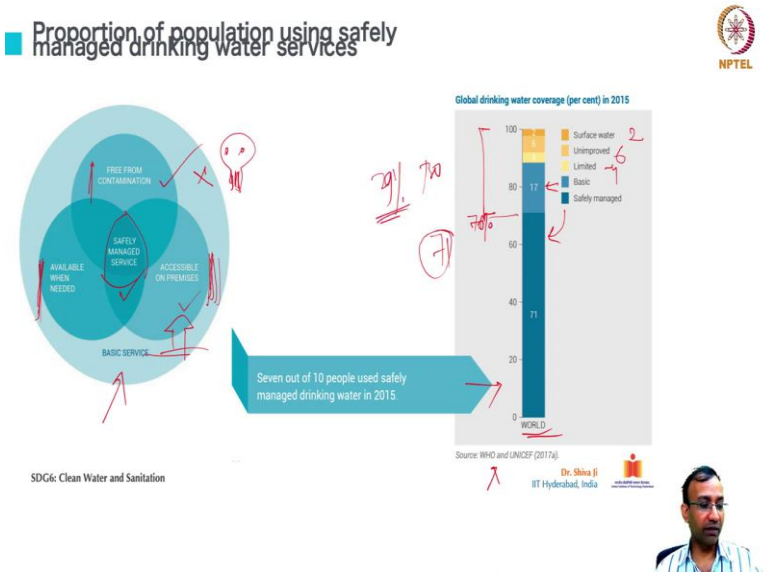

So, moving on, proportion of population using safely managed drinking water services. So, this we can see here in the world, roughly around 70, is 70 percent is safely managed this dark blue basic is for 17 and here it is 71, 17 and then we have 4, 6 and 2. So, 4 is for limited

an unimproved 6 and surface water for 2 percentage, this is as per 2015 is the world's data source from these two agencies.

So, this is where one can, understand like, where we are in terms of, achieving this target of safely managed, water resource. And what are the basic services you can see? What all does it constitute? Free from contamination, available when needed and accessible on premises. So, these are the three, criteria's for which you can say it is a safely managed, water service.

So, there should not be any contamination of any sort. And available wherever you want, you do not have to seek or go somewhere else to collect water and it should be available on your premises at your own place. So, that is the thing, so, if it satisfies the three criteria, this is safely manage water, 7 out of 10 people use safely managed drinking water in 2015. So, this is definitely good percentage but still we can say around 30, it was 29 percentage is yet to get this.

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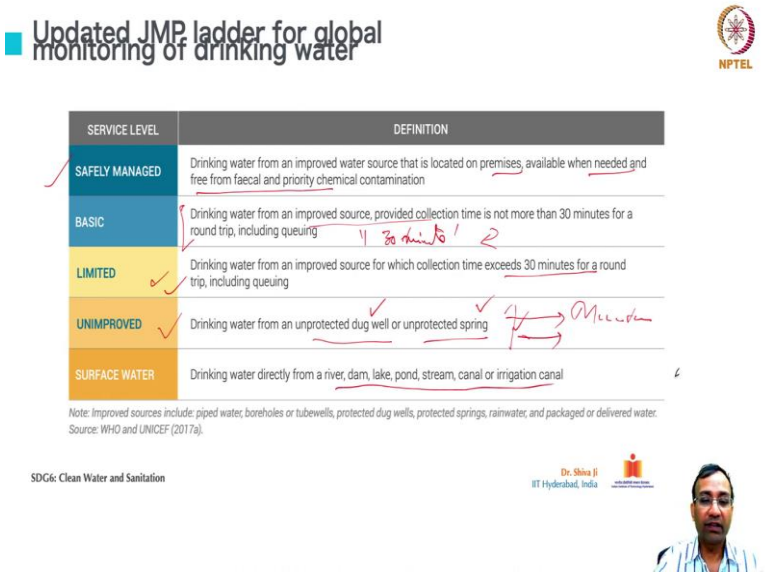

So, definition you can see what is safely managed water we are seeing in from slide one drinking water from an improved water source that is located on premises, available when needed and free from faecal or priority chemical contamination, that is safely managed water. Basic water drinking water from an improved source provided collection time is not more than 30 minutes for a round trip including QA.

So, that is basic water facility which where you need to go out and fetch your own water. But that quality and all of those things should be there, then limited light yellow, we are drinking

water from an improved source for which collection time exceeds 30 minute. So, even this time is also considered, in defining that slab.

So, if it is a basic water facility it should be accessible to and fro in less than 30 minutes if it is exceeding that then it goes in the light-yellow category that is limited service level. Then unimproved service level, drinking water from an unprotected duckbill or unprotected spring. So, where there is no checks and measures or no testing or validation of the water quality, people are in sourcing water from those places, unprotected wells, unprotected springs and natural springs in the open.

Because if they are in the mountain ranges and also there is a high chance that they may not be polluted and all, but if it is found in general populated area, then the chances often some form of contamination, increases. So, that becomes unimproved surface level then surface water drinking water directly from a River, Dam, Lake, pond stream canal or irrigation system when you fetch and use it that is surface water it goes, under that.

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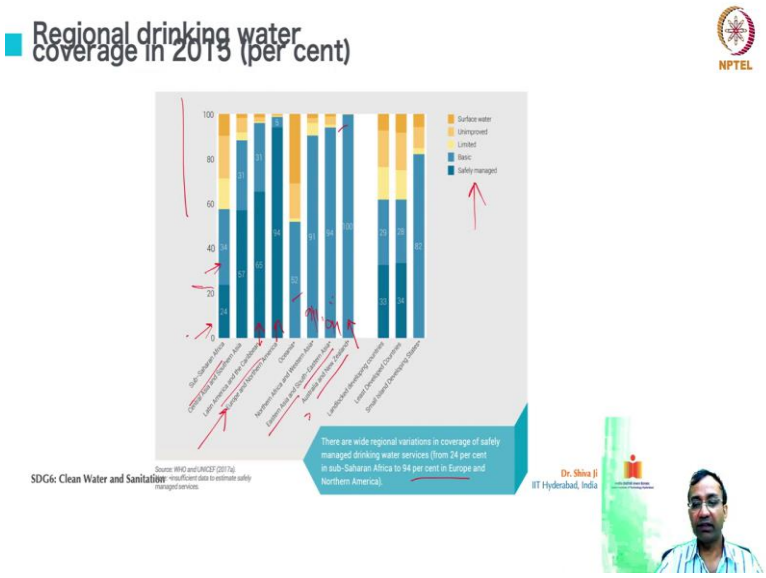

Regional drinking water coverage in 2015 percentage so, we can see in continuation to the previous slide, safely managed dark blue. So, the highest safely managed no dark blue category is present in Europe and Northern America you see this, this column and then second highest column we have from Latin America and Caribbean.

And then, Oceania if you see this, Australia and New Zealand they have almost 100 percent basic service system water supply 94 in Eastern Asia and Southern Eastern Asia and then Northern Africa and Western Asia 91 percent, Oceania only 52 percent but the worst

situation is here Sub Saharan Africa only at 24 percent and basic 34 percent and rest the remaining three are in 40 percent range.

So, this is this distribution there are wide regional variations in coverage of safely managing water services from 24 percent in Sub Saharan Africa to 94 percent in Europe and Northen America this one, so, Eastern Asia and Southern Eastern Asia. So, there is so much of disparity from 24 to 94 in some cases 100 percent.

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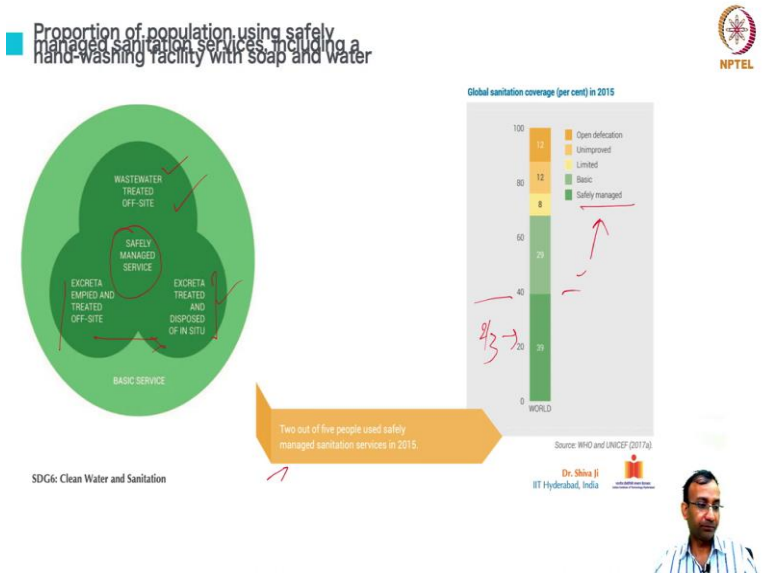

Further proportion of population using safely managed sanitary services including a hand washing facility with soap and water. So, what is safely managed service in this context, first it should qualify wastewater treated off-site not on-site and excreted treated and disposed of in situ. So, then wherever this thing is going on, if you dispose it off properly right there at that place itself it is the most nice and effective, excreta, emptied and treated off site.

So, both of these things, offsite and even wastewater also treatment if it is offsite we can say like, it is a safely managed sanitation service, 2 out of 5 people use safely managed sanitation services in 2015. So, safely manage you can see up to 40 percent. So, two thirds this percentage comes from mostly European and those continent.

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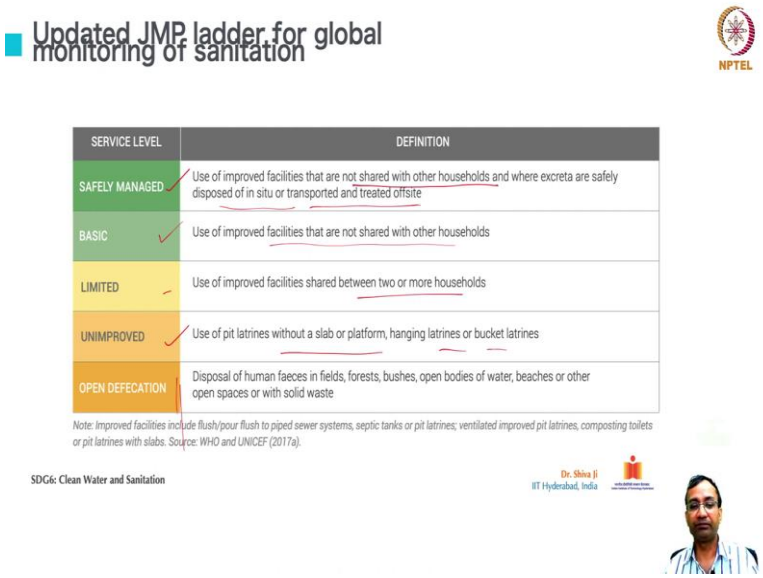

Well, what is safely managed sanitation. So, you can see what is the service level that definition is given, use off improved facilities that are not shared with other households and where excreta are safely disposed of in situ or transported and treated offsite. So, not a public toilet, that does not qualify as, facility to your family.

So, there should be very clear about like, establishing, this fact. Then, basic use of improved facilities that are not shared with other households, limited in use of improved facilities shared between two or more households not more than that. So, 2 or little, few more unimproved use of pit latrines without a slab or platforms, hanging latrines or bucket ledges. So, these are those are unimproved and then open defecation is of course very clear, disclosure of human faeces in fields, forest, bushes, open bodies, water beaches etc. Just in open right so that is open defecation thing.

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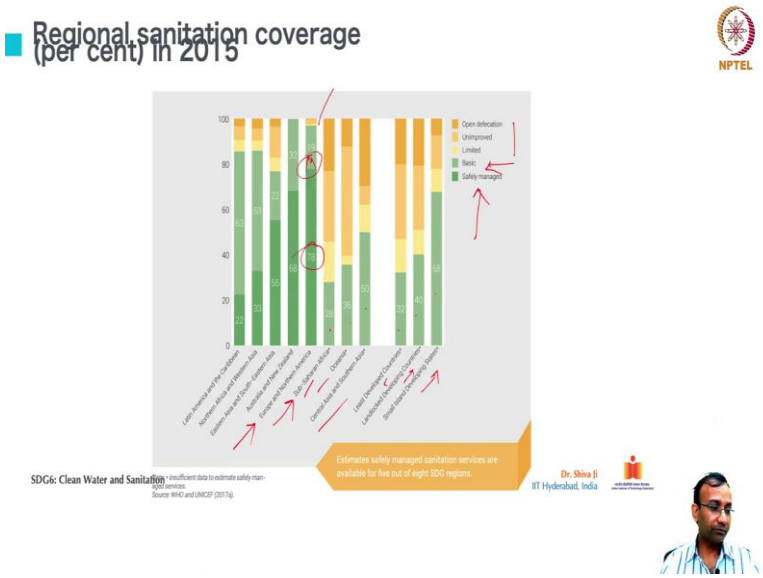

The reason why is percentage you can see over here, the least, there is no safely managed percentage over here, Sub Saharan, Oceania, Central Asia and Southern Asia and least developed countries, landlocked developing countries and some small scale island developing states. So, they have almost nil safely managed water category.

They are beginning from basic water services facilities itself and that stands are 28, 36, 50, 32, 40 and 68 for these region wise distributions. The best performance is of course, from Europe and Northern America the safely managed percentage is at 78 and remaining 19 basic and very few percentage are left over here which goes in the limited, unimproved an open defecation categories.

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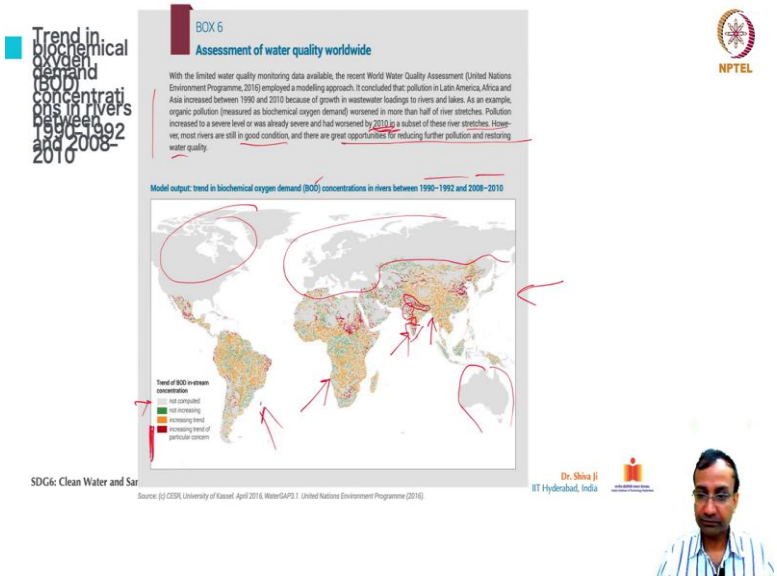

So, this is the slide which talks about, Trend in Biochemical Oxygen Demand. It is called a BOD also. Concentrations in reverse between 1990 to 1992 and 2008 to 2010. So, this is the outcome of this model this study, which says trend in biochemical oxygen demand, concentrations in reverse between these two and span of years. So, Greece data is not there.

So, we do not know what is happening here and majority of Europe and almost all of the Europe and Russia and Australia and New J also it looks like, they are not part of this thing, there is no there is no data available perhaps or this is not computed. So, with the limited water quality monitoring data available, the recent world water quality assessment, United Nations Environmental Program 2016 employed a modelling approach, it concluded that pollution in Latin America, Africa, Asia and is increased between 1990 to 2010 because of growth in wastewater below loadings to rivers and lake.

As an example, organic pollution measured as biochemical oxygen demand worsen in more than half of the rivers stretches, pollution increased to a severe level or was already severe and had worsened by 2020 or 2010. I think by that year, in a subset of these rivers stretches however, most rivers are still in good condition and there are great opportunity for reducing for the pollution and restoring the water quality.

So, this is the description you can see, increasing trend of particular concern is depicted by reds. So, I think so then Southern this Plateau Region, Southern Indian region, Rajasthan, Gujarat and parts of Maharashtra region and this Himalayan I think Sub Himalayan this Gangetic belt.

This has been presence of increased trend of political concern. And then yellows and most of the places I think China also is full, African continent almost is full in the middle except few there are reds in this side. And southern America almost is full of some reds and a lot of yellows.

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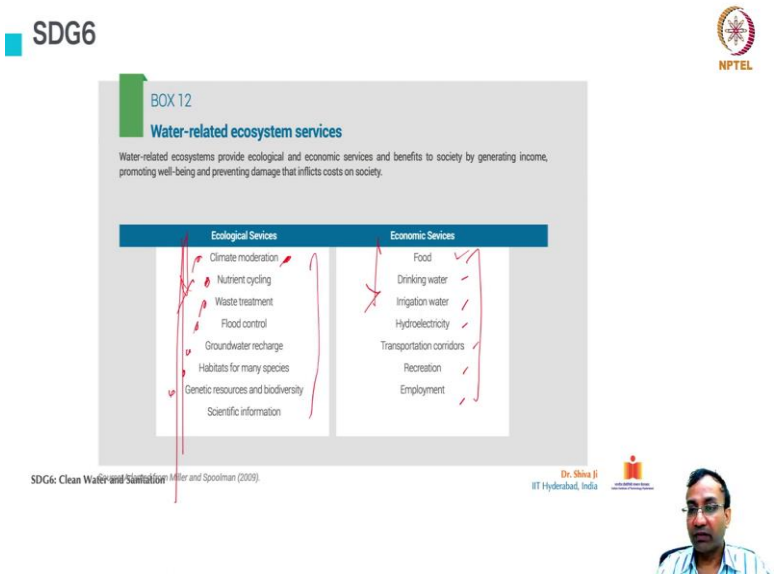

So, what are the water related eco ecosystem services? So, we will see here in this slide, ecological and economic services and benefit to society by generating income promoting wellbeing and preventing damage that inflicts costs on society, so what are those ecological services and what are comparable economic services.

So, it is kind of two column arrangements so climate moderation, nutrient cycling, waste water, food control, groundwater recharge, habitats for many species, genetic resources and bio diversity scientific information and economic food wise, if you see it is a direct food, drinking water irrigation, hydroelectric transportation employment.

So, these are actually economic services compared to that, there exists in ecological services also which we should be aware of, that is why this slide, so that you consider them as an economic, not economic, ecological assets and they should not malfunction and they should not go actually bust.

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So, this is a picture from north Darfur, women in El Fasher north Darfur uses a water ruler, this is the source. So, these women used to carry these pots on the top of your head, for several kilometres. And what these agencies and some designers actually came to the rescue and they designed a water, capsule, in the form of a cylinder rolling one.

So, compared to carrying the same weight at the top of your head and pulling it, on ground because pulling again further is going to reduce the amount of force you need to put in, so that you can easily these women, can drag, this cannon. So, definitely it is a very simple a solution. And but held a big number of people and households to get water efficiently.

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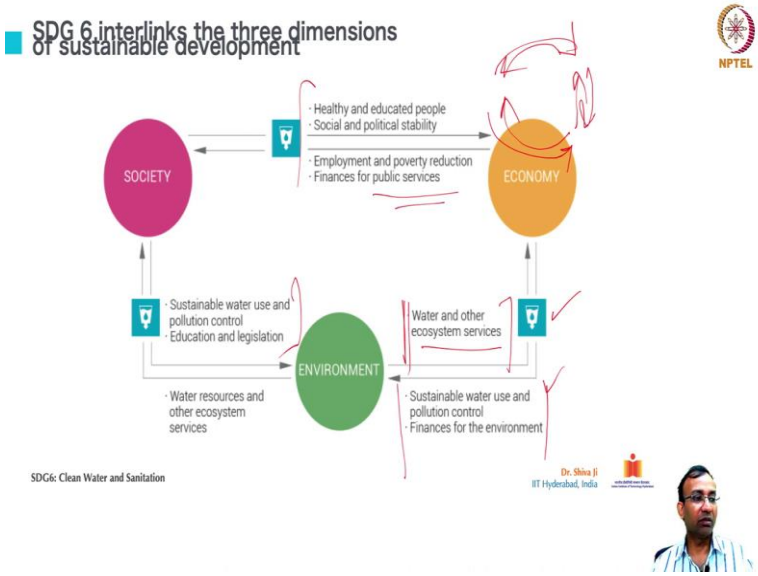

So, SDG 6 interlinks the three dimensions of sustainable development while ESGs we know, so in environment if you see water is an integral part of this biosphere where life has been become a little possible, water other ecosystem services essentially directly connected no need to emphasize sustainable water use and pollution control finances for the environment. So, this also can be your topic depending upon your strength, your background.

Then in the society we have water resources and other ecosystem services sustainable water use and pollution control educational legislation and here on the top we have healthy and educated people social and political stability employment and poverty reduction finances for public services. So, in a way if you see it is a again to and fro cyclic model, where things are so much interdependent and related, one leads to another, once improvement leads to further improvement in the next one.

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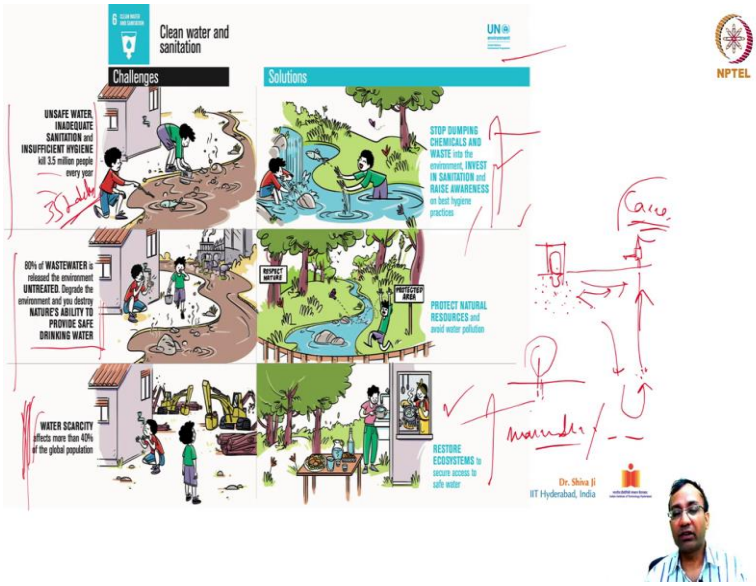

So, with this almost we have come to the end of this session before that, before closing I would to reiterate this from a UN Environment that, in the challenges unsafe water, inadequate sanitation and insufficient hygiene kills 35, 3.5 million people every year that means 35 lakhs people every year, they get killed out of water related issues.

Very simply do not pollute those water bodies, do not dump, do not throw waste chemicals and other things, look for responsible and proper disposal and do not spoil these invest in sanitation or raise awareness on best hygiene etc then point two 80 percent of wastewater is released the environment untreated.

So, 80 percent of it is still untreated with goes in the system, degrade the environment and you destroy nature's ability to provide safe drinking water, this is the point I was talking about initially, wherever there is a kind of toilet a facility. And some a few feet away if there is these, hand pumps or any sort of water supply where you get, your fetching water and quenching the thirst.

So, this has direct relation of creating contamination, so, microbial, presence from its exhaust has the potential to reach to this hand pumps water resources, and again, it may travel up can come up and cause issues at the side. Lastly, water scarcity affects more than 40 percent of global population.

So, what was scarcity in some form, we have seen like, there are example from our country as well, restore ecosystems to secure access to safe water. So, it is essential to well of course,

have buildings but even trees also green tree also, because that helps retaining water in the topsoil, if there is no water, this soil is going to drain this whole thing out.

So, you need to maintain this and ensure balance of manmade and a nature's elements also together in our biosphere. So, well I think it is very simple. We all have experienced water related things in our life in our places of where we are living. So, maybe you can make a quick a walk in your vicinity, in your neighbourhood and see, what is the condition of water facilities, drinking water facilities, and sanitation services. So, and please share, through your design projects. So, with this, we have come to the end of lecture this lecture. Thank you all for joining, see you in the next lecture.