

**Water Economics and Governance**  
**Prof. Manoj Kumar Tiwari**  
**Department of Ocean Engineering**  
**Indian Institute of Technology, Kharagpur**

**Lecture – 58**  
**Global Water Diplomacy : Trans - boundary Water**

[noise] Hi everyone [noise] [vocalized-noise]. So, we have steadily and slowly [vocalized-noise] moved to the last week of this course which is the 12th week [vocalized-noise] and ah we will be ending the discussions remaining of the content of the course in this week. [vocalized-noise] ah The major [vocalized-noise] point of discussion this week is the global water diplomacy where we will talk about the issues [vocalized-noise] related to the trans boundary, or international water bodies. [vocalized-noise]

We will talk about ah conflicts as well as cooperation in this regard [vocalized-noise] and ah towards the end of this week we will try to have a [vocalized-noise] comprehensive summary of the entire course. [vocalized-noise]. So, to start with ah we will be talking about the trans boundary waters, or ah what we also call as international waters [vocalized-noise].

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## International Waters or Trans-boundary Waters

Water bodies (or their drainage basins) transecting international boundaries including oceans, lakes, rivers, groundwater aquifers, wetlands etc.

Oceans, seas, and waters outside jurisdiction of any nation are also referred as the **high seas**






Image Source: <http://www.thehagueinstituteforglobaljustice.org/latest-insights/latest-insights/news-brief/report-the-multi-track-water-diplomacy-framework/>



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So, the water bodies or their drainage basins which transit [noise] international boundaries; this could be ocean, this could be lakes, this could be river, or even groundwater aquifers, and wetlands [vocalized-noise]. So, all such water bodies are typically referred as international water body or international water or it is also known as trans boundary ah water bodies [vocalized-noise]. So, the river which intersects more than one nation is known as trans boundary rivers.

[vocalized-noise]. So, ah we have means all the nations have ah under their jurisdiction some water bodies. [vocalized-noise] And ah those which cut across the nations will be called as international waters or trans boundary waters that is fine [vocalized-noise], but particularly with the ocean, seas, and [vocalized-noise] ah some unoccupied land there are certain water bodies or certain part of water [vocalized-noise] which is in fact, beyond the boundary of any nation ok so which is outside the jurisdiction of any nation. [vocalized-noise] Like nobody owns the entire ah sea Atlantic ocean, or ah the Indian ocean nobody owns the entire ocean. [vocalized-noise]

There is ah international norm that from the ah territory or the land boundary of a nation [vocalized-noise] up to 12 nautical miles [vocalized-noise] distance is will be considered as the oceanic territory of that notion and nation. And beyond that twelve nautical miles whatever comes is not under the ah not under the governance of that particular or for that matter any nation.

[vocalized-noise]. So, all such reasons where there is [vocalized-noise] ah which does not fall in the jurisdiction of any specific or any particular nation [vocalized-noise] are referred as high seas [vocalized-noise]. So, high seas are the area which are [vocalized-noise] not under the jurisdiction of any nation, and are rather governed by the international norms. [vocalized-noise]

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## International Waters or Trans-boundary Waters

- The world's 263 transboundary lake and river basins cover nearly half of the Earth's land surface.
- A total of 145 nations include territory within international basins, and 21 countries lie entirely within international basins.

Source:  
[http://www.un.org/waterforlifedecade/transboundary\\_waters.shtml](http://www.un.org/waterforlifedecade/transboundary_waters.shtml)



Image Source: <http://greenwatchbd.com/water-management-in-transboundary-rivers/#prettyPhoto>



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Anyway we will at our least there are 263 trans boundary lakes [vocalized-noise] and river basins in the world. So, this total world has a total of 263 trans boundary lakes, and river basins [vocalized-noise] and this covers nearly half of the land surface, in the entire land surface. If we [vocalized-noise] see the river basins the attachment area of these trans boundary, ah water sources [vocalized-noise]. So, almost half of the earth's land area is covered under this ah [vocalized-noise] trans boundary lakes, and river basins [vocalized-noise] ok, we do not realize this, but ah that is the fact

Like for example, if we see Ganga is not ah river only for India, Ganga cut across the Bangladesh as well. So, Ganga is a trans boundary river and you see the kind of basin that Ganga has it is a huge part ok. [vocalized-noise] And ah it is not only Ganga that we have as a trans boundary, Brahmaputra [vocalized-noise] which cut across the China.

Then there are ah [vocalized-noise] ah various other rivers which cut across the Nepal, ah Bangladesh, Ganga cuts across the Bangladesh. Then we have Pakistan quite a few rivers cutting across [vocalized-noise] so ah it is not only the condition of India. If you see the collectively world there are over around a half of the earth land surface is false under the catchment area of these 263 trans boundary lakes and river basins.

A total of 145 nations [noise] that include territories which are in the international basins, this trans boundary or international basins if we say [vocalized-noise] so there are ah

total of 145 nations which are there [vocalized-noise] and around 21 countries, are there which lie entirely within the international basins. So, they do not have a independent [vocalized-noise] ah [vocalized-noise] independent water basin, or independent source of water that way [vocalized-noise] their entire water comes from these international basins. There are 21 such countries. [vocalized-noise]

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**International Waters or Trans-boundary Waters**

- While most basins are shared between just two countries, there are many basins where this number is much higher.
- There are 13 basins worldwide that are shared between 5 and 8 riparian nations.
- Five basins, the Congo, Niger, Nile, Rhine and Zambezi, are shared between 9 and 11 countries.
- The river that flows through the most nations is the Danube, which travels within the territory of 18 nations.

Source: [http://www.un.org/waterforlifedecade/transboundary\\_waters.shtml](http://www.un.org/waterforlifedecade/transboundary_waters.shtml)

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While most of the basin shared between just two countries, there are basins [vocalized-noise] where this number is much higher ok [vocalized-noise]. So, there are 13 basins in total worldwide that are shared between 5 and 8 ah riparian nations. There are five basins, Congo, Niger, Nile, Rhine, and ah Zambezi, which are shared between 9 and 11 countries. [noise] There are rivers that flow the river which actually flows through the most number of nations is ah Danube, which travels within the territory of 18 different nations [vocalized-noise].

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## International Waters or Trans-boundary Waters

- Political boundaries are drawn without any consideration to river basin boundaries.
- Out of 263 rivers crossing international boundaries, **only 143 of them have developed any mechanism for co-operative water management**, while 158 lack any such water management framework.
- These international water courses **account for almost 60% of global run-off and affect roughly 40% of the world population.**

Source: <http://greenwatchbd.com/water-management-in-transboundary-rivers/>



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So, this is the kind of scale our ah [vocalized-noise] our earth, or our ah the world is divided between these different international basins; [vocalized-noise] that is primarily because when the division of the nations or ah countries takes place [vocalized-noise] we the political boundaries that are drawn do not considered ah river basin boundaries ok. They they are more based on the linguistic [vocalized-noise] ah linguistic thing, socio [vocalized-noise] social cultural aspects [vocalized-noise] and and not primarily on the river ah basin only.

So, out of this 263 rivers ah crossing international boundaries [vocalized-noise] only 143 of them have developed any mechanism for cooperation on water management, while 158 lacks any such water management framework. The international water course account for almost 60 percent of the total run-off, and affects roughly 40 percent of the world's population, so these are some data which are ah [vocalized-noise] there to ah see that how much population of the world or how much ah number of people relies on these international water basins. [vocalized-noise]

Now why we are specifically pointing out these international water basins or trans boundary basins? [vocalized-noise] Because when we say the governance of water the governance of water where water is within the territory of a nation is easier for that nation to make [vocalized-noise], but when there are multiple nations involved the issues are of ah very different kind ok. [vocalized-noise]

So, issues can run off ah like can see the interest of that particular nation [vocalized-noise] where ah; obviously, upper riparian state has higher ah hold on to the water ok. [vocalized-noise] ah While the lower one can suffer there are many such examples. [vocalized-noise] So, in such cases it becomes very important to have a proper mechanism for ah judicial, or equitable allocation of water particularly in these cases. [vocalized-noise]

The issues with states like ah the earlier week we were discussing for example, the Kaveri river dispute which is ah between the [vocalized-noise] between the ah Tamil Nadu and Karnataka of course, there were other parties, but major dispute is between ah Tamil Nadu and Karnataka [vocalized-noise]. So, here even if [vocalized-noise] the disagreement arises there is a central mechanism to resolve it on a state of ah central government. [vocalized-noise]

But in trans boundary rivers because nations are independent and they are not governed under any ah like in general these river basins or this thing are not governed as such in any international law. [vocalized-noise] And ah many nations are do not bind to ah follow international laws [vocalized-noise] like in state and this thing they are bind to follow the ah central laws or they are bind to follow the [vocalized-noise] ah [vocalized-noise] decisions given from the supreme court. [vocalized-noise]

However [vocalized-noise] in cases like this like in cases where we are talking about the international ah or trans boundary rivers which cut across the nations, [vocalized-noise] there are nations are not as such bind to follow any such regulations [vocalized-noise]. So, when [vocalized-noise] ah you do not have a supervisory control from anybody it is become very difficult [noise] to manage the things in more equitable and a peaceful manner.

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## International Waters or Trans-boundary Waters

- Disparities between riparian countries in economic development, institutional capacity, infrastructure and political orientation often give rise to **multilateral or bilateral disputes**.
- Climate change, deteriorating ecosystems, excessive population growth and aging infrastructure could further trigger issues in international watersheds.
- Co-operation on shared water resources is critical, **specially in water stressed and water scarce countries**.
- Managing the interdependence of transboundary waters **is one of the greatest human development challenges** of the international community.

Source: <http://greenwatchbd.com/water-management-in-transboundary-rivers/>



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Now international waters on ah this if we see there are disparities between riparian countries in economic development, institutional capacity, infrastructure and political ah orientation [vocalized-noise] which gives rise to such multilateral or bilateral disputes. [noise] Those rivers cutting across multi nation could have a multilateral ah multinational dispute as well. [vocalized-noise]

As we were discussing the reason behind such disputes is because the the socio economic status, [vocalized-noise] of the different nations could be different that is the first one ok. [vocalized-noise] One like if you are seeing a dispute between China, and say ah [vocalized-noise] India there are different strengths of Chinas and different strengths of India is still it is ah not that big a difference.

But if you see a difference between let us say ah [vocalized-noise] China with ah one of the African countries or ah [vocalized-noise] say Maldives or say others small nations ok [vocalized-noise] Laos, Maldives and this kind of nations if you see [vocalized-noise]. So, China holds a much stronger position [vocalized-noise] being an upper riparian state, holds the ah sort of ah can have ah [vocalized-noise] more control over the water. [vocalized-noise]

And [vocalized-noise] being more powerful in socio economic status over these countries [vocalized-noise] can force them to ah work accordingly [noise] or even if

there are such let us say [vocalized-noise] opposition is made in this sense [vocalized-noise]. So, China can oppose it and deny following it [noise]. So, those kind of ah [vocalized-noise] things happened when there is a [vocalized-noise] differences in the terms of socio economic development. [vocalized-noise]

Differences in terms of institutional capacity, so whoever has a good economic resources [vocalized-noise] can actually [vocalized-noise] fund in the development of the infrastructure, development of the institutional capacity for the management or better hold or capture of the water. [vocalized-noise] Then the political orientations also play a role ok.

A how strong is the political leader India has seen a lot of this like a [vocalized-noise] if we see the current government regime which is in the past ah 4 years ah as opposed to the earlier government regime [vocalized-noise]. So, there has been lot of ah [vocalized-noise] differences and lot of disparities in the ah political leadership as well. Here we have ah we are now being ruled with a new ah people new set of government with new set of thoughts [vocalized-noise] and earlier it was the different case [vocalized-noise].

So, [vocalized-noise] how strongly a political orientation can put itself in a world forum ok that is also very important when we come towards the trans boundary water [vocalized-noise] ah things. [vocalized-noise] There are climate change, deteriorating ecosystem, [vocalized-noise] then ah the rate of population growth in various nations, different rate of population growth, [vocalized-noise] and [vocalized-noise] the kind status, and the quality of infrastructure, the age of infrastructure that is there [vocalized-noise].

So, these kind of factors are additionally acts [vocalized-noise] towards triggering the issues [vocalized-noise] in these international water sets ok. [vocalized-noise] The climate change has been one of the most talked about issues ah in ah recent past [vocalized-noise]. So, we know that how the climate change is affecting the ah water sources [vocalized-noise] and there has been lot of discussion on an international platform [vocalized-noise] to control the ah [vocalized-noise] climate change. And accordingly manage or govern our water resources looking at the threats, coming from the [vocalized-noise] climate change.



[vocalized-noise] Then ah the ecosystem or the pollution part is another reason for the dispute in such trans boundary rivers [vocalized-noise]. So, ah how is the ecosystem which countries more behaving or acting more responsibly towards the [vocalized-noise] ah towards the environment that also makes a lot of that also makes a lot of ah [vocalized-noise] inputs to such differences. [vocalized-noise]

Then the population growth rate of the population growth, so ah accordingly [vocalized-noise] rate of the population growth the demand will change ok. [vocalized-noise] The ah scale of development, the scale of ah municipal demand, will change the irrigational ah irrigation demand could change, [vocalized-noise] so that is also another aspect [vocalized-noise].

So, these are the kind of ah points which sort of ah trigger issues related to the international water sets [vocalized-noise]. The cooperation on the shared water resources is crucial especially in the water stressed, and water scare countries [vocalized-noise]. So, ah because the countries which are already under water stress or water scarcity [vocalized-noise] they [vocalized-noise] already do not have the adequate sources of water. [vocalized-noise]

Now if they are water whatsoever the available water relies on this trans boundary waters and it is not being cooperated from let us say upper riparian state. So, it becomes very difficult for those nations to manage with already limited resources if those even ah if ah problems are created even with those available resources. So, [vocalized-noise] the issue becomes much more complicated over there. [noise]

[vocalized-noise] The another point is managing the interdependence of this trans boundary waters is sort of ah [vocalized-noise] one of the major challenges in front of the international community, [vocalized-noise] ah [vocalized-noise] kind of one of the greatest human development challenges. Because ah we have seen that [vocalized-noise] management and development of water [vocalized-noise] relies [vocalized-noise] on to the ah development of a nation relies on to the largely relies on to the water resources, [vocalized-noise] and since [vocalized-noise] the water resources or major water resources cut across the boundaries of different nations.

So, if there is no good cooperation of or the management of these resources or interdependence of the trans boundary rivers [vocalized-noise] because each depends on

each other [vocalized-noise]. So, if it is not done then ah there could be a problem [vocalized-noise]. And necessary not necessarily that ah always upper riparian states are in benefit [vocalized-noise] at times even lower riparian states can create problem for upper riparian states [vocalized-noise]. So, if let us say [vocalized-noise] just across the boundary ah country decides to make a dam big dam and does not allow water to pass through in the downstream, in order to regulate the water over there [vocalized-noise]. So, in high flow seasons the upper riparian countries may get huge degree of flood.

So, those kind of flooding can take place in [vocalized-noise] that ah this thing [vocalized-noise]. So, it is better to have a coordinated cooperative approach have [vocalized-noise] understand and realized this interdependence on each other and come up with a good practice, ah good plan for managing these ah international waters or trans boundary water bodies. [vocalized-noise] [noise].

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**Trans-boundary Waters: Global Challenges**

- One third population worldwide do not have enough water to meet their daily needs. Further, the demand for water is rising along with population growth, urbanization, and increased domestic and industrial use.
- According to the UN, in 2025 nearly 2 billion people will live in conditions of absolute water scarcity, and two thirds of the world in areas of water stress.
- Water and food insecurity is at the root of violent conflict in many parts of the world. Examples of acute cases of water-related conflicts include Iran, Syria, the Israeli-Palestinian conflict.
- **Water conflicts are considered a major threats to global peace and stability**

Source: The Multi-track Water Diplomacy Framework, A Legal and Political Economy Analysis for Advancing Cooperation over Shared Waters, The Hague Institute for Global Justice, 2016

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So, ah if we look on a global scale so one third population worldwide [vocalized-noise] do not have enough water to meet their daily needs. Further, the demand for water is rising along with the population growth, along with the urbanization, along with the ah increase in the agricultural consumption in ah along with the development [vocalized-noise] activities asking more for the industrial waters or water for industrial sector.

[vocalized-noise] And; obviously, when the population is increasing there is going to be the increased domestic demand as well.

So, as per the United Nations, by 2025 nearly 2 billion people will live in the conditions of absolute water scarcity, and almost two-third of the world will live in the areas of water stress. [vocalized-noise] We have already discussed that that India and China which constitute significant population of the world almost around [vocalized-noise] ah India has around 17 percent, 17 percent population of the world and so [vocalized-noise] is the China a little higher than that at present. [vocalized-noise] so that means, collectively we have around 35 or over 35 percent of the population. [vocalized-noise]

So, [vocalized-noise] just these two nations already had has one-third of the population residing these [vocalized-noise] and [vocalized-noise] they are on the verge of getting water stressed [vocalized-noise]. So, by 2025 if India and China are declared water stress nations [vocalized-noise] so one-third is this one.

And then African continent and quite ah some ah [vocalized-noise] the entire African continent and some sections in the [vocalized-noise] other nations would collectively make it around two-third of the world [vocalized-noise] living in the areas of water stress. [vocalized-noise] Whereas, around 2 billion people are estimated [vocalized-noise] to be under absolute water scarcity [noise] so that is the [vocalized-noise] sort of one of the major global challenges that we are [noise] ah facing at present [vocalized-noise].

The water and food [vocalized-noise] food securities are such issues that it can lead to the violent conflicts and it has [vocalized-noise] been seen in the past in ah many parts of the world ok because these are the essentials for survival. So, for purpose of survival one needs; obviously, one needs air, [vocalized-noise] one needs water, and one needs food. [vocalized-noise]

Now the air is something which cannot be stopped ok, and international laws, or jurisdiction does not have as such control over the air [vocalized-noise] nobody can stop air flowing anywhere ok [vocalized-noise]. So, ah since air is naturally available it is not much part of the concerns then [vocalized-noise] only the pollution some of the pollution aspects are arising with the air. [vocalized-noise] But [vocalized-noise] the availability and this kind of aspect is totally irrelevant for air, [vocalized-noise] the remaining two

essential components of the life which is water and food are the prime ah sort of prime reasons for several [noise] disputes world over. [noise]

[vocalized-noise] More over ah more than the food because food is something which is ah may not exactly be provided by the nature it is something which is produced [vocalized-noise]. So, whatever land area has a [vocalized-noise] nation can have control over it in order for producing food and it cannot blame another country [vocalized-noise] for not producing food for one nation [vocalized-noise].

So, even that has [vocalized-noise] little scope for dispute in such a way [vocalized-noise] the [vocalized-noise] ah particularly if in the international ah scale the dispute related to food, ah there is not much scope though [vocalized-noise] the water is the one which is most vital [vocalized-noise] in international cooperation. [vocalized-noise]

Why because when we see that the water cut across the boundaries of different nations [vocalized-noise] and there are ah [vocalized-noise] ways with which people can control it. So, if you [vocalized-noise] and it is a natural resource it is not being generated by any particular country [vocalized-noise].

So, since it is a natural resource by law of nature it has to be distributed equitably [vocalized-noise] the now if some country tries to prevent tries to stop the ah water flowing into another nation [vocalized-noise]. So, it is going to be basically; obviously, going to create [noise] some sort of dispute and some sort of conflict. [vocalized-noise] And [vocalized-noise] this because ah it has a direct link with the public if water is not supplied it is not the government who will suffer, [vocalized-noise] it is not the managers who will suffer, it is the [vocalized-noise] mainly public who is going to suffer. [vocalized-noise]

And that is why [vocalized-noise] the agitation may arise from the ah from the consumer level, from the public level and that can turn violent many a times which has been seen. [vocalized-noise] We ah discussed in case of ah Tamil Nadu and ah Karnataka case ah last week [vocalized-noise] that there has been lot of violence ah violent activities particularly ah in both the states, and mores over in the Karnataka against the decisions of the [vocalized-noise] or against [noise] ah the management practices suggested award given by the ah tribunal. [vocalized-noise]

So, in case of a such system as well in case of such a [vocalized-noise] trans boundary a waters the if it is not properly, or judiciously coordinated, if it is not properly distributed. [vocalized-noise] There are likely to be violent conflict that can arise because if people will not get water they have a [vocalized-noise] they will; obviously, be forced to fight for it ok. [vocalized-noise] And that can lead to some sort of a violent conflicts as well [vocalized-noise].

So, example of such acute cause of water related conflicts includes Iran, Syria and Israeli philistine conflicts. [vocalized-noise] These water conflicts are a generally considered a major threat to [vocalized-noise] global peace and stability. As [vocalized-noise] in a as we were discussing because a of the nature of such conflicts and because of the a dependency of life on to the water. [vocalized-noise] The water conflicts has a [vocalized-noise] has every chance, in fact to turn into the violent or has turned into a major major conflicts [vocalized-noise] if it is not judiciously or amicably resolved a in the right frame of time [noise].

So, a we will conclude this session here and a in subsequent session we will talk about further about some of the a reasons for, or some of the some types of the disputes related to the trans boundary rivers. [vocalized-noise] As well as we will see a how the cooperation can resolve such disputes.

Thank you. [noise]