Sociology and Resource Management
Prof. Archana Patnaik
Department of Humanities and Social Sciences
Indian Institute of Technology, Kharagpur
Module - 01
Natural Resource Management and Different Theoretical Approaches
Lecture - 05
Institutional Analysis and Development (IAD) Framework (contd.)
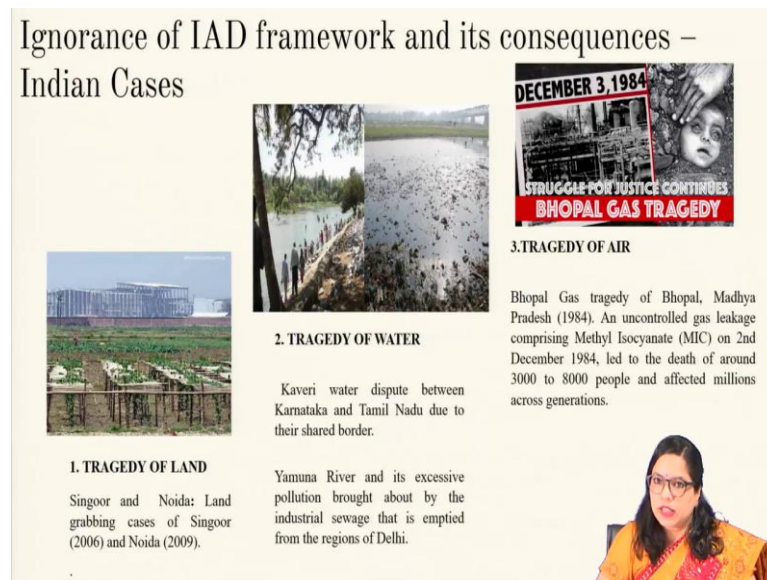
(Refer Slide Time: 00:31)

Contents

In the next subsection,

1. Example of ignorance of the design principles

2. The repercussions

3. The challenges in the governing process in managing the commons.

4. The solution - polycentric governance (Ostrom, 2011)

5. critiques and challenges of the IAD framework

Hello everyone, in today's module, we will cover some examples of ignorance of the design principle, the repercussions of the challenges in governing process in managing the commons, and the solution in form of polycentric governance, that was put forward by Ostrom and we will also discuss or end this module by discussing the critique and the challenges of the IAD framework.

Since we have discussed, the IAD framework in the last class and how it is proposed to be a solution to the tragedy of the commons, let us highlight, some insights where ignoring the rules, that were laid by Ostrom can cause a high level of conflict about the ownership over-exploitation and degradation of the commons.

We will reflect on certain cases from India to provide a contextual basis for your understanding of the IAD framework. When we consider, resources then we find a range of conflicts associated with them their use and management, and this dates back to British colonialism, as stated by Guha. The recent conflicts such as those that occur in Noida and Singoor and Jodhpur land graving incidences and Kaveri and Yamuna river, water governance crisis, or Bhopal gas tragedy.

If we see them, then these are the points where we can see resources and conflicts associated with them. The major reason for the same encompassed the eel governance about the nature of legal services and poor alternatives and action-oriented approaches. In the 5 Indian cases, mentioned earlier concerning the land, water, and air, the tragedy of the commons could have been easily avoided, if the government have followed what Ostrom was proposing through her aid design principles. And the varied dimensions such as ecological and cultural as well as a local understanding of the cost and the benefit attached to the property.

(Refer Slide Time: 02:58)

In the case of the tragedy of the commons, witnessed in the case of Singoor and Noida, the two instances highlight the clear ignorance of Ostroms first and the second rule advocating the group boundaries and work with rules that are formulated incongruence with local needs. Along with the defense of the 8th rule of governing commons in a nested tire with an interconnected system. About the tragedy of the water as witnessed concerning the rivers like Kaveri and Yamuna, Ostroms 1st, 2nd, 3rd, and the 7th rules were largely ignored; which could have resolved the water dispute and the pollution issues.

The first rule supported defining the group boundaries which we had discussed in the last class. The second is related to the matching of the common goods by the local needs. The 3rd looked into power within the hands of the stakeholders who can modify, rules on their own accord, and finally, the 7th rule discusses the provision of accessible low-cost means of dispute resolution.
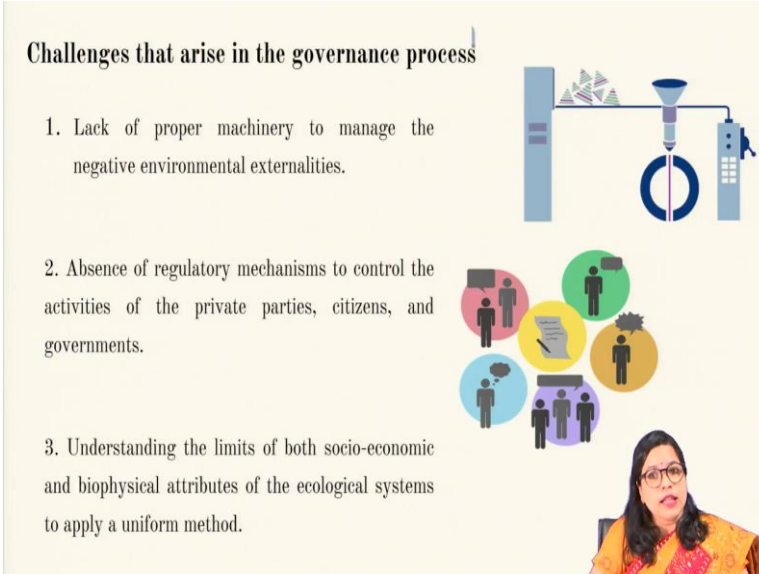
Finally, the 5th and the 6th rule of Ostrom could have helped, avert the tragedy in case of air, or that is the Bhopal gas tragedy. The 5th rule cites the monitoring of the behavior of members in the regulation of resources, while the 6th talks about the sanctions that are issued for the violators.

Even today, the settlement cases are still on; also violating the 7th rule that discusses the low-cost means of dispute resolution, all of this example highlight, the necessity of a strict revision of the processes of governance of the commons.

(Refer Slide Time: 05:15)

As we can see, it is essential to have proper governance in the process of managing the commons.

Let us take a look at the different challenges that arise in the governance process. One of the most common problems in managing the commons, and resources is the lack of proper machinery to manage the negative environmental externalities. There is an absence of regulatory mechanisms to control the activities of private parties, citizens, and governments.
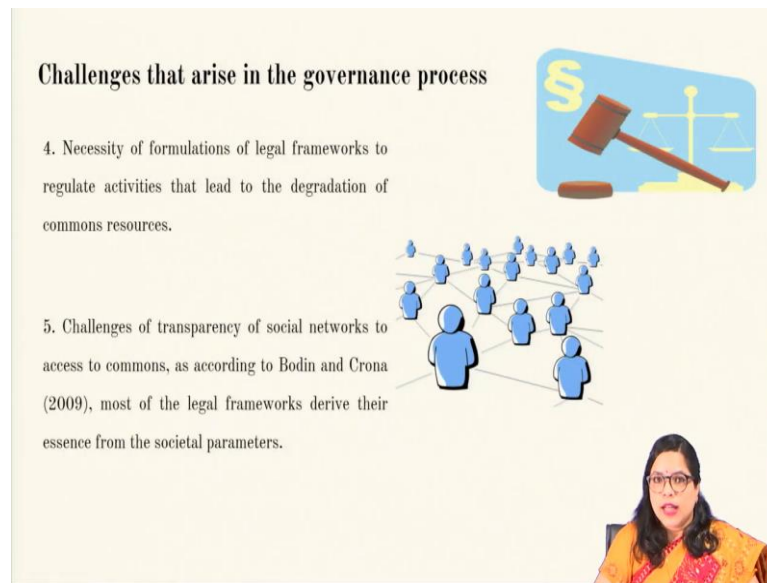
There are challenges in understanding the limits of both socio-economic and the biophysical attributes of the ecological systems to apply a uniform method.

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There also lies, the necessity of formulations of a legal framework to regulate activities that lead to the degradation of commons resources.

Apart from these challenges of governance that are faced by the state, some challenges occur about the transparency of the social network; which plays an important role in access to commons. And according to Bodin and Crona, most legal frameworks derive their essence from societal parameters.

(Refer Slide Time: 06:44)

The above discussion has highlighted, the importance of the role of the government and the governance play in the management of the commons. In this context, Elinor Ostrom performed a large number of experiments to determine the nature of governance, that best suits the management of the commons. In the following section, hence we will discuss, the ways of governance that are most useful in coping with the tragedy of the commons.

Ostrom highlighted certain advantages and disadvantages when dealing with the common resource or when or when dealing with a parallel set of local users in her policy experiments. Assessing a full decentralized system of governing the commons. Here, the decision-making power is in the hands of the locals or the small-scale common pool resource users.

Some of the advantages include stakeholders who are in charge and have in-depth insight and local knowledge of the functioning of the biophysical system of their respective resources. The success of their appropriation depends on local knowledge. These people have a deeper understanding of local behavior and the degrees of what is appropriate and what is not in the context of resource use. As the management is entirely local, the trustworthiness of the included resources or the resource manager is guaranteed, which also saves time and the cost of sanctioning and guarding the resources.

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As the management is entirely local, the trustworthiness is in of the included resource managers is guaranteed. Dependence on the knowledge that is disaggregated knowledge of the decentralized local system of managing the commons.

Feedback of changes in which the resource system responds to the action of the resource appropriates is all generated in a way, that is disaggregated, for example, fishers are aware of changes in the size and the species distribution of their catch. And when it changes with time or irrigators get their ideas, about the effectiveness of water allocation through identifying the yield amount.

Localized management also instills rules, that are adapted in a way or more cohesive manner, that is in synchronization with the functioning of the local resource.

(Refer Slide Time: 09:40)

As most of the management occurs with the help of local appropriates, the cost of enforcement of laws and monitoring are much lower in this case. Finally, as there is a decentralized unit, that experiment with the rules of resource management there are low costs or low chances of failure or loss for a whole region.

Now, let us discuss, the disadvantages of a highly decentralized system in managing a common resource. Firstly, the differential interest of the appropriates in managing or regulating the resource, some of them might not have due interest; which also might be because of the existent, alternative sources of income and lower level of resource dependence. Internal conflicts among appropriates, poor leadership and a fearful attitude anticipating turning of efforts by the outside authorities might lead to a disadvantage of the highly decentralized managing system.

Second, the complexity of designing rules and poor adaptation to modify rules might result in the self-organized efforts failing. Thirdly, the non-democratically organized governance system of the resource would lead to the creation of power elites and tyranny. And this is more extreme in location, where the appropriates are unable to leave the resource usage at a lower cost.

Fourthly, stagnation may happen due to reduced innovation by the appropriates in the ecological system; which is subject to variability. The success of certain rules might lead the appropriates to simply stick to them and not to try and improve their management system.

Disadvantages of a highly decentralized system in managing commons resources.

5. Exclusion and Discrimination	6. Lacking scientific information	7. Lack of external conflict resolution mechanisms	8. Mismanaged and poor CPR regulation
Providing identity tags might lead to the creation of exclusion and discrimination against certain sections of the appropriators.	Due to the close-knit local level of most sources of information, proper scientific information might be limited.	This might lead to rifts between two or more groups who might claim ownership and control of a common pool resource.	• Local appropriators might not be able to manage a common pool resource which might be of a larger scale, leading to problems of its poor regulation.

Fifthly, providing identity tags to increase trust and conformity to rules is an essential element.

However, this might lead to the creation of exclusion and discrimination against certain sections of the appropriators. Sixthly, due to the close-knit level sixthly, due to the close-knit local level of more sources of information, proper scientific information might be limited regarding the type of the resource and the procedures of managing the same.

Seventhly, if there are lacking external conflict resolution mechanisms, there might arise conflict between two or more groups, who might claim ownership and control over the common pool resource; which might hinder again the proper management of the same as well as lead to violence.

Finally, sometimes local appropriates might not be able to manage a common pool resource, which might be of a larger scale; leading to the problem of poor regulation. As per Ostrom, governance has the power of managing.

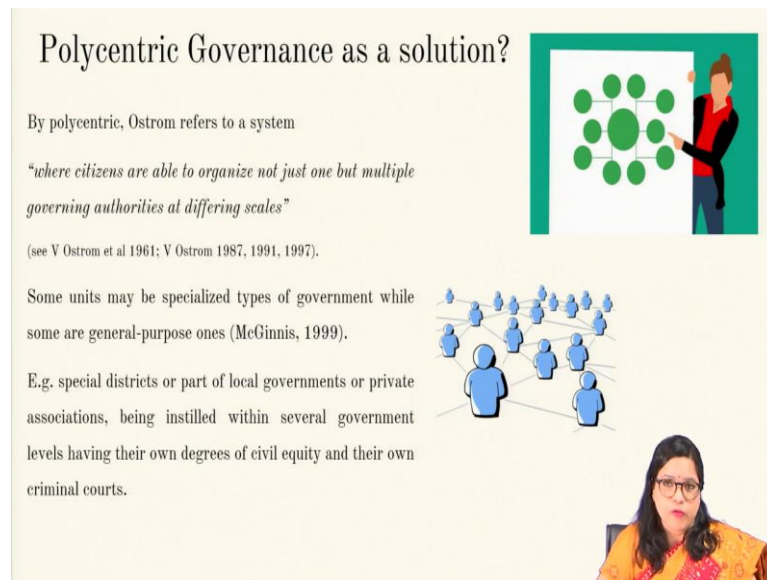The common pool resources are the polycentric governance systems, that can cope with the tragedy of the commons. By polycentric Ostrom referred to a system where citizens can organize not just one, but multiple governing authorities at different scales. With a particular geographical area, each unit has a degree of interdependence to create and implement rules within a certain scope of authority. According to McGinnis, with such a system, some units may be a specialized type of government, while some are generally purposed ones.

These self-organized resource governance systems might be of varied types such as special districts or part of local government or private associations, being installed within several government levels having their degrees of civil equity and their criminal courts.
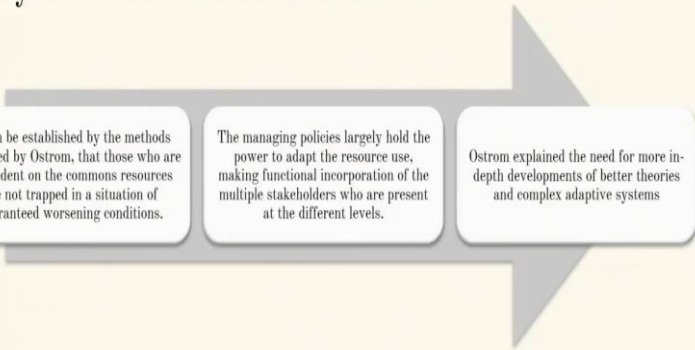
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In the context of the power of people users of the common pool, resources can make some rules by their usage to utilize the advantages of local knowledge. As well a blend of scientific and local level knowledge is also a positive point found within the polycentric common pool resource governance systems.

For example, the formal and -established law, in the state of Maine, as well as the example of the pacific salmon fisheries in Washington and its management are good examples of functional polycentric systems that work better than federal policies.

(Refer Slide Time: 15:22)

It is not very easy to cope with the potential common pool resource-related tragedies. However, it can be established by the methods proposed by Ostrom that those who are dependent on common resources are not trapped in a situation of a guaranteed worsening condition. The managing policy, largely hold the power to adapt the resource use; making functional incorporation of the multiple stakeholders, who are present at the different levels.

Ostrom explained, the need for more in-depth development of better theories and complex adaptive systems that can contribute to the aversion to the tragedy of the commons; and promote their sustainability for the generations to come. Hence, in this lecture, we saw the importance of the IAD framework and its practical application, in the form of design principles.

The degree of influence, that the principles can have is witnessed from the 5 examples that are discussed, the tragedy of land, water, and air by not abiding by the Ostrom design principle, where again the resources were held in common. Although there are large degrees of benefits, that have been achieved through the framework and the design principle governing the action situation, there are criticisms and challenges that have been posed by Michael Cox, Arnold, Tomas, and as well as Ostrom.

(Refer Slide Time: 17:11)

So, these scholars have identified three main critiques of Ostrom's design principle, which include the following. First, the review inferred, that a large number of scholars

considered the design principle to be incomplete in nature and their need for additional attributes for sustainable management of the resource.

The second criticism is that it encompasses the design principle with its degree of wide application in variable cases, beyond those that were used to develop them. Finally, the third criticism, outlined by Cox and others is what is considered the design principle, in itself. A large number of authors tend to argue for a more constructivist or environmentally and socially embedded angle, which does not only focus on the actors, as the rational decision-makers and without any inherent heterogeneity and conflict within the communities.

So, the Ostrom IAD framework is also criticized for lacking the study of power relations. Clement proposed a politicized version of the well-established IAD framework.

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He has included, political-economic context and discourse as exogenous variables in addition to the original focus on rules in use, biophysical conditions community attributes, action arenas, and the patterns of interaction.

Thus, the theory that Ostrom proposed, we can see is evolving day by day, and different scholars are adding to her design principle. And as we all know, one theory cannot be complete in itself, and we need to evolve, the theory if we want to implement it in the present context.

Similarly, even if Ostrom was criticized for her design principles or the IAD framework, we see, clement has brought in additional dimensions of including power into it, which makes it more comprehensive, than the way it was. So, however, we will keep on discussing these theories later.

Thank you for listening and have a great day ahead.