

Natural Resources Management (NRM)
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Week - 12
Lecture - 64
Social Capital and Collective Management of Resources

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VIEWPOINT

Social Capital and the Collective Management of Resources

Jules Pretty

The proposition that natural resources need protection from the destructive actions of people is widely accepted. Yet communities have shown in the past and increasingly today that they can collaborate for long-term resource management. The term social capital captures the idea that social bonds and norms are critical for sustainability. Where social capital is high in formalized groups, people have the confidence to invest in collective activities, knowing that others will do so too. Some 0.4 to 0.5 million groups have been established since the early 1990s for watershed, forest, irrigation, pest, wildlife, fishery, and microfinance management. These offer a route to sustainable management and governance of common resources.

resources are commonly owned is further increased by suspicions that people tend to free-ride, both by overusing and underinvesting in the maintenance of resources. As our global numbers have increased, and as incontrovertible evidence of harm to water, land, and atmospheric resources has emerged, so the choices seem to be starker. Either we regulate to prevent further harm, in Hardin's words (1), to engage in mutual coercion mutually agreed upon, or we press ahead with enclosure and privatization to increase the likelihood that resources will be more carefully managed. These concepts have influenced many policy-makers and practitioners. They have

From Malthus to Hardin and beyond, analysts and policy-makers have widely come to accept that natural resources need to be protected from the destructive, yet apparently rational, actions of people. The compelling logic is that people inevitably harm natural resources as they use them, and more people therefore do more harm. The likelihood of this damage being greater where natural

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1912 12 DECEMBER 2003 VOL 302 SCIENCE www.sciencemag.org

TRAGEDY OF THE COMMONS?

Table 1. Social capital formation in selected agricultural and rural resource management sectors (since the early 1990s). This table suggests that 455,000 to 520,000 groups have been formed. Additional groups have been formed in farmers' research, fishery, and wildlife programs in a wide variety of countries (21).

Countries and programs	Local groups (thousand)
<i>Watershed and catchment groups</i>	
Australia (4500 Landcare groups containing about one-third of all farmers), Brazil (15,000 to 17,000 microbasias groups), Guatemala, and Honduras (700 to 1100 groups), India (30,000 groups in both state government and nongovernmental organization programs), Kenya (3000 to 4500 Ministry of Agriculture catchment committees), United States (1000 farmer-led watershed initiatives)	54 to 58

SPECIAL SECTION

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Dear participants, today I will be discussing a very important paper and this paper is about a topic which is very important in the field of natural resource management or we could say for any kind of resource management and that is social capital and collective management of resources by Jules Pretty. Jules Pretty is very well known researcher in the field of natural resources management and this particular topic social capital, if you recall that in one of the previous lectures, I have discussed with you about various capital. There are five capitals; among these the human resource capital, social capital, these two are actually critically important for a natural resource management.

And by now, all of you are well aware of the fact that natural resource management is best carried forward by the people, by the community, who live among those resources are the best managers for these resources. And those people, those communities are considered as social capital. Of course, you and me also part of that social capital, but the people the community who are actually living with those resources are one of the most important component of social capital.

And this paper particularly, Doctor Jules Pretty, has very, very nicely lucidly elaborated. And today, we will discuss on this paper, and this will clarify, or this will make all of us actually understand the importance of social capital and collective management and how actually, it takes place., what are the different aspects involved with that. If you see that in this paper, Doctor. Jules Pretty, has again, once again started with Malthus Thoery, than to Hardin and beyond.

Remember, Garrett Hardin, we have already discussed that paper. And it has been found that somehow, all these people have widely come to accept that natural resources need to be protected from the destructive, yet apparently rational actions of people.

But the logic behind this, that the people at the end of a day is going to harm the natural resources as they use for their benefit. And more people, therefore, will make more harm to the natural resources. And I think we have discussed it in quite great detail when I was discussing Garrett Hardin papers with you. The likelihood of these damage is greater when natural resources are commonly owned, is further increased by suspicions that people tend to go for free ride.

They think these resources are free. So, they start overusing it and under investing in the maintenance of those resources. The reason is that those resources are not owned by them. It is free, common, so they end up some time over using.

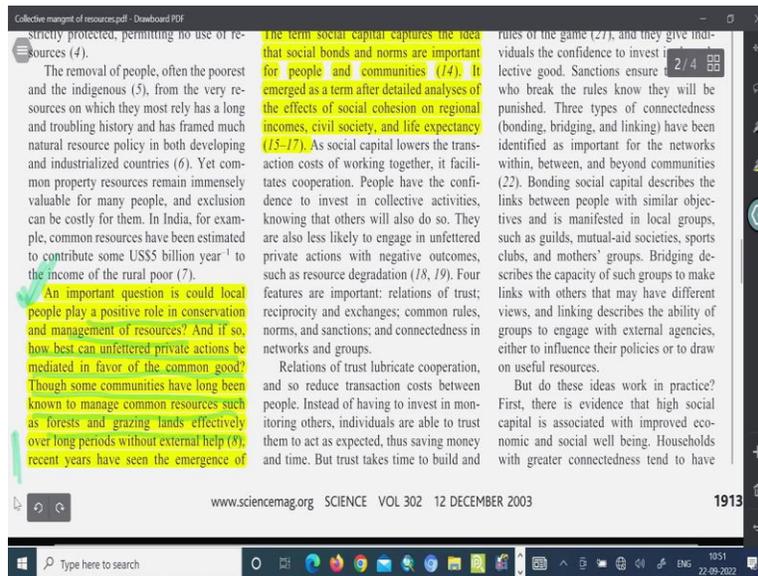
Now as the population increase and in evidence of detrimental effect towards various resources like water, land, atmosphere is very, very clear to us. We will also see that there is the option that is left for us that either we regulate to prevent the indiscriminate use of natural resources. And if you recall that in Hardin words, Hardin said that to engage in mutual coercion, mutually agreed upon, or we press ahead with enclosure and privatization to increase the likelihood that resources will be more carefully managed. Now, this is to a large number of people is a very sensitive statement.

But if you look into this, and if you look into this aspect through the eyes of the author, the researcher, probably, you could be able to see the other side of this fact, what actually the author says here. Because the author is very much concerned about the resources. And it is clearly visible, anything free available to us, even today, we ended up misusing it, we end up over consuming, we take away the resources from the system, which probably another person could have used.

Now, here the issue of collective management comes in. One individual organization cannot help; each one of us has a role to play. I over consume, because it is free. That is a human tendency, anything say food or clothes or anything that you provide. And if you say free, then people tends to consume it extra, probably, that extra is not required for his well being rather it can harm his health.

But in doing so what he is doing, he is taking that food, which probably another person could have eaten or any other resources. So, if we now look at the other aspect of this particular paper, you will see that, that the author is actually trying to focus on social capital and collective management to avoid this great harm of over consuming, over utilizing resources under estimating the value of the resources.

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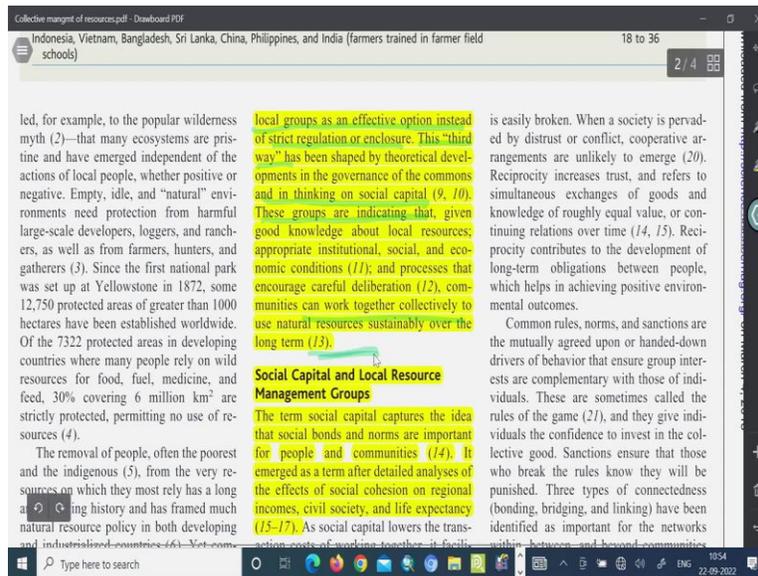


So, this paper from that point of view is very important. So in this paper, the author Jules Pretty actually asked an important question and he asked could local people play a positive role in conservation and management of resources. And if it is yes, then how best can unfettered private actions be mediated in favour of the common good?

Can we have the private actions for the betterment of common good? Now, these are very critical questions. You will find that those some communities have long been known to manage common resources, such as forest we know that northeast and many parts of our country, the tribal people, indigenous people anyway taking care of their forest and other natural resources.

But the problem starts when your population increase, demand increases, aspiration also increases, then there is an issue, and that requires collective management. Now, forest management; forests grazing lands effectively over a period of time. So, all these issues are actually important for, you know, regulating the resource uses.

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Now, the question is that whether you will leave it to the local people solely to maintain or you want to bring in strict regulation, or enclosure. You remember that in Garrett Hardin paper when we are discussing, that in some cases government come can and regulate it through making reserved forest national park.

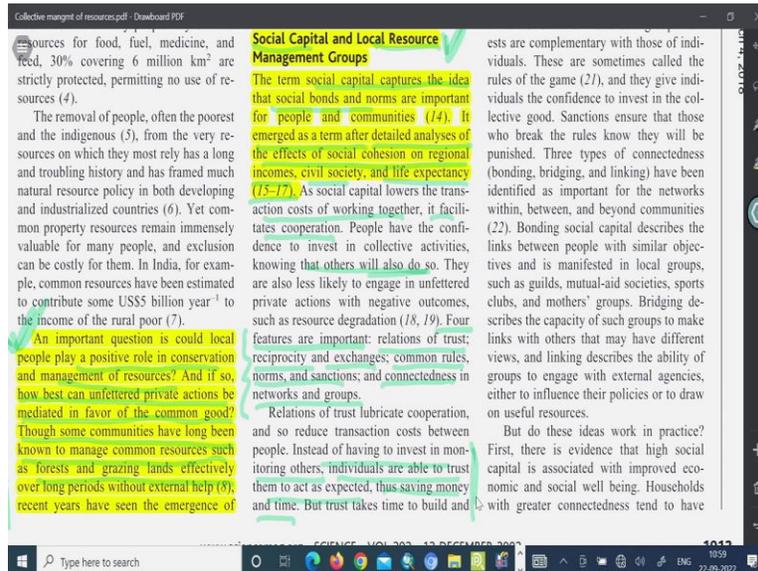
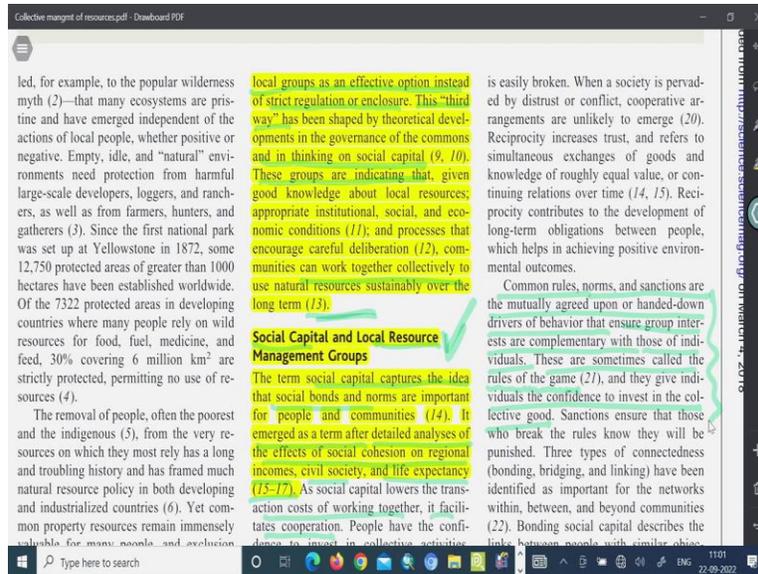
So, in that case, what happened the entry of the indigenous people get restricted; government takes care of that area. Now the social dynamics of the indigenous people who live with the forest from centuries, now, there is a break in that social dynamics which is very sensitive. But the issue is that whether you would like to leave it to the indigenous people completely or we want to advise government to take it over and make it restricted region.

Now, this particular aspect, if you recall, I discussed in great detail, the plus and the minus aspect of these two management path. Now, here also Jules Pretty talks about that, he says then, there is another way, third way, which has been shaped by theoretical developments in the governance of the commons; means commons properties or common resources and thinking on the social capital.

Now, these groups, these groups, they are indicating that with a good knowledge about local resources, appropriate institutions, social and economic conditions, processes that can encourage careful deliberations, where communities can work together collectively to use natural resources in a sustainable manner, over a long period of time, things can be better. Now, having said that,

bringing these things into practice is not easy. One has to work with a long time with the community.

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Now, look at the aspect of social capital and local resource management groups. If you recall that we talked about when we were talking about watershed management, we discussed about water user group. So, the term social capital, it captures the idea that social bonds and norms are important for people and communities. You cannot keep the natural resources and the communities separate and in isolation, they both are very integral part of the ecosystem. If you

want it happen in a sustainable manner, then this integration of people and natural resources is very, very important.

Now, Jules Pretty says that it emerged as a term after detail analysis of the effects of social cohesion on regional income, civil society, and life expectancy. This terminology has come into existence. Social capital, as he writes here that it lowers the transaction cost of working together, it also facilitates cooperation, people have the confidence to actually invest in collective activities, knowing that others will also do so. If I go, my family go for preserving natural resources in a village, I hope I go with that feeling that probably my neighbour also will do that. That is the kind of social capital that he is talking here.

He believes that the entire community there if one person one home goes, then others also will be attracted to do that. But he feels that this community probably may not be very keen in engaging private actions with some negative outcomes or resource degradation. Private actions could be utilization of natural resources, using those resources to develop some products or something. So, the local community may feel that those are not a very good option and could actually destroy the resource base.

So, here are four features, Jules Pretty things are very, very important. Relation of trust, mutual trust, norms, reciprocity and exchanges among people, common rules, norms and sanctions, connectedness in networks and groups. So, these are very important point, if you want your natural resources to be maintained in a sustainable manner. The trust; there is a deficit of trust among the indigenous people and sometimes also with government, different stakeholders. The trust among these two communities is lacking.

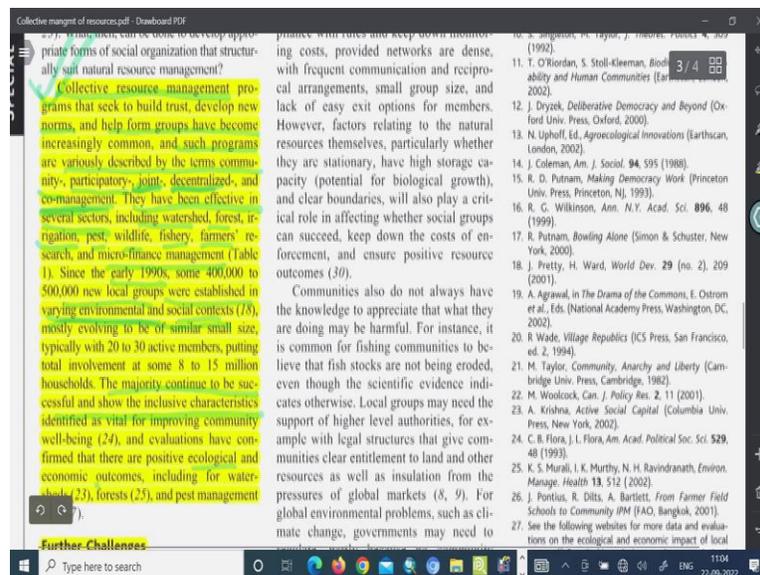
And that could be one hurdle for sustainable natural resource management. So, their relation of trust, transaction of ideas, thoughts, exchange of opinion, these are critical. So, Jules also says that instead of having to invest in monitoring others, individuals are able to trust them to act as expected thus saving money and time. Here he says that if we trust each other, then we do not need to monitor each other.

So, you can avoid a lot of expenditure of monitoring someone also you can save a lot of time. He also says common rules norms and sanctions are mutually agreed upon or handed down drivers of behaviour that ensure group interest and complemented with those of individuals. And

sometimes these are called as rules of the game. And these things give an individual confidence to invest in the collective good. Otherwise, every individual you know, thinks, why should I invest my money for preserving resource which is no one's. Why should I give money?

But once there is a trust, and once there is a common rules among the community understanding is there when they learn to understand that these resources, if it is safe, it is going to serve entire community not only one individual. And that level of confidence when comes in then you will see that a collective good is going to take place and this is a wonderful social capital social dynamics, which can encourage the better natural resource management.

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Next another point that I would like to bring in front of you and also highlight is the collective resource management programs that seek to build trust, develop new norms help to form groups. These programs are described by the terms community, participatory joint like joint forest program, joint forest management, decentralized this kind of terminology co-management, you are hearing these days. Everybody talks about participatory natural resource management, joint forest management, decentralized resource management, co-management of forest like that.

So, this terminology actually is coming from the concept of collective resource management program, which Jules Pretty writes here in this paper. Now, it has been also found that these things have been effective in several sectors, including your watershed, forest, irrigation, pest, wildlife, fishery, farmer's research, microfinance management everywhere.

Because wherever people and social capital is involved, collective resource management is the key to success. Because it talks about a collective action to address a problem. Since early 1990s, somewhere around 400,000 to 500,000 new local groups as were established in varying environmental and social context, in across country, that Jules was talking in this particular paper, and he reports that the majority of them continue to be successful and show that inclusive characteristics. So, the inclusiveness, collective action is the key for successful natural resource management; that is what coming again and again from every paragraph in this particular article.

So, there are positive ecological and economic outcome also has been reported here. And then you find that not only water, but forest, pest management, wildlife, fishery, almost every field of natural resource management can be actually successfully sustainably managed, provided we take care of these things, social capital and collective management.

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Further Challenges

The formation, persistence, and effects of new groups suggests that new configurations of social and human relations could be prerequisites for long-term improvements in natural resources. Regulations and economic incentives play an important role in encouraging changes in behavior, but although these may change practices, there is no guaranteed positive effect on personal attitudes (28). Without changes in social norms, people often revert to old ways when incentives end or regulations are no longer enforced, and so long-term protection may be compromised.

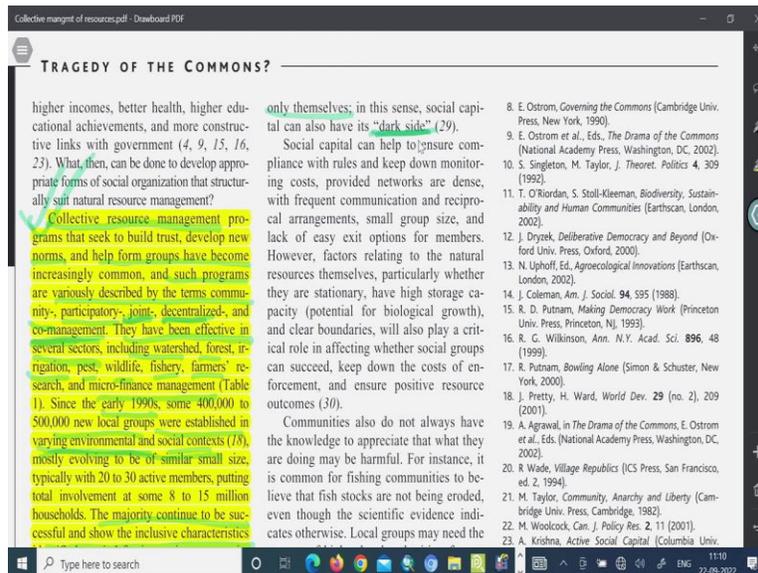
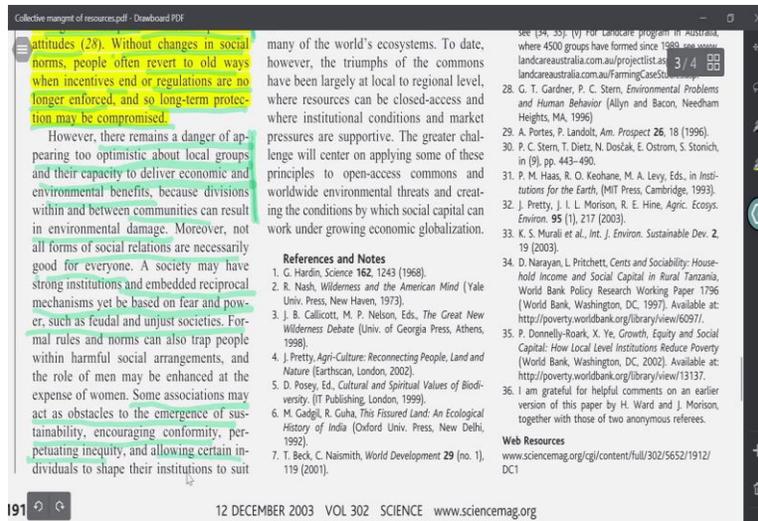
However, there remains a danger of appearing too optimistic about local groups and their capacity to deliver economic and environmental benefits, because divisions within and between communities can result in environmental damage. Moreover, not all forms of social relations are necessarily good for everyone. A society may have strong institutions and embedded reciprocal norms yet be based on fear and power, such as feudal and unjust societies. Formal rules and norms can also tran

mate change, governments may need to regulate, partly because no community feels it can have a perceptible impact on a global problem. Thus, effective international institutions are needed to complement local ones (31).

Nonetheless, the ideas of social capital and governance of the commons, combined with the recent successes of local groups, offer routes for constructive and sustainable outcomes for natural resources in many of the world's ecosystems. To date, however, the triumphs of the commons have been largely at local to regional level, where resources can be closed-access and where institutional conditions and market pressures are supportive. The greater challenge will center on applying some of these principles to open-access commons and worldwide environmental threats and creating the conditions by which social capital can work under growing economic globalization.

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35. P. Donnelly-Roark, X. Ye, *Growth, Equity and Social*



So having said that, Jules Pretty also in this article brings in or focuses few challenges. What are those? The formation, the persistence and effects of new groups like water research groups suppose, forest management groups. So, this group suggests the formation persistent of these groups suggests that new configuration of social and human relation could be prerequisite for long term improvements in natural resources.

So, this all actually hints towards that. Now, the regulations and the economic incentives also play a very important role in encouraging these changes in people's behaviour, and they can also change their practice. Having said this, Jules also said that there is actually no guaranteed positive effect on personal attitudes though.

He says that, all these good things can happen, but it is very difficult to guarantee that some person's individual attitude can also be changed. He cannot guarantee it. Because the collective action still can be brought in and can be energized, but sometimes individual attitude characteristics to modify and change is difficult. So, that cannot be guaranteed.

Without the changes in social norms, people often revert to old ways of their practice, means, you cut it; you use it and forget it. So, without changes in social norms, people community has a chance that they will go back to their old ways of lifestyle, when incentives end. Suppose, government some incentives to restore natural resources, if that ends and if suppose, regulation are no longer enforced and so, no long term protection may be compromised.

Now what happened is that, when suppose government decides that okay, this strict regulation we are removing, that is one and then suppose your social norms, which you develop with time, you are not changing, modifying it as per the demand of time, what happens is that, the people will tend to go back to that time, when there was no regulation, nothing free; all resources are free and use it as much as possible.

So, there is a chance that they may go back. So, this is critical that Jules pointed out here. But he says that, however, he says there remains a danger of appearing too optimistic about local group and their capacity to deliver economic and environmental benefits. So, he also gives a warning that we should not be too much optimistic on the local groups, because divisions within and between communities can result in environmental damage as well.

And people who have worked in the community level at the ground level, grass root level, you know it what Jules Pretty is talking about here. There could be few divisions within the community and because of that division, they might actually create some negative effect on the resources and that is something that one needs to take care of. He also says not all forms of social relations are necessary and good for everyone.

A society may have strong institutions and enable reciprocal mechanisms yet be based on fear and power such as feudal and unjust societies. So, he also goes on to say that some associations may can act as obstacles to the emergence of sustainability and encouraging conformity, perpetuating equality and allowing certain individuals to shape their institution to suit only

themselves; very strong statement. So in this case, social capital can also have its dark side that is what Jules brings in.

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higher incomes, better health, higher educational achievements, and more constructive links with government (4, 9, 15, 16, 23). What, then, can be done to develop appropriate forms of social organization that structurally suit natural resource management?

Collective resource management programs that seek to build trust, develop new norms, and help form groups have become increasingly common, and such programs are variously described by the terms community-, participatory-, joint-, decentralized-, and co-management. They have been effective in several sectors, including watershed, forest, irrigation, pest, wildlife, fishery, farmers' research, and micro-finance management (Table 1). Since the early 1990s, some 400,000 to 500,000 new local groups were established in varying environmental and social contexts (18), mostly evolving to be of similar small size, typically with 20 to 30 active members, putting involvement at some 8 to 15 million individuals. The majority continue to be successful and show the inclusive characteristics

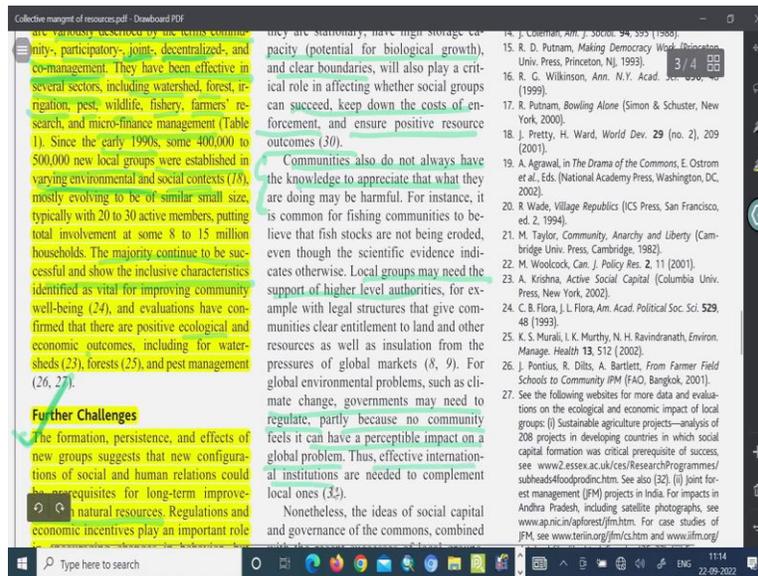
only themselves; in this sense, social capital can also have its "dark side" (29). Social capital can help to ensure compliance with rules and keep down monitoring costs, provided networks are dense, with frequent communication and reciprocal arrangements, small group size, and lack of easy exit options for members. However, factors relating to the natural resources themselves, particularly whether they are stationary, have high storage capacity (potential for biological growth), and clear boundaries, will also play a critical role in affecting whether social groups can succeed, keep down the costs of enforcement, and ensure positive resource outcomes (30).

Communities do not always have the knowledge to appreciate that what they are doing may be harmful. For instance, it is common for fishing communities to believe that fish stocks are not being eroded, even though the scientific evidence indicates otherwise. Local groups may need the

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Social capital can help to ensure compliance with the rules can keep down monitoring costs, provided networks are very good and with frequent communication and reciprocal arrangement, small group size, lack of easy exit options for members. So, these are certain points that need to be looked at. However, there are factors relating to the natural resources themselves, particularly whether they are stationary, or have high storage capacity, clear boundaries and those things can also play a critical role in affecting whether social groups can be successful in the endeavour to manage natural resources, keeping down the cost of enforcement, ensure positive resource outcomes.

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Finally, Jules went on to say that communities do not always have the knowledge to appreciate that what they are doing may be harmful. This is again a very important observation. Communities do not always have the knowledge to appreciate the fact that they are also doing some harm to the natural resources. As an example, fishing. Fishing communities believe that fish stocks are not being eroded even though the scientific evidence indicates otherwise.

They are fishing daily 24 by 7, 30 days in a month, but still they feel that fish stocks are not going down. So, that kind of inner feeling can be dangerous for sustainable natural resource management, even at the community level. Local groups may need the support of higher-level authorities.

For example, with legal structures, that which can give them enough legal structures to the community's clear entitlement to land and other resources as well as some protection from the pressures of global market. For global environmental problems, such as we talk about climate change, governments may need to regulate because no community feels that it can have a perceptible impact on a global problem; that is the very common thinking that you will find. So, Jules says here that effective international institutions are needed to complement the local ones, which are on the ground.

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Further Challenges

The formation, persistence, and effects of new groups suggests that new configurations of social and human relations could be prerequisites for long-term improvements in natural resources. Regulations and economic incentives play an important role in encouraging changes in behavior, but although these may change practices, there is no guaranteed positive effect on personal attitudes (28). Without changes in social norms, people often revert to old ways when incentives end or regulations are no longer enforced, and so long-term protection may be compromised.

However, there remains a danger of appearing too optimistic about local groups and their capacity to deliver economic and environmental benefits, because divisions within and between communities can result in environmental damage. Moreover, not all forms of social relations are necessarily good for everyone. A society may have strong institutions and embedded reciprocal mechanisms yet be based on fear and power, such as feudal and unjust societies. For

global environmental problems, such as climate change, governments may need to regulate, partly because no community feels it can have a perceptible impact on a global problem. Thus, effective international institutions are needed to complement local ones (31).

Nonetheless, the ideas of social capital and governance of the commons, combined with the recent successes of local groups, offer routes for constructive and sustainable outcomes for natural resources in many of the world's ecosystems. To date, however, the triumphs of the commons have been largely at local to regional level, where resources can be closed-access and where institutional conditions and market pressures are supportive. The greater challenge will center on applying some of these principles to open-access commons and worldwide environmental threats and creating the conditions by which social capital can work under growing economic globalizations.

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VIEWPOINT

Social Capital and the Collective Management of Resources

Jules Pretty

The proposition that natural resources need protection from the destructive actions of people is widely accepted. Yet communities have shown in the past and increasingly today that they can collaborate for long-term resource management. The term social capital captures the idea that social bonds and norms are critical for sustainability. Where social capital is high in formalized groups, people have the confidence to invest in collective activities, knowing that others will do so too. Some 0.4 to 0.5 million groups have been established since the early 1990s for watershed, forest, irrigation, pest, wildlife, fishery, and microfinance management. These offer a route to sustainable management and governance of common resources.

resources are commonly owned is further increased by suspicions that people tend to free-ride, both by overusing and underinvesting in the maintenance of resources. As our global numbers have increased, and as incontrovertible evidence of harm to water, land, and atmospheric resources has emerged, so the choices seem to be starker. Either we regulate to prevent further harm, in Hardin's words (1), to engage in mutual coercion mutually agreed upon, or we press ahead with enclosure and privatization to increase the likelihood that re-

From Malthus to Hardin and beyond, analysts and policy-makers have widely come to accept that natural resources need to be protected from the destructive, yet apparently rational, actions of people. The compelling logic is that people inevitably harm natural resources

At the end he says that the ideas of social capital and governance of the commons combined with the recent successes of various local groups perhaps offer the roads for constructive and sustainable outcomes from natural resources in many parts of the world ecosystem. But till date, that triumphs of the commons have been largely at local to the regional level, where resources can be closed access and where institutional conditions and market pressures are also supported.

The greater challenge will centre on applying some of these principles to open access commons and worldwide environmental threats and creating the condition by which social capital can work under growing economic globalizations. Now, that kind of system, to that kind of ecosystem to

visualize is really great. So, let us hope that the world will actually look like this the way Jules Pretty here hopes to see.

And if that happens, then I think that management of natural resources with the help of social capital and following the collective management of resources will be a very successful one. And the natural resource management will be insured for the benefit of the society and also for the environment.