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ECONOMIC INEQUALITY IS BAD FOR SUSTAINABLE USE OF NATURAL RESOURCES

Communities with substantial economic inequality will have problems conserving the local natural resource systems on which they depend, according to new research by **Jeff Dayton-Johnson** and **Pranab Bardhan**. Their work, published in the latest issue of the *Economic Journal*, suggests that except in situations where inequality is especially severe, community management of natural resources – such as fisheries, village forests or grazing lands, or waterways for irrigation – will suffer if users of the resource are divided by major differences in wealth or income.

These findings are important because millions of people in developing countries depend critically on such common resources for their livelihoods, and community management has often been proposed as an efficient way to promote their sustainable use. Therefore, policy-makers need to understand the conditions under which community management is likely to work best.

The findings are also significant since economists have long believed that inequality might be positive in groups that depend on 'public goods' – like conservation of a fish population – that benefit all members of the group. This is because the wealthy members of the group derive such a large part of the benefit from these public goods that they will unilaterally provide them.

For example, a wealthy fisherman might benefit from preserving fish stocks today, given that his share of future stocks is so huge. So he will cut back on his catch in the present even if his poorer neighbours do not. Nevertheless, the poorer fishermen benefit from their rich neighbour's conservation, either by fishing more today, or in the future, or both. This argument was first made by the late Mancur Olson.

Dayton-Johnson and Bardhan find that such 'Olson effects' – namely, that inequality favours the conservation of a commonly held resource like a fishery – occur only when inequality is especially severe. Then, it is indeed in the larger fisherman's interest to conserve by cutting back on his exploitation of the common fishing ground regardless of what his poorer neighbours do. After all, even zealous overfishing by the small fishermen will have only a small impact on the size of the future fish stock.

But if inequality is not quite so high, the poor fishermen have nothing to gain from cutting back on their catch, even if the richer fishermen do; but the richer fishermen are also better off overfishing today, given that the poorer fishermen are too. If group inequality is in this middle range, no one would benefit in the future from restricting his catch today since the fish stock would have been depleted by his neighbours.

This economic analysis suggests that villages where inequality is very high or very low will be more successful in conserving their fish resources, but that for villages in the middle range of inequality, overfishing will lead to declining fish stocks.

For policy-makers, this means that for communities in the middle, programmes transferring control of fisheries or other natural resources to the local level will have to be accompanied by other measures to reduce economic inequality – such as providing credit or training to the poorest members of the community.

For economists, the analysis suggests that the trade-off between equality and resource conservation is not always correct: except for extremely unequal communities, greater equality will be accompanied by more sustainable resource use.

The authors' work is an exercise in theory, but it is inspired by their recent fieldwork on community irrigation systems in Central Mexico and South India.

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Notes for Editors: 'Inequality and Conservation on the Local Commons: A Theoretical Exercise' by Jeff Dayton-Johnson and Pranab Bardhan is published in the July 2002 issue of the *Economic Journal*.

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