

# Local Government and Rural Development in the Bengal Sundarbans: An Inquiry in Managing Common Property Resources<sup>1</sup>

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*ABSTRACT* Of the three strategies available for managing common property resources (CPR)—centralized control, privatization and local management—this essay focuses on the last, which has proven quite effective in various settings throughout the Third World, with the key to success being local ability to control access to the resource. The major factors at issue in the Sundarbans situation are: historically external pressure on the forest; currently dense population in adjacent areas; a land distribution even more unequal than the norm in Bangladesh; and a decentralized local government structure initiated in the mid-1980s. The first three factors have encouraged the local population to view this CRP as a frontier to be exploited, rather than as a resource to be preserved for sustained yield. Thus to the extent that the new local government structure proves to be democratic and responsive to popular needs, it would most likely accelerate destruction of the Sundarbans, using the area as a cheap and easy way to provide some livelihood to the rural poor and landless. Accordingly, decentralization cannot be a viable strategy for preserving this unique forest resource; only a strong central control can ensure its survival into the next century.

## I. Introduction

There are essentially three strategies to forestall overexploitation of an immensely valuable common property resource (CPR) like the Sundarbans, two in the public sector and one in the private sphere. The most obvious and time-tested path is to strengthen the police function of the Forest Department, or in other words to further *centralize* the authority and control of the government over the resource. Such an approach, of course, has great difficulties, as the furor over the proposed 1980 Indian Forest Act has abundantly shown.

The second method is to *privatize* the resource, on the theory that its new owners will safeguard it as part of a rational long-term sustained yield strategy. Historically, privatization as a policy for land tenure and revenue in the Indian subcontinent has

had a very mixed and contentious record, but it continues to resurface as a possibility for afforestation programs in India (*e.g.*, promising the usufruct of government land planted in trees in return for providing security for strip plantations<sup>2</sup>).

The third way is to encourage *local authorities* to manage the resource in their own long-term interest by treating it as a CPR for sustained yield rather like private owners would be expected to. This approach has been notably successful in some instances, though much less so in others.

Other essays in this collection deal with various aspects of the centralization strategy (Richards & Flint, 1990; Herring, 1990), and while privatization has its adherents in the international donor community (*e.g.*, Roth, 1987 for the World Bank, or Hageboeck and Allen, 1982 for the United States

Agency for International Development), even to the extent of pushing such a strategy for activities like fertilizer and tubewell distribution in Bangladesh (see Blair, 1986), little interest appears to have been shown thus far in implementing similar strategies for natural resources there (though see McCarthy, 1990).

This paper will focus on the remaining strategy, namely the management of the Sundarbans resource by local authorities, which in the Bangladesh sector of the region means popularly elected Upazila and Union Parishads. In the last several years, the Bangladesh government has embarked on a decentralization initiative that has given considerable autonomy to the upazila level, and accordingly a consideration of local government's role in the Sundarbans offers a good opportunity to focus on CPR management at local level.

It would make sense here to include the West Bengal sector of the Sundarbans area as well, especially in view of the efforts of the current state government in Calcutta to decentralize various development sectors to the panchayat structure, but the immediate concern of the present exercise centers on the Bangladesh Sundarbans, and so I will confine myself to that part of Bengal in this paper. Much of the literature on the Sundarbans derives from West Bengal, however, so I will draw on the overall experience in both Bengals where appropriate.

The paper begins with a brief consideration of the ecological parameters, both in terms of the resource base and population growth patterns. The next section will focus on public choice theory in the context of common property resources, with some attention to examples of local management of such resources elsewhere. The discussion then moves on to local government in Bangladesh and its potential for local resource management along with a look at how successful this local government initiative has been. Last will come an analysis of the CPR issue in the specific context of the Bengal Sundarbans, concluding with an assessment of the outlook for CPR there in the future.

## II. The Ecological Parameters

Accounts of the size of the Sundarbans vary, but 800,000 hectares seems a reasonable estimate—roughly 200,000 hectares in the 24 Parganas District of West Bengal and 600,000 in the “greater” Khulna District<sup>3</sup> of Bangladesh (Blasco, 1977:241; Bari, 1978:4). Most of the West Bengal Sundarbans falls in two thanas (Kultali and Gosabe), while in Bangladesh there are five upazilas<sup>4</sup> involved (Shyamnagar in new Satkhira District, Koyra and Dacope in new Khulna District, and Mongla and

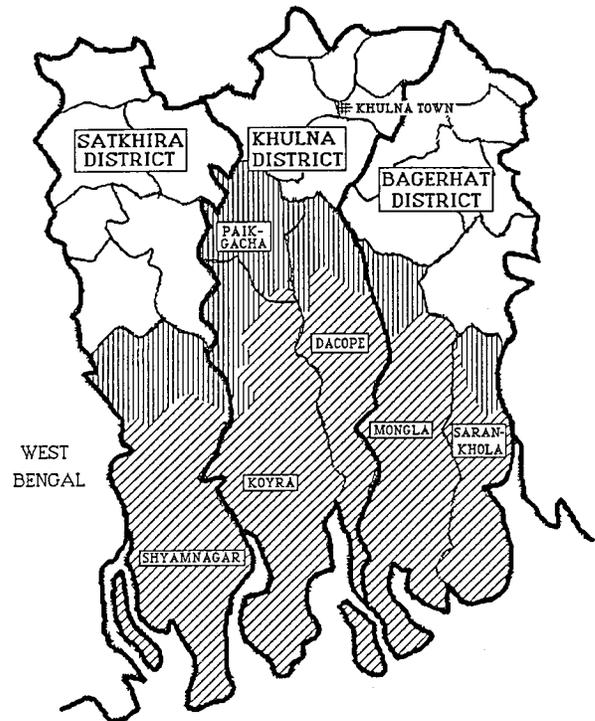


Figure 1  
KHULNA REGION & THE SUNDBANS  
UPAZILAS IN THE RESERVED FOREST TRACT

▨ AREA IN THE RESERVED FOREST TRACT  
▩ AREA OUTSIDE THE RESERVED FOREST TRACT

Sarankhola in new Bagerhat District, as shown in Figure 1.

The area of the Sundarbans appears to have been both expanding and contracting over the years. Alluvial silt washed down from the Himalayas by the Gangetic river system has built up land in the Bay of Bengal over the millennia, more so in the eastern Sundarbans than in the west during recent centuries, it appears, due to the eastward shift of the Ganges (Blasco, 1977). This process of land formation has probably been aided materially by various mangrove species, which, through natural succession, have facilitated progradation of the shoreline (Naskar and Bakshi, 1982, though the role of mangroves in building land seems to be somewhat controversial; see Thom, 1984).

But while, on the one hand, the Sundarbans has been expanding slowly to the south, it has been shrinking more rapidly from the north, as people have cleared the forests and cultivated crops, partly through design of government (as in the East India Company's efforts to colonize the area in the late 18th century; see Bari, 1978: 31-52 and 300ff.; more generally, see Eaton, 1990 and Richards and Flint, 1990), partly through natural migration over time and partly no doubt through the inability of the Forest Department to keep people out of its reserved areas, though in this century it has done

remarkably well in preventing people from settling permanently in the forest tracts, particularly when one considers the population pressures at work. Blasco (1977: 249) cites estimates that the forest area of the entire Sundarbans has been reduced by half in the last two or three centuries and by 150,000 hectares in the last 100 years.

The entire Sundarbans tract is managed by the Forest Department, which has operated a yearly auction for cutting rights for many decades. Most of the abuses found in professional forestry management elsewhere have been observed here as well, such as excessive thinnings in the auctioned area, connivance between purchasers and forestry staff to cut wider areas than sanctioned, *etc.* (Bari, 1978: 141-142 *et passim*<sup>5</sup>). The major usable forest species include a wide variety of mangroves, and government auction of trees, such as *gewa*, *sundri* and *golpatta* palm, raise substantial revenues each year (Bari, 1978: 132-155). *Gewa* is the principal feedstock for the Khulna Newsprint Mills, a 48,000 ton facility built in 1959, and a significant (if heavily subsidized—see BO, 1987a) export earner.<sup>6</sup> The other major commercial species is *sundri*, which is used for saw- and fuelwood. And as is the case with forests elsewhere, there are also a host of other products with significant commercial value as well (Bhattacharyya, 1990), some of which are collected legally and some extralegally.

Historically, most of the land cleared of forest has been turned into paddy for growing rice, but this century's rigid prohibition on settlement ap-

pears to have effectively stopped this practice. A greater threat today probably comes from mariculture, for prawns and shrimp can be grown successfully in the brackish water characteristic of the area, though doing so appears to require removing mangroves and reclaiming land.<sup>8</sup> Crustaceans have a good export market and in recent years their cultivation and processing for export has grown quite remarkably, to the point that by the mid-1980s they ranked second among all Bangladesh exports in value, ahead of tea and leather, even if still a very long way behind jute (BBS, 1986a: 559). Much if not most of this industry is situated to the east of the Sundarbans, but there appears to be considerable interest in increasing crustacean culture in the reserved forest (e.g., BO, 1988), an interest doubtless spurred by the government's target of a 136 percent increase in shrimp exports during the 1985-90 five-year plan (GPRB, 1985: 199).

Population growth in the Sundarbans area has been substantial, though it is difficult to tell from official statistics just how great it has been. Table 1 presents the census data for the 1951-1981 period for the relevant thanas and upazilas, as well as for the rural population of the two districts and for Bangladesh and West Bengal as a whole. It might be thought that growth rates in the Sundarbans region would have been greater than elsewhere, particularly in more recent years, as spillover from more densely populated regions would push into the less densely settled Sundarbans. As is clear from the table, however, increases in the Sundar-

Table 1. Rural Population Increase in the Bengal Sundarbans, 1951-1981<sup>a</sup>  
(percentage increase; data are for rural areas only)

|                              | 1951-1961 | 1961-1974              | 1974-1981 | 1951-1981 | 1961-1981 |
|------------------------------|-----------|------------------------|-----------|-----------|-----------|
| BANGLADESH (rural)           | 20        | 35                     | 13        | 84        | 53        |
| Khulna Region (rural)        | 13        | 33                     | 11        | 67        | 48        |
| Shyamnagar Upazila           | 13        | 37                     | 17        | 82        | 60        |
| Paikgacha Upazila            | <1        | 33                     | 185       | 53        | 55        |
| Koyra Upazila <sup>b</sup>   | n.a.      | n.a.                   | 15        | n.a.      | n.a.      |
| Dacope Upazila               | 7         | 16                     | 24        | 53        | 43        |
| Rampal Upazila <sup>c</sup>  | 22        | 28                     | 19        | 87        | 53        |
| Mongla Upazila <sup>d</sup>  | n.a.      | n.a.                   | n.a.      | n.a.      | n.a.      |
| Sarankhola Upazila           | 33        | 38                     | 19        | 121       | 65        |
|                              | 1951-1961 | 1961-1971 <sup>e</sup> | 1971-1981 | 1951-1981 | 1961-1981 |
| WESTBENGAL (rural)           | 42        | 25                     | 20        | 115       | 51        |
| 24 Parganas District (rural) | 32        | 28                     | 20        | 102       | 53        |
| Patharpina Thana             | 43        | 42                     | 24        | 151       | 75        |
| Namkhana Thana               | 40        | 36                     | 28        | 143       | 74        |
| Kultali Thana                | 45        | 48                     | 20        | 157       | 78        |
| Gosaba Thana                 | 29        | 37                     | 19        | 110       | 63        |

<sup>a</sup>Sources for table: GOP (n.d.); GOWB (1954, 1975, n.d. [a], n.d. [b]); GPRB (1975, 1983, 1984).

<sup>b</sup>Koyra Upazila was created from the southern (Sundarbans) part of Paikgacha after 1971, but figures are available for 1971 and 1981.

<sup>c</sup>For 1981 urban-rural breakdown was not available, so urban population was included for all other years as well (this amounted to 2% of total population in 1961 and 7% in 1971). Data for all other *upazilas* and *thanas* in the table are for rural population only.

<sup>d</sup>Mongla Upazila was carved out of the southern (Sundarbans) portion of Rampal after the 1981 census; hence no census population figures are available.

<sup>e</sup>Note that the census years were different for West Bengal than for Bangladesh in the 1970s.

bans area, while impressive, are really not much different from Bengal as a whole, for either East or West. Generally, growth is higher in the West than in the East, most likely because of Hindus fleeing East Pakistan in the first decade or so after the partition in 1947.<sup>9</sup> After 1961, rates of population increase were more or less balanced in the two Bengals.

There are some problems in estimating population growth, though, for it is not clear from the data just what portions of Sundarbans thanas and upazilas are being counted in the census each year. For two census years, separate figures (i.e., in addition to those reported by union and upazila) were returned for the Sundarbans forest area in Bangladesh. In 1961, some 6721 persons were reported, while in 1981 the figure was 20,682 (GOP, n.d.; BBS, 1983: 4-5). The fact that 97 percent of this population was male in 1961 and 99 percent in 1981 would lead to the conclusion that it consisted for the most part of forestry staff, and perhaps commercial cutters who were in the reserve forest area on the "reference day" of the census (e.g., 5 March for the 1981 census; see GPRB 1984: xiii). Quite likely a good many others were in the Sundarbans area as well, but were not counted by census enumerators who did not "officially" know of their presence (especially since the Forest Department is charged with restricting non-official settlement in the reserved forest area). Chaffey *et al.* (1985: 58) refer to "large numbers of fishermen who either inhabit floating accommodation boats in the inland waterways or camp at one or [the] other of the two fishing islands in the south eastern Sundarbans," also observing that the total number employed over the course of a year in the forest "is thought to be 300,000," though this must be a guess. In sum, it can be stated that population in the Sundarbans area is probably growing at least as rapidly as elsewhere in rural Bengal.

A landholding perspective is given in Table 2, which presents a summary of the landholding data by household for the Sundarbans area in 1983-84, as well as for the three "new districts" that make up the new "region" (i.e., "old district") of Khulna and Bangladesh as a whole, thereby making possible some comparisons between the Sundarbans and outside areas.

The first six columns give the customary agricultural census figures for *number* of holdings and *area* held in three size classes. Here it is immediately apparent that landholding inequalities were more pronounced in the Sundarbans area than elsewhere; there were fewer smallholdings in the Sundarbans upazilas and, correspondingly, a greater proportion of larger holdings. For Shyam-

nagar, Dacope, and Mongla upazilas, roughly 45 percent of all operated area was in "large" holdings of 7.5 acres and more, while for the Khulna region as a whole the figure was under 35 percent and for Bangladesh overall it came to about 26 percent.

Agricultural censuses generally do not give data for landless families, but fortunately this one collected information for all rural households. Accordingly, columns six through ten offer percentage figures for *all* families, not just for those with land. Thus for Bangladesh overall, whereas 70.3 percent of farm-owning households owned between 0.05 and 2.50 acres (column 1), only 51.1 percent of *all* rural households owned land in that range (column 7). This meant that 27.3 percent of all families were *de facto* landless.<sup>10</sup> Clearly many of the landed families worked mainly as agricultural laborers, then, for households in this category amounted to 39.8 percent of the total (column 10).<sup>11</sup>

For the Sundarbans *upazilas*, agricultural labor households are a substantially higher proportion of the total than for the three new districts taken individually, the Khulna region as a whole, or the entire country. In some of the *upazilas*, agricultural labor households amount to more than half the total, as against less than two-fifths for the nation as a whole (the only exception is Sarankhola Upazila, where agricultural labor households are less common than for the district or the Khulna region). The presence of this large landless population plus the existence of a large and sparsely populated resource like the Sundarbans should be expected to generate a considerable urge to exploit that resource, and indeed it is probably not too far-fetched to suggest that a good portion of that landless population is already exploiting the Sundarbans forest, most likely as part of those 300,000 persons reported earlier to be employed there over the course of a year.

Altogether, between the population growth in recent years, the existence of a large proportion of landless laborers in the population, the demands made on the forest from the newsprint industry and other commercial interests (combined with the excessive cutting that has been the hallmark of Forest Department management), and a new concern for shrimp farming in the Sundarbans, the resource base would appear to be under considerable threat. A "tragedy of the commons" would not be out of the question, a possibility that has caused at least some anxiety to the Bangladesh government at high levels in the recent past.<sup>12</sup>

### III. Public Choice Theory and the Sundarbans as a Common Property Resource

Public choice theory as it has developed in the

last couple of decades offers a powerful approach to understanding the range of possibilities of managing (and mismanaging) the Sundarbans as a common property resource. The theory itself, insofar as it relates to the present discussion, is quite simple and straightforward.<sup>13</sup> Goods and services generally can be thought of as characterized by two dimensions: exclusion and subtractibility. A good (or service) is *exclusive* when its use or consumption can be restricted to those who meet some specified condition, usually a payment in return for it. This principle, of course, is the keystone of the market's operation. On the other hand, consumption of *non-exclusive* goods cannot be restricted in this way. Thus an item purchased in the marketplace is an exclusive good, while air is non-exclusive. Common property resources are more or less synonymous with the latter category.

The *use* of a good (as opposed to the good itself) is *subtractible* when its consumption prevents others from consuming it, as with an item of food. Perfectly *non-subtractible* goods are rare, but sunlight, gravity or flood-control are examples; here use by one or any number of people does not preclude use by others. More frequently encountered are *partly non-subtractible* goods, where use by one or a few people does not affect use by others, but increasing use will constrain others' consumption. Examples would be public roads or, obviously, the environment. Another way to distinguish these categories would be to say that subtractible goods are characterized by *alternative use*, while partly non-subtractible goods can be called subject to *joint use*.

The two measures can be combined into a contingency table, as is done in Figure 2. The distinctions in the figure should be reasonably clear, with the possible exception of that between *common pool resources* and *public goods*. The latter are available to all, people using them do not preclude others from doing so as well, and widespread use does not diminish the resource itself. The television sets owned by village *panchayats* in rural India, for example, would be public goods to the extent that everyone can watch (excluding some groups, such as women or Harijans, however, would render the TV set a "toll good" in the context of Figure 2). Common pool resources, like fish in a public pond, are also available to all, but their use does diminish them. In particular, they are susceptible to overuse and even elimination.

*Common property* (as opposed to *pool*—the distinction should be kept in mind) *resources* can move from one cell of the table's bottom row to another as their use and abuse changes over time. Thus a ground water aquifer with few people tapping into

Figure 2

TYPES OF GOODS AND THEIR USE: DIFFERING PERCEPTIONS OF COMMON PROPERTY RESOURCES<sup>a</sup>

|  |                                     | TYPE OF USE   |  |
|--|-------------------------------------|---|--|
|  |                                     | ALTERNATIVE USE   | JOINT USE  |
| T<br>Y<br>P<br>E<br><br>O<br>F<br><br>G<br>O<br>O<br>D | EX-<br>CLU-<br>SIVE<br>GOOD         | <b>Private goods:</b><br>bread, shoes,<br>Garhwal trees (outsider view),<br>Sundarbans (local view)   | <b>Toll goods:</b><br>theaters, electric power,<br>Bahia fish (local view),<br>Sundarbans (Forest<br>Dept view)                          |
|  | NON-<br>EX-<br>CLU-<br>SIVE<br>GOOD | <b>Common pool resources:</b><br>village well,<br>Bahia fish (outsider view),<br>Garhwal trees (local view),<br>Silent Valley (local view),<br>Sundarbans (outsider<br>CPR management view) | <b>Public goods:</b><br>roads, village-owned TV set,<br>Silent Valley (outsider view),<br>Sundarbans (outsider<br>environmentalist view) |

<sup>a</sup> Adapted from Ostrom and Ostrom (1977: 12)

it constitutes a *public good* that continually recharges itself. But if more and more people take water from it, the aquifer becomes a *common pool resource*, subject to depletion, which is manifested in a sinking water table. And if too many use it for too long, the water table can sink to the point where tapping into it is no longer feasible. Hardin's "tragedy of the commons" is thus an extreme case of a public good turning into an abused common pool resource that finally vanishes altogether.

But turning a public good into a common pool resource is not the only option available for dealing with a resource subject to more demand than it can sustain. One obvious move is to privatize it, as mentioned back in the introduction to this essay. A variant commonly practiced in forestry is to ration the resource, say through an auction, and then in effect privatize it, so that the winning bidders can cut the block of trees they have purchased.

Different groups of people in an area may have different views about public policy for dealing with resources or, in other words, may have different ideas concerning the appropriate cell of Figure 2 for a given local resource. The "Chipko movement" in the Garhwal hills of Uttar Pradesh is a good example (see Uphoff, 1987: 275-276, or Bahuguna, 1986 for a brief account of the circumstances). Here forestry officials in connivance with timber cutters saw the forest as a private good, but the local inhabitants, who had secured their living from the forest for generations, saw it as a common pool resource to be safeguarded from depredation. Fortunately, the latter were able to act on their beliefs to save a good portion of the trees that would have otherwise been lost.

In the Silent Valley controversy (cf. Herring, 1990), on the other hand, local people apparently thought of the resource as a common pool resource for them to exploit for their livelihood (though I am not sure whether it would be “common pool resource” or a “private good” in terms of Figure 2), while outsiders (who ultimately prevailed) considered the area a public good.

Sea tenure for fishing rights on the Bahia coast of eastern Brazil offers a different case (Cordell and McKean, 1986). Here the outsider view would be that increasing population and a virtually unchanging fishing technology would lead to rapidly escalating demands on the resource and its inevitable depletion: in short, a common pool resource in severe danger. But in fact local fishing communities see the fishing grounds as a “toll good” which can be apportioned to community members, who can and do then use social pressure to maintain the grounds as an exclusive resource from which “unauthorized” fishers can be excluded.

In one final example, the Andhra Pradesh villages studied by Wade (1986; see also Wade, 1987) provide a case where different aspects of a given resource are managed differently by the villagers concerned. Here the two major common resources are cropland and water for irrigation. Land is treated as a private good for cropping purposes, but after the harvest, the stubble is managed as a common pool resource by the village. Water is treated as a common property good to be allocated by village authority in some villages but as a private good in others.

In various ways, the Sundarbans fits into each of the cells of Figure 2. An environmentalist view would call the Sundarbans a public good and categorize it similarly to the Silent Valley as a public treasure from which predatory outsiders should be excluded. Forestry professionals would think (officially, that is) of the Sundarbans as a toll good, to be allocated on a “sustainable yield” basis to authorized commercial interests to exploit. People like ourselves who are concerned with long-term CPR management would probably want to consider the area a common pool resource to be used by its inhabitants in a rational manner similar to the ideology of the Chipko Movement, though we would doubtless concede that the forestry bureaucracy and outside commercial interests would have to be given some role as well. Local inhabitants most likely think of the Sundarbans as a resource there for the taking, to be exploited as the need arises, and accordingly they resent efforts to keep them from doing so, in a manner perhaps reminiscent (though on a smaller scale) of the “sagebrush rebellion” in the American West a few years back (see

Dowdle, 1984; also McCurdy, 1984). This assertion will be developed further in section V below.

#### IV. Local Government in Bangladesh: The Upazila Initiative

Centralized “command polities” are not any better for managing political systems than command economies are for promoting economic growth over anything more than the very short run. It is primarily for this reason that governments sooner or later turn to decentralization schemes: Those in the capital city simply do not know what to do at the local level, for even in a relatively homogeneous country like Bangladesh there is just too much local variation for everything to be efficiently decided at the center.

Thus each successive regime in Imperial Bengal/East Pakistan/Bangladesh has felt compelled to decentralize authority to some extent, and in fact that extent has increased markedly over the years, almost in direct proportion to the equal growth of a combination of the government’s simultaneous desire to promote rural development and failure to achieve much notable success in doing so. As the need to develop the countryside has become more pressing, the urge to decentralize has also become stronger. So it is, then, that the Ershad government has embarked upon what is on paper by far the boldest scheme yet to emerge for decentralizing government authority to local level.<sup>14</sup>

The essence of the Ershad reform was to place a directly elected head of each *upazila* (a unit of roughly 250,000 people) in charge of a newly constituted *upazila parishad*. Other voting members of the *upazila parishad* were to be the elected chairmen of the constituent union *parishads* (the next level down—there are on average 8 to 10 unions in each *upazila*<sup>15</sup>), and three or four nominated (primarily female) members. Under the chairman’s supervision was to be another new official, the *upazila nirbahi* officer, a generalist administrator in the tradition of the old subdivision officer. Then under the *nirbahi* officer’s charge were to come the various technical officers at *upazila* level (the *upazila* engineer, agricultural officer, etc.). The mechanism for replacing the traditional line ministry control of these field officers (i.e., their department superiors, whom they reported to, received their pay from and were promoted or transferred by) was to be the “Annual Confidential Report” or ACR, which was henceforth to be written by the *nirbahi* officer and “endorsed” (seconded) by the elected *upazila* chairman.

The second aspect of the reform lay in budget allocation. Whereas previously each line department had decided upon and implemented its own

field program at local level, now the *upazila parishad* would be given a lump sum development block grant from Dhaka (about Tk. 5 million to start, later on reduced to roughly Tk. 4 million) to allocate as its wished for development activities. The technical officers would continue to draw their pay, for that continued to come directly from Dhaka, but their activities were now to be determined by their new local bosses.

The scheme was bound to be somewhat precarious from the beginning, for its two driving forces were quite contradictory, just as had been the case with the decentralization efforts mounted by previous regimes in Dhaka. On the one hand, the government saw that real decentralization was needed to promote any genuine rural development,<sup>16</sup> while on the other it also saw that its rather feeble base of political support needed some major bolstering in the countryside. The *upazila parishad* initiative could meet either objective, but not both at the same time, for to realize either one was in effect to jeopardize the other. Serious development in the countryside would mean including other groups and classes beyond traditional elites, thereby alienating the latter, which had customarily been the main bulwark of rural support for the government. Alternatively, regime support in the rural areas would be most easily realized through a patronage operation that would funnel resources down to local elites in return for their allegiance, but that allegiance would then come at the cost of any improvement in the position of other classes, for local elites would tend to follow past practice of sequestering outside resources to themselves.

The patronage/support goal is generally the more prominent one in the developing world, and Bangladesh has been no exception here, both before and after the secession from Pakistan in 1971. The *upazila* initiative, in other words, sounds rather like a recipe for confirming dominant elites in the rural areas, both by allowing them more resources and by giving them programmatic control over rural development policies previously decided in Dhaka. The picture is rather more complex than this, however, and I would argue that there might be good reason to hope that the new structure in the course of time could deliver some tangible benefits to the poor, even while in the shorter run serving the interests of the local gentry. Similar representative structures at local level in large parts (though admittedly by no means all) of India have been able to accommodate a gradually widening spectrum of groups and classes beyond the traditional elites over the last 25 years or so, and the same could happen in Bangladesh.<sup>17</sup>

As things have turned out, the basic scheme has been implemented, though it has been weakened and perhaps even fatally vitiated by a number of compromises along the way. To begin with, the opposition parties, sensing the “non-partisan” elections as a means to put Ershad men into power locally, vigorously attacked the *upazila* poll. The government backed down and postponed the poll for a year, finally conducting it in the spring of 1985.

Equally opposed to the whole idea were the technical field officers in the line ministries, who resisted being placed under the *upazila nirbahi* officer, even to the extent of undertaking a strike later on in 1985. As a result the government retreated, the *nirbahi* officer was removed from his ACR duties, and the chairman became the ACR writer. Shortly after that came another reduction in *upazila* level supervision, as it was announced that the chairman’s ACR would become a “performance report,” counting about 20 percent of the total for a technical field officer’s personnel evaluation, while a “technical report” to be written through the old departmental channels would constitute the remaining 80 percent.

Then the chairmen themselves came under increasing pressure to join the ruling Jatiyo Party. Many succumbed to these pressures, so that while somewhat less than half of the 460 chairmen were (despite the “non-partisan” cover) reported to be with the ruling party just after the election, by early 1987 it was estimated that more than 80 percent had joined it.<sup>18</sup> Finally, in the summer of 1987 the secretary general of the ruling Jatiyo Party was made the Minister of Local Government, thereby taking charge of the *upazila* system itself. Clearly the government is interested in using the *upazilas* to strengthen its support base in the rural areas.

Still, the *upazilas* have retained a fair amount of autonomy in their discretion over rural development programs, and at least some (though certainly not all) of the *upazila* chairmen appear to have established a satisfactory supervisory relationship with their technical officers. The *upazila* budgets were cut back somewhat for 1986-87, but they still had budgets of roughly Tk. 4 million each, exclusive of recurrent (i.e., salary) costs, which they could spend more or less as they chose, plus a similarly sized grant in the form of food-for-work allotments.

What they have chosen to do is essentially building physical infrastructure: roads, bridges, field drains, school buildings, etc. Services like health, extension, education, animal husbandry and the like have assumed a very low profile. Nor has planning received much interest. Each *upazila* is mandated to draw up a five-year plan for its develop-

mental activity, which is supposed to include both infrastructure and services, but there is no evidence that many (any?) *upazilas* have put together the required planbook, or even seriously thought about the business of planning for future needs of their areas.<sup>19</sup>

### V. Analysis

What are the prospects that the *upazila parishad* structure could manage the Sundarbans area as a common property resource? At present, the Forest Department has complete control over the Sundarbans reserved forest region, but it is certainly not inconceivable that those *upazilas* that have some area lying within the forest preserve will in future be given some degree of authority or influence over that area.

Local representative structures, whether "official" elective bodies, informal leadership groups, or traditional leaders, certainly can be effective at protecting and managing common property resources, as illustrated in the cases mentioned in section III of the paper. There are many other examples as well (*e.g.*, many of those analyzed in the PCPRM study, 1986). But at this point it is far from clear that the *upazila parishad* system could become a good CPR management structure.

There are several relevant considerations. For one thing, a crucial factor in the success of local management of CPRs is that the resource has been in long-term use by local people and thus something that they think of as a fundamental part of their immediate social and cultural as well as economic environment. The Chipko women or the Bahia fishermen thought of the Garhwal trees or the coas-

tal fish runs as *their* resources to preserve for long term use. Similarly in Wade's South Indian villages, people had lived with their land and water resources for many generations. As Elinor Ostrom (1985) puts it, there must be a sense of user *proprietorship* in the resource if people are to develop and implement rules for sustained exploitation.

In the Sundarbans case, however, the ethos would seem to be more nearly one of a *frontier*. People from outside the Sundarbans have for centuries seen it as an uninhabited region, there to be moved into, cleared for crop cultivation (or more recently for mariculture), settled and exploited, as illustrated in the essays by Eaton (1990), and Richards and Flint (1990). The appropriate analogy is more likely 19th century North America or the present-day Amazon basin than the Garhwal hills of Uttar Pradesh: Resources are to be used, not to be managed.<sup>20</sup>

Thus an *upazila parishad*, to the extent that it represents the interests of its constituents, could probably not be counted upon to show much interest in long-term management. Certainly the track record so far with *upazilas* generally in drawing up plans of any kind does not encourage one to think that they would do very well at CPR management. Perhaps worse, the presence of such a tempting resource as the Sundarbans would offer an *upazila parishad* a concrete opportunity to provide a boost to the rural poor without hurting those better off by letting as many people as possible exploit the forest. As elsewhere, those doing the most exploiting can be safely assumed to be those in least need, but the proximity of a usable CPR would allow the poor a chance for income in addition to the customary "trickle down" that has been their lot.

Table 2. Households and Landholdings in the Bangladesh Sundarbans, 1983-84

| Region/district/upazila | Percentage of all FARM OWNING households |        |       |                     |        |       | Percentage of ALL households |        |       |              | 1981 pop/sq mi w/reserved forest |          |
|-------------------------|--|--------|-------|---------------------|--------|-------|------------------------------|--------|-------|--------------|----------------------------------|----------|
|                         | number w/holdings                        |        |       | total operated area |        |       | number w/holdings            |        |       | agric labor* | excluded                         | included |
|                         | small                                    | medium | large | small               | medium | large | small                        | medium | large |              |                                  |          |
| (1)                     | (2)                                      | (3)    | (4)   | (5)                 | (6)    | (7)   | (8)                          | (9)    | (10)  | (11)         | (12)                             |          |
| BANGLADESH              | 70.3                                     | 24.7   | 4.9   | 29.0                | 45.1   | 25.9  | 51.1                         | 18.0   | 3.6   | 39.8         | 1772                             | 1567     |
| Khulna Region           | 66.3                                     | 26.4   | 7.4   | 22.3                | 43.3   | 34.4  | 50.6                         | 20.1   | 5.6   | 44.5         | 1763                             | 923      |
| Satkhira District       | 66.0                                     | 26.1   | 7.9   | 22.1                | 41.6   | 36.3  | 49.8                         | 19.7   | 6.0   | 51.9         | 1544                             | 934      |
| Shyamnagar Upazila      | 60.7                                     | 27.5   | 11.8  | 15.4                | 38.5   | 46.1  | 44.2                         | 20.0   | 8.6   | 58.7         | 1394                             | 313      |
| Khulna District         | 63.0                                     | 29.0   | 8.0   | 20.5                | 45.2   | 34.3  | 46.2                         | 21.2   | 5.9   | 33.5         | 2116                             | 1035     |
| Paikgacha Upazila       | 61.1                                     | 28.1   | 10.8  | 17.8                | 40.1   | 42.2  | 48.0                         | 22.1   | 8.5   | 42.4         | 1188                             | 1172     |
| Koyra Upazila           | 64.5                                     | 26.3   | 9.2   | 19.9                | 39.8   | 40.4  | 50.2                         | 20.4   | 7.2   | 49.1         | 1226                             | 179      |
| Dacope Upazila          | 50.1                                     | 35.8   | 14.1  | 12.5                | 43.3   | 44.2  | 39.8                         | 28.5   | 11.2  | 44.1         | 639                              | 276      |
| Bagerhat District       | 69.4                                     | 24.4   | 6.3   | 24.3                | 43.3   | 32.4  | 55.8                         | 19.6   | 5.0   | 47.2         | 1624                             | 837      |
| Rampal Upazila          | 65.5                                     | 25.3   | 9.2   | 18.7                | 38.9   | 42.5  | 52.6                         | 20.4   | 7.4   | 50.5         | n.a.                             | n.a.     |
| Mongla Upazila          | 61.3                                     | 26.3   | 12.3  | 14.2                | 36.6   | 49.2  | 46.8                         | 20.1   | 9.4   | 52.8         | n.a.                             | n.a.     |
| Sarankhola Upazila      | 69.1                                     | 25.4   | 5.6   | 22.6                | 48.6   | 28.8  | 50.7                         | 18.6   | 4.1   | 42.9         | 1478                             | 293      |

Small holdings = 0.05 < 2.50 acres      Medium holdings = 2.50 < 7.50 acres      Large holdings = > 7.50 acres

\*Agricultural labor households include some that hold land in excess of 0.05 acres; thus columns 7 through 10 total to more than 100 percent.

Sources: BBS (1983; 1986b)

The issue is nicely illustrated in the last two columns of Table 2, which show population density in the area, both when the reserved forest area is excluded (as it now is, since no non-government employees are permitted to reside there permanently) and when it is included. A similar picture emerges from Figure 1 when the reserved and unreserved portion of each of the forested *upazilas* is compared. Given the pressure on land resources that now exists generally (column 11), the greater-than-normal (for Bangladesh) bias towards larger landholdings (cols. 8 and 9) and the relatively large proportion of households dependent on agricultural labor for a living (col. 10), the pressure on local government to do whatever it could to allow access to an apparently "free" good would be intense. And for an *upazila* government accountable to its citizenry, that pressure might well prove irresistible. To put it another way, the more the *upazila* system is able to change from being a patronage/support structure for the government into a representative structure promoting and implementing rural development activities, the more the Sundarbans could (and probably would) be in danger.

On the other hand, the Forest Department has done reasonably well at protecting specific species of biota. As Presler showed in his essay for the Sundarbans Workshop, it was in a sense too successful in conserving the forest resource in some of its early management plans. More recently, it has been able to control quite effectively the cutting of *passur* (Chaffey *et al.*, 1985: 187), even while it has allowed serious overcutting of *gewa* and *sundri*. And as Seidensticker points out (Seidensticker and Hai, 1983), Bangladesh has acquitted itself rather well thus far in protecting tigers and other large fauna.<sup>21</sup> But how long can large wild animals be protected while trees are cut to excess? Choudhury's 1968 management plan for the Sundarbans<sup>22</sup> is apparently now due for replacement; can this conflict be resolved? In sum, can the state exercise the coercive Hobbesian role that Hardin asserts is required to protect its CPRs?<sup>23</sup>

## VI. Outlook

The Sundarbans forest is a common property resource in need of long-term management at both national and local level. The forest has come under increasing threat as population pressure against available resources on one side and economic pressure to earn foreign exchange on the other combine to force produce gatherers, timber cutters and shellfish cultivators into the mangrove area. For its part, the national government must surely feel compelled to show some resolve in protecting the Sundarbans resources, if only to satisfy ecology-

minded donors that something serious is being done.<sup>24</sup> At the same time, there is clearly a role for local government to play here, and the new decentralization initiative embarked upon by President Ershad opens the way for considerable local involvement in CPR issues.

Experience elsewhere indicates that local bodies can be instrumental in good CPR management. At the moment, however, the ability of Bangladesh's new local government units to plan much of anything is very rudimentary. And in view of what seems to be the perception of the Sundarbans as an exploitable frontier, the outlook for wise resource management by the *upazila parishads* should not be considered great.

Should things then be left altogether to the Forest Department? Its track record in such matter has also been substantially less than ideal, though arguably better than that of official forestry management elsewhere in the Indian subcontinent (or the Third World generally, for that matter). After all, extensive stands of mangrove forest and a sizeable population of large fauna do continue to exist in the Sundarbans, in marked contrast to the denudation that so permeates other previously forested areas of the subcontinent. So despite the likelihood that central government management of the Sundarbans in recent decades has contributed more to the destruction of the resource than to its preservation, the overwhelming probability is that turning the area over to local control to any degree would result in an even faster rate of destruction.

In terms of the three strategies suggested at the beginning of this essay for preserving common property resources—centralization, privatization and local management—only a strong centralization approach would appear to have any hope of success. But then central control has proved at least moderately successful in conserving the Sundarbans thus far. If this great mangrove resource is to last very long into the next century, it will almost certainly be because the central government has made its continued existence a priority.

## Notes

1. The original version of this paper was prepared for the Sundarbans Workshop, sponsored by the Smithsonian Institution and the Joint Committee on South Asia of the Social Science Research Council and the American Council of Learned Societies, Washington, DC, 20-21 November 1987.
2. In various contexts, it has shown some promise of success, for instance in the current West Bengal social forestry project in which landless people obtain rights to the trees they tend on degraded state-owned land (see Shah, 1987 for an account). It is perhaps noteworthy that the government initiating this project was a communist one that might be expected *a priori* to have some bias against privatization.

3. Khulna District was divided into three districts in the reorganization of 1984, each conforming to one of its previous subdivisions: Satkhira, Khulna, and Bagerhat. Today "old Khulna" or "greater Khulna" or "Khulna Region" is used to refer to the larger district of the pre-1984 arrangement.
4. Also in the early 1980s the old thanas were "upgraded" to become *upazilas*; the territory is the same as for the erstwhile thanas (though a few new *upazilas* have been created), but the administration, as well as the representativeness and autonomy of the governing body were considerably enhanced. For more detail, see section IV, below.
5. The comprehensive inventory done in the early 1980s (Chaffey *et al.*, 1985: 172, 187) more diplomatically notes merely that there has been substantial "over-exploitation," such that for the main species, "Recorded removals of round timber alone amount to overcutting" (187).
6. Most of the export appears to go to India. See, for instance, ET (1987). Interestingly, the current (1985-90) Five Year Plan calls for no expansion in newsprint production (GPRB, 1985: 248; though see also Timberg's essay), perhaps an indication that the government has become well aware of the overcutting of recent years.
7. Acutally a freshwater or non-mangrove tree, growing primarily in the northern reaches of the Sundarbans.
8. This is what I gather from Pillary (1958), Librero (1984) and Soegiarto (1984). In the Philippines, mangrove clearing for mariculture has become quite widescale; Librero (1984: 82) reports that in 1978 alone there were applications to clear some 50,000 ha. of mangrove area, which would amount to roughly one-sixth of the total Bangladesh Sundarbans region.
9. Hindu population in Khulna District increased by only 3% during 1951-61, while the overall urban + rural growth was 18%. In Paikgacha thana, where Hindus actually outnumbered Muslims in 1951, they had decreased in absolute numbers by 18% at the time of the 1961 census (data from GOP, n.d.: IV-40 & 41).
10. This figure is obtained by subtracting the sum of columns 7 + 8 + 9 from 100, that is  $100.0 - (51.1 + 18.0 + 3.6) = 27.3\%$ .
11. That is, at least 12.5% of the agricultural labor households ( $39.8 - 27.3 = 12.5$ ) must have owned land. In fact the percentage was undoubtedly somewhat greater than 12.5, since "agricultural laborers" in the census are those who report earning a majority of their income from that type of work, and a good number of landless families do not depend on agricultural labor for the greater part of their livelihood (*e.g.*, petty traders, government workers, artisans, *etc.*). Thus there must be many landed families who do work primarily as landless laborers—far in excess of the 12.5% that could be inferred from the landholding data alone.
12. See the text of Vice-President Abdus Sattar's speech to the Unesco seminar on mangrove ecosystems, held in Dacca in 1978 (Unesco, 1979: 15-16). The "commons" reference is, of course, to Hardin (1968).
13. The discussion here more or less follows the presentation in Ostrom and Ostrom (1977). For a more recent account, see Oakerson (1986). Needless to say, there is considerably more to the public choice approach than is being presented here. Two aspects that might be of interest to the reader are: (1) the issue of individual vs. group basis of action (in particular, the assumption of "methodological individualism" that is part of most public choice theory may not apply in the South Asian context); and (2) the allied question of "rational" (*i.e.*, invariably cost/benefit calculated) behavior.
14. The argument here and the outline of the *upazila* scheme are based largely on Blair (1985). On decentralization more generally, see Conyers (1984 and 1986) and Smith (1987). The analysis of the Ershad initiative to date is based mainly on Blair (1987a and 1987b).
15. The union *parishads* (roughly analogous to gram panchayats in India, though they usually have larger populations to serve) have been in place more or less since 1973, though with interruptions as regimes have changed. They have had some discretionary power with rather small budgetary allocations. Consensus at present in Bangladesh is that the *upazila* system has diminished the role and power of the union *parishads* to some extent.
16. This concern came out quite clearly in the major government report that led to the setting up of the *upazila* system. See GPRB (1982).
17. For an elaboration of this case, see Blair (1985). Such an optimistic scenario presumes that a representative rural structure would stay in place for at least a couple of decades, a feat that has proven impossible thus far in East Pakistan/Bangladesh, where regime changes at the top have meant that local government systems have never remained in operation for very long.
18. Two newspaper surveys of the new *upazila* chairmen were conducted shortly after the polls held in May 1985, with both reporting about 45% in the Jatiyo Party (Ahmed, 1986). The later estimates were reported to the author by numerous political observers in Dhaka in 1987.
19. These were the impressions I gathered on field trips in January and July-August 1987 to analyze decentralization in Bangladesh. Later trips in 1988 and 1989 did nothing to change these conclusions.
20. Or as Herring puts it (1990), the local citizenry exhibits an instrumentalist rather than a preservationist understanding of nature. To use his terms, there is no reason to assume evidence of either social or "deep" ecology in the local mindset.
21. A 1987 survey showed 550 tigers in the Sundarbans (BO, 1987b).
22. Choudhury (1968), cited in Chaffey (1985: 193) and in Seidensticker and Hai (1983: 113). Choudhury's plan was to end in 1979-80, but delays occasioned by the liberation war caused it to be extended into the 1980s (Seidensticker and Hai, 1983: 76).
23. See Herring (1990) on this.
24. Given that these donors provide some 85-90 percent of the government's annual development budget (see, *e.g.*, World Bank, 1987: 229), such desires have to be accorded important consideration.

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