

21. State Regulation of Open-Access, Common-Pool Resources

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"But still another inquiry remains; one often agitated by the more recondite Nantucketers. Whether, owing to the almost omniscient look-outs at the mast-heads of the whaleships, now penetrating even Behring's straits, and into the remotest secret drawers and lockers of the world; and the thousand harpoons and lances darted along all continental coasts, and so remorseless a havoc; whether he must at last be exterminated from the waters, and the last whale, like the last man, smoke his last pipe and then himself evaporate in the final puff." (Melville, Moby Dick, 1922, 425).¹

1. INTRODUCTION

The Problem At Hand

Open-access, common-pool resources, such as many fisheries, aquifers, oil pools, and the atmosphere, often require some type of regulation of private access and use to avoid wasteful exploitation.² In the absence of constraints on users, such as those provided by informal community norms, more formal property rights, or other types of state regulation, individuals competitively exploit the resource rapidly and wastefully. Short-term horizons dominate, with little investment or trade to channel the resource across time or across users to higher-valued applications. This excessive extraction, which amounts to private plunder, continues so long as it is in the interests of the individual parties, even if society would be better off with less intensive and extensive use. Without some limits on individual behavior to better reflect broader, social benefits and costs, only private net benefit calculations govern resource use decisions.

The historical and contemporary record of open-access resources is not a happy one. The depletion of valuable fisheries, the overdraw of critical

¹I am grateful to Jim Smith who brought this passage to my attention. In this chapter, I cite selections from the literature on regulation of the common pool. The literature is a large one, and the list referenced here is only suggestive, not exclusive.

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aquifers, the stranding of rich oil deposits following excessive, competitive extraction, and the dumping of smoke and other pollutants into the air are examples of the common pool. Unfortunately, many of these open-access problems persist, and the discussion here suggests why that is the case. Throughout this chapter, the terms common pool, commons, and open access are used interchangeably. They do not refer to common property, which is a type of solution to the open-access, common pool, as described below.

The Costs of Reducing the Losses of the Commons

Despite the documented losses of the commons, it is not always in society's interest to completely confront the problem. Too many resources may be required, relative to the benefits achieved. In some cases, for example, where very large geographic scales or highly mobile resources are encountered, the transaction costs of defining and enforcing even loose constraints can be prohibitive, at least compared to the value of the resource at stake. In other cases, where there are large numbers of heterogeneous parties competing for the asset, the transaction costs of reaching agreement among the competitors on access and use restrictions also can be very high, relative to the anticipated gains. Or, in a third case, information may be so limited or controversial regarding the benefits of controlling entry and use that no consensus is achieved on the need to take action. Such information problems arise from high transaction costs of collecting and conveying data regarding the status of the resource being exploited.

In all of these situations, the "commons" persists because of transaction costs. It is too costly to place boundaries around the resource; it is too costly to secure agreement to limit individual actions; and it is too costly to obtain enough information to determine the proper course of action to protect the resource. In these cases of high transaction costs, continuation of the commons is efficient, as Coase (1960, 39) has taught us.

By contrast, in other situations where information is clearer about the costs of the common pool and where monitoring entry and agreeing on acceptable uses can take place with relatively lower transaction costs, then community rules can reduce open-access losses. Indeed, if a common resource is accessed locally by a comparatively small number of parties with similar or generally homogeneous objectives and production costs, then the problem of overuse often can be effectively addressed through informal rules or norms that constrain individual actions.

Under these circumstances it can be relatively easier for a small group of similar people who have a history of interaction with one another to gather and interpret information about the resource's status and to agree upon the types of uses and constraints necessary to conserve it. They also can accept the distribution of the costs and benefits (and ultimately, of wealth and political power) within the community that is inherent in any definition and assignment of use privileges, even under informal arrangements. Community management of regional agricultural irrigation water, pastures, or inshore fisheries provides