

Background and History of MSA: Public Trust Management Issues

Tragedy of the Commons

The tragedy of the commons is a term, probably coined originally by William Forster Lloyd and later used by Garrett Hardin, to denote a situation where individuals acting independently and rationally according to each's self-interest behave contrary to the best interests of the whole group by depleting some common resource. The concept was based upon an essay written in 1833 by Lloyd, the Victorian economist, on the effects of unregulated grazing on common land and made widely-known by an article written by Hardin in 1968.

Excerpt from *Science* 13 December 1968:

Vol. 162 no. 3859 pp. 1243-1248

DOI: 10.1126/science.162.3859.1243

"The Tragedy of the Commons," by Garrett Hardin:

"The tragedy of the commons develops in this way. Picture a pasture open to all. It is to be expected that each herdsman will try to keep as many cattle as possible on the commons. Such an arrangement may work reasonably satisfactorily for centuries because tribal wars, poaching, and disease keep the numbers of both man and beast well below the carrying capacity of the land. Finally, however, comes the day of reckoning, that is, the day when the long-desired goal of social stability becomes a reality. At this point, the inherent logic of the commons remorselessly generates tragedy.

As a rational being, each herdsman seeks to maximize his gain. Explicitly or implicitly, more or less consciously, he asks, "What is the utility *to me* of adding one more animal to my herd?" This utility has one negative and one positive component.

1) The positive component is a function of the increment of one animal. Since the herdsman receives all the proceeds from the sale of the additional animal, the positive utility is nearly +1.

2) The negative component is a function of the additional overgrazing created by one more animal. Since, however, the effects of overgrazing are shared by all the herdsmen, the negative utility for any particular decision-making herdsman is only a fraction of $\frac{1}{N}$.

Adding together the component partial utilities, the rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another; and another... But this is the conclusion reached by each and every rational herdsman sharing a commons. Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit--in a world that is limited. Ruin is the

destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all.

Some would say that this is a platitude. Would that it were! In a sense, it was learned thousands of years ago, but natural selection favors the forces of psychological denial (8). The individual benefits as an individual from his ability to deny the truth even though society as a whole, of which he is a part, suffers.”

Public Lands and National Forests

- 1960: Multiple-Use Sustained-Yield Act 16 USC 528-531. Directs the Secretary of Agriculture to manage National Forests for Multiple-Use and Sustained Yield meaning:

§ 531. Definitions...:

(a) “Multiple use” means: The management of all the various renewable surface resources of the national forests so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some land will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output.

(b) “Sustained yield of the several products and services” means the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the national forests without impairment

of the productivity of the land.
(Pub. L. 86–517, § 4, June 12, 1960, 74 Stat. 215.)

- Forest and Rangeland Renewable Resources Acts (1974, 1978) 16 USC 1600-1614; 1641-1647; 1671-1676):

Forest Service to develop:

“renewable resources program:” based on assessment, public involvement required, required provisions, promulgation of regulations, addresses clearcutting, MUSY

Limitations on timber sales: public participation, advisory boards subject to FACA

- Federal Land Policy and Management Act (1976) (43 USC 1701-1784)

Secretary of Interior must develop “land use plans” for public lands; MUSY applies; advisory councils subject to FACA; “grazing advisory boards,” subject to FACA; areas of “critical environmental concern.”

Plans must address specified factors:

(c) Criteria for development and revision In the development and revision of land use plans, the Secretary shall—

(1) use and observe the principles of multiple use and sustained yield set forth in this and other applicable law;

(2) use a systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic, and other sciences;

(3) give priority to the designation and protection of areas of critical environmental concern;

(4) rely, to the extent it is available, on the inventory of the public lands, their resources, and other values;

(5) consider present and potential uses of the public lands;

(6) consider the relative scarcity of the values involved and the availability of alternative means (including recycling) and sites for realization of those values;

(7) weigh long-term benefits to the public against short-term benefits;

(8) provide for compliance with applicable pollution control laws, including State and Federal air, water, noise, or other pollution standards or implementation plans; and

(9) to the extent consistent with the laws governing the administration of the public lands, coordinate the land use inventory, planning, and management activities of or for such lands with the land use planning and management programs of other Federal departments and agencies and of the States and local governments within which the lands are located, including, but not limited to, the statewide outdoor recreation plans developed under the Act of September 3, 1964 (78 Stat. 897), as amended [16 U.S.C. 460l–4 et seq.], and of or for Indian tribes by, among other things, considering the policies of approved State and tribal land resource management programs. In implementing this directive, the Secretary shall, to the extent he finds practical, keep apprised of State, local, and tribal land use plans; assure that consideration is given to those State, local, and tribal plans that are germane in the development of land use plans for public lands; assist in resolving, to the extent practical, inconsistencies between Federal and non-Federal Government plans, and shall provide for meaningful public involvement of State and local government officials, both elected and appointed, in the development of land use programs, land use regulations, and land use decisions for public lands, including early public notice of proposed decisions which may have a significant

impact on non-Federal lands. Such officials in each State are authorized to furnish advice to the Secretary with respect to the development and revision of land use plans, land use guidelines, land use rules, and land use regulations for the public lands within such State and with respect to such other land use matters as may be referred to them by him. Land use plans of the Secretary under this section shall be consistent with State and local plans to the maximum extent he finds consistent with Federal law and the purposes of this Act.

Additional Conservation Legislation:

- ESA (1973)
- The Wilderness Act (1964)(The Wilderness Act, signed into law in 1964, created the National Wilderness Preservation System and recognized wilderness as “an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain.” The Act further defined wilderness as "an area of undeveloped Federal land retaining its primeval character and influence without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions")
- Ocean Dumping Act (1972)(Marine Protection, Research, and Sanctuaries Act of 1972) (33 USC 1401-1445)