Cooperative Management in the Great Lakes: Exploring Characteristics of Success

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Introduction

Our paper describes the unique nature of cooperative fishery research and management in the Great Lakes and formulates operational procedures based on our experiences that may be useful elsewhere.

Cooperative Great Lakes Fishery Management

The joint strategic plan

To coordinate fisheries management in the Great Lakes, the eight Great Lakes states, the province of Ontario, two tribal fisheries agencies, and the federal governments of Canada and the United States have adopted “A Joint Strategic Plan for Management of Great Lakes Fisheries” (joint strategic plan; GLFC 1997). First signed in 1981 and subsequently revised in 1989 and again in 1997, the joint strategic plan is the framework for fishery management decision making based on sound science and consensus. The goal statement of the joint strategic plan is

To secure fish communities, based on foundations of stable self-sustaining stocks, supplemented by judicious plantings of hatchery-reared fish, and provide from these communities an optimum contribution of fish, fishing opportunities and associated benefits to meet needs identified by society for wholesome food, recreation, cultural heritage, employment and income, and a healthy aquatic ecosystem.

Four strategies were adopted to achieve this goal: ecosystem management, consensus, accountability, and information sharing. The philosophy underlying the joint strategic plan is that each of the Great lakes fishery management agencies has a share in the Great Lakes ecosystem and that, in the interest of the common good, management authorities must be cooperative to be effective, rather than unilateral in their actions.

The strength of the joint strategic plan in its implementation comes through the activities of the lake committees. One committee was established for each Great Lake (Eshenroder 1987). A council of lake committees was also formulated to discuss basin-wide issues. Lake committees consist of one representative from each of the state, provincial, or tribal agencies with authority for fishery management. Federal signatories to the plan are not members but serve in an advisory role to the lake committees. Fundamentally, lake committees seek to manage each lake as a whole system, as opposed to management that follows the political fragmentation of the basin. Within the lake committees, decisions are made by consensus about the nature of desired fish community structure and the actions necessary to achieve them, stocking strategies, law enforcement activities, and harvest rates. Each management agency is then accountable for implementing the shared decisions within its own jurisdiction. The joint strategic
plan is generally recognized as one of the most effective vehicles for cooperative, international fisheries management in the world.

Two unique aspects exist with the Great Lakes fishery management structure described above. First, agency involvement with the lake committee process is voluntary among the fishery management jurisdictions. No legislation forces or coerces the provincial, state, or tribal agencies to participate. No agency by its participation forfeits its jurisdiction or responsibilities. The second unique aspect of this voluntary, consensus-based approach is that international fishery management occurs among subnational governments (province, states, tribes) in the absence of central federal authority. In other international fisheries, federal governments usually have lead roles with subnational governments, assisting them in the process. In some cases, federal governments formulate agreements and establish international fisheries commissions with management authority to establish regulations and harvest quotas. In the Great Lakes, the United States and Canada established an international fisheries commission, but not with the same level of authority as in some other international fisheries commissions.

**Great Lakes Fishery Commission**

In 1955, the governments of the United States and Canada signed the “Convention on Great Lakes Fisheries,” the treaty that established the Great Lakes Fishery Commission. This binational convention created the commission “to formulate and implement a comprehensive program for the purpose of eradicating or minimizing the sea lamprey populations” in the Great Lakes and to formulate, coordinate, and undertake a fishery research program that focused on the fish stocks of common concern (GLFC 1955). Thus, the responsibilities of the commission can be summarized first as the implementation of management program focused on control of the nonnative sea lamprey *Petromyzon marinus*. Beyond management authority for sea lamprey, the GLFC does not have any jurisdictional authority for fishery management in the Great Lakes. Second, the commission is to coordinate, conduct, and communicate fishery research. Third, the commission supports the activities of the agencies with jurisdictional authority to coordinate fishery management and to promote the productivity of Great Lakes fisheries. Given these responsibilities, the commission promotes both cooperative management and research. The commission was the logical organization to help facilitate the effective implementation of the joint strategic plan among its signatories and provide administrative support (e.g., schedules, communications, agenda setting) to the lake committees in their activities.

**Challenges, conflicts, obstacles, and solutions**

The challenges facing Great Lakes fishery management are large within the context of the ecological and political diversity of the basin. Invasions of foreign species from plankton to fish, allocation of percid harvest in Lake Erie, restoration of native species such as lake trout, lake sturgeon, and the American eel, and disagreements over the jurisdictional authority of some aboriginal groups are just a few of the challenges. Though we cannot comprehensively discuss all challenges, we can offer a few personal observations.

**Goals and objectives are important!**

Great Lakes fishery managers have worked hard over the past two decades to clearly describe fish communities and their associated fisheries, as well as articulate the characteristics desired in the future. These characteristics or management goals are known as fish community objectives and are developed through a consensus process by lake committees (e.g., Ryan et al. 2003). Species-specific
plans also are developed for native species requiring specialized rehabilitation approaches, such as lake trout and lake sturgeon (Schneider et al. 1983; Krueger and Decker 1999). These species specific plans are considered to be nested within, and consistent with, the fish community objectives. Agreed-upon goals can resolve potentially negative interactions and serve to maintain a laser focus on what management is attempting to achieve. Conflicts in day-to-day management are reduced when lake managers across jurisdictions share a common understanding of their long-term goals. Conflicts do arise when discussions focus on management actions such as harvest regulation and are not explicitly linked to agreed-upon goals. This situation happens when the participants do not personally agree with established goals or (have forgotten the earlier agreements made by their agencies). These situations can be summarized as “arguing about actions while being at cross-purposes on goals.”

Knowing jurisdictional boundaries is important!

Cooperative management requires that the participants know their roles and how each fishery management agency is similar to, or different from, their own. Some fishery management agencies are organized within a natural resources agency that includes environmental protection, whereas others may be solely focused on fish and wildlife management. Participants in cooperating agencies must know not only bounds of their agency, but also those of other agencies. Jurisdictional authority is jealously guarded by individual agencies in the Great Lakes. For example, the staff serving the Great Lakes Fishery Commission may provide advice or offer rational dialog regarding ongoing fishery management; however, great care is given to only provide input and not infer authoritative direction. Should the commission begin to operate in a directive manner, the province, states, and tribes will ensure that the folly is identified and corrected immediately!

Personalities are important!

Many government agencies seem to relish internal reorganization. Reorganization may refocus the agency appropriately, but often, much energy is expended with a commensurate decline in morale. Individual people are a real key to effective cooperative management. Good people can overcome weak organizational structures. Great organization structures can be sabotaged by complacent, unmotivated people. Cooperative fishery management requires managers who see their role as resource stewards; they are not threatened by new information or approaches, enjoy discussion and debate, and care about fish and people. The best managers are those who lead based on guiding principles (e.g., honesty is the best policy, do no harm to the resource): have a stewardship concern for future generations’ access to resources, have strong listening skills, recognize the importance of relationship building with managers outside their agency, and know that understanding another manager’s position does not mean you agree with it. When at least one such manager exists in each of several agencies on a Great Lake, then they can become a leading force for progressive fishery management. Most outstanding leaders have a special charismatic ability to effectively communicate and motivate others. Loss of key leading fishery managers can be devastating. Deliberate succession planning for these managers must occur if long-term, successful, cooperative fishery management is to continue.

Communication is important!

Honest communication among managers is required for cooperative Great Lakes fishery management. For example, when determining harvest allocation among jurisdictions, agreements are made.

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within the lake committee. Managers then report to their agencies. Sometimes the agency balks at this nonbinding agreement; similarly, fishery stakeholders may stage a rebellion against the agency. The manager's best course of action, under these circumstances, is to return to the lake committee forum and state the circumstances. Finding fault with the science supporting the earlier agreement guarantees a bad outcome. Honest communication builds predictability, trust, and mutual respect in relationships in cooperative management regimes.

**Applying the Great Lakes Experience**

The Great Lakes have an organizational structure where all management agencies have separate but equal voices, where stakeholders are advisory, where decisions are made by consensus, and where an oversight body with credibility (but no management authority) serves to arbitrate difficult issues. Because the system is voluntary, protects and respects individual jurisdictional authority, and requires written goals and objectives, it works. Cooperative, charismatic leadership characterize the managers within the basin. Their desire for consistent ecosystem management overrides local, more restricted perspectives, which are, at times, embraced by their administrators.

Cooperative research, in which agencies and universities forge partnerships, and in which funding agencies join forces to attack basin-wide problems, is also driven by effective organizational structures but most importantly by flexible, creative administrators. Within the Great Lakes, we have been indeed fortunate to have innovative administrators that serve to deal effectively with ever-evolving ecosystem issues. Our view of cooperative management and research and its attendant difficulties lies, first and foremost, with people … success requires fishery managers that have courage and credibility … critical character traits that enable managers to put fish first.

**References**


