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Benefits and Risks of Adopting the Global Code of Practice for Recreational Fisheries

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Benefits and Risks of Adopting the Global Code of Practice for Recreational Fisheries

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ABSTRACT: *Recreational fishing constitutes the dominant or sole use of many fish stocks, particularly in freshwater ecosystems in Western industrialized countries. However, despite their social and economic importance, recreational fisheries are generally guided by local or regional norms and standards, with few comprehensive policy and development frameworks existing across jurisdictions. We argue that adoption of a recently developed Global Code of Practice (CoP) for Recreational Fisheries can provide benefits for moving recreational fisheries toward sustainability on a global scale. The CoP is a voluntary document, specifically framed toward recreational fisheries practices and issues, thereby complementing and extending the United Nation's Code of Conduct for Responsible Fisheries by the Food and Agricultural Organization. The CoP for Recreational Fisheries describes the minimum standards of environmentally friendly, ethically appropriate, and—depending on local situations—socially acceptable recreational fishing and its management. Although many, if not all, of the provisions presented in the CoP are already addressed through national fisheries legislation and state-based fisheries management regulations in North America, adopting a common framework for best practices in recreational fisheries across multiple jurisdictions would further promote their long-term viability in the face of interjurisdictional angler movements and some expanding threats to the activity related to shifting sociopolitical norms.*

El sábalo americano de la costa del Riesgos y beneficios de adoptar un código global de prácticas para pesquerías recreativas

RESUMEN: *las pesquerías recreativas constituyen el uso dominante, y a veces el único, de diversas poblaciones de peces, particularmente en ecosistemas dulceacuícolas en pueblos occidentales industrializados. No obstante, a pesar de su importancia social y económica, la pesca recreativa es comúnmente regulada por normas y estándares locales o regionales, con marcos políticos y de desarrollo poco comprensibles y una comunicación inter-jurisdiccional deficiente. En este trabajo se argumenta que la adopción de un Código Global de Prácticas (CGP), de reciente creación, para pesquerías recreativas puede ofrecer beneficios útiles para el tránsito de la pesca recreativa hacia la sustentabilidad a escala global. El CGP es un documento voluntario, especialmente diseñado para las prácticas y temas relativos a la pesca recreativa, por lo que complementa y extiende el Código de Conducta de la Pesca Responsable elaborado por La Organización de las Naciones Unidas para la Alimentación y la Agricultura. El CGC para pesquerías recreativas describe los estándares mínimos, ambientalmente amigables, éticamente apropiados y socialmente aceptables en las prácticas y manejo de la pesca recreativa. Si bien muchas, si no es que todas, las previsiones presentadas en el CGC ya comienzan a tratarse en la legislación pesquera nacional y en las regulaciones estatales de manejo en los Estados Unidos de Norteamérica, la adopción de un marco común que defina las mejores prácticas en las pesquerías recreativas a través de diversas jurisdicciones, promoverá aun más su viabilidad a largo plazo. Tal promoción se está dando de cara a movimientos inter-jurisdiccionales en pro de la pesca con línea y de amenazas crecientes a la actividad que están relacionadas al cambio en las normas sociopolíticas.el sábalo americano representa una invasión nociva o una introducción benéfica.*

INTRODUCTION

The importance of recreational fishing as a leisure activity emanates from the 16th and 17th centuries and was popularized by Izaak Walton's "The Compleat Angler, or Contemplative Man's Recreation," first published in 1653 (Pitcher and Hollingworth 2002). Recreational fishing is now highly developed and pursued by large numbers of people around the world, primarily to meet nonessential, yet relevant, human needs (Arlinghaus and Cooke 2009) but also to supplement diets. Recreational fishing also generates significant employment in terms of angler expenditure–dependent jobs (Cowx 2002; Ditton 2008). Despite the importance of recreational fisheries globally, the sector is constantly challenged by a need to adapt to social and ecological change (e.g., declining participation in some areas of the world, Gray et al. 2003; U.S. Fish and Wildlife Service

[USFWS] 2006; increasing anti-angling sentiments in some countries, Arlinghaus, Cooke, Lyman, et al. 2007; Arlinghaus, Cook, Schwab, et al. 2007). To assure sustainable development of recreational fisheries, some degree of action is needed at all levels of jurisdiction and across many recreational fisheries (Post et al. 2002; Cowx and Arlinghaus 2008).

Recreational fisheries are the predominant or sole user of most freshwater fish resources in developed countries, rapidly expanding in transitional economies (e.g., Domarkas and Radaityté 2008; Shen 2008; Zakariah 2008), and is an integral component of coastal fisheries in all industrialized countries (Coleman et al. 2004; Ihde et al. 2011). However, the overall importance of recreational fisheries is often overlooked or underappreciated in the wider political arena in many countries (Arlinghaus et al. 2002). Fundamental conflicts exist over the use of water and access to resources (Cowx 1998; Arlinghaus 2005; Cowx et al. 2010), and there is often intrasectoral competition between the fisheries subsectors (e.g., between the commercial and recreational fishing, and even aquaculture; Arlinghaus 2005). In addition, although recreational fishing is often regarded as less damaging to aquatic ecosystems than commercial fishing, recreational exploitation can have various direct and indirect impacts on fish and fish populations (Post et al. 2002; Cooke and Cowx 2006; Lewin et al. 2006) and, indeed, structure entire aquatic ecosystems (Roth et al. 2007, 2010). In addition, on moral grounds the issue of fish welfare has gained momentum in some countries, particularly in Europe, and recreational angling is increasingly being questioned based on the argument of the unnecessary infliction of pain and suffering to fish (Huntingford et al. 2006; Arlinghaus, Cooke, Lyman, et al. 2007; Arlinghaus, Cooke, Schwab, et al. 2007; Arlinghaus et al. 2009). Concerns over fish welfare perhaps have the greatest potential to disrupt recreational fisheries, because some advocates are beginning to question the general legitimacy of recreational fishing (de Leeuw 1996). Long-term viability and sustainable development of recreational fisheries will benefit from addressing these and other issues (Cooke and Cowx 2006; Lewin et al. 2006; Cowx et al. 2010).

Given the high social, economic, and ecological benefits of recreational fisheries, development of a code of practice could make an important contribution toward their long-term sustainability (Cowx and Arlinghaus 2008). To this end, the European Inland Fishery Advisory Commission (EIFAC)—a regional fisheries body within the Food and Agriculture Organization of the United Nations (FAO)—recently developed a Code of Practice (CoP) for Recreational Fisheries for global application (European Inland Fishery Advisory Commission [EIFAC] 2008; Arlinghaus et al. 2010). Although the EIFAC focuses on European countries, the CoP was developed in consultation with stakeholders and practitioners from across the world, and the wording and context are formulated to make it relevant across a range of jurisdictions that deal with recreational fisheries (Arlinghaus et al. 2010). As developed, the CoP can provide a coherent framework to address pertinent issues concerning recreational fisheries and may thus also be of interest to North American fisheries managers and researchers.

The objective of this article is to expose the North American fisheries profession to the background of the CoP and highlight the various areas where the CoP may provide a useful framework—or build upon existing approaches—to develop new policies for sustainable recreational fisheries. In addition to the benefits of the CoP, we address some risks associated with adopting the CoP. We finish by outlining a recent example where the code has been used in the policy arena at the international level.

OBJECTIVES OF THE CODE OF PRACTICE FOR RECREATIONAL FISHERIES

Similar to the popular and widely used FAO Code of Conduct for Responsible Fisheries (CCRF; FAO 1995) primarily direct at marine commercial fisheries, the EIFAC Code of Practice for Recreational Fisheries (Figure 1; EIFAC 2008) outlines the minimum standard for ethically permissible, socially acceptable, and biological sustainable recreational fisheries development and management. The CoP adopts and promotes a participatory consultation process and is built around the best available science. Though global in orientation, the CoP explicitly acknowledges regional and national specificities and leaves ample opportunity to accommodate national and regional differences. The goals of the CoP are to

1. establish best practice and management principles for responsible recreational fisheries among nations, regions, organizations, or individual recreational fishing communities;
2. serve as a guiding instrument to establish or improve institutional and policy frameworks required to exercise responsible management of recreational fisheries;
3. facilitate and promote cooperation among public bodies, nongovernmental organizations (NGOs), and individual stakeholders in the conservation, management, and development of recreational fisheries resources, including the aquatic ecosystems of which they are an intrinsic part;
4. promote recreational fisheries by outlining and facilitating best practices within the sector for long-term sustainability and for the responsible use of all ecological services generated by aquatic ecosystems and aquatic organisms;
5. serve as a model for development of sustainable recreational fisheries, especially for countries in which recreational fishing is a relatively new activity.

At a general policy level, the CoP thus seeks to promote understanding of the importance of recreational fishing as a provider of key socioeconomic services among public bodies, NGOs, and individual stakeholders involved in conservation, management, and development of aquatic ecosystems. The CoP adopts a science-based approach to sustainable recreational fisheries by outlining science-based best practices (e.g., in the context of catch and release), and it also emphasizes research and monitoring as an important component of sustainable fish-

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eries. The CoP identifies adaptive comanagement of recreational fisheries through the integration of all stakeholder concerns into development of regulations and planning as an important component of effective management. Finally, the CoP promotes education, training, and appropriate angler conduct in areas where this is incomplete or even lacking as important to ensure that recreational fisheries remain viable.

STRUCTURE OF THE CODE OF PRACTICE FOR RECREATIONAL FISHERIES

The CoP has 13 articles, plus an annex, that provides definitions for key terms used in the document (Figure 2; EIFAC 2008). In addition, a brief introduction highlights the purpose of the CoP. Similar to the structure of the CCRF (FAO 1995), the first three articles of the CoP for recreational fisheries are introductory: (1) nature and scope; (2) objectives; and (3) implementation and updating. Some general principles are contained in Article 4, followed by Article 5 on environmental stewardship and ethics. These two articles prescribe a set of basic values that people involved with recreational fisheries may want to embrace when promoting sustainability (see Arlinghaus et al. [2009, 2010] for details). However, pro-environmental values (Article 5) are not sufficient to develop sustainable recreational fisheries, and need to be supported by a functioning policy and institutional framework (highlighted in Article 6), as well as by appropriate compliance and enforcement (Article 7). What follows these articles on basic policy and governance are four articles that deal with technical areas of importance for developing responsible and sustainable recreational fisheries, viz. recreational fishing practices (Article 8); fish welfare (Article 9); stakeholder interactions (Article 10); and management (Article 11). These technical articles specify basics and commonsense aspects, such as "avoid littering" and "do not take more fish than needed," but also elaborate on sophisticated management philosophies, such as adaptive management approaches. In terms of fish welfare, detailed guidelines—for example, the need to kill a fish immediately after dehooking if it is to be taken home for consumption—are included. Finally, a scientific basis for management of recreational fisheries is detailed in Article 12. Article 13 on awareness, education, and training closes the CoP by describing steps to educate and inform fisheries and other stakeholders who impact recreational fisheries resources.

The CoP for recreational fisheries is designed to be interpreted, applied, and used on a voluntary basis in conformity with the relevant rules of various international, national, regional, and local agreements and on legislation relating to the aquatic environment and fisheries. Further, the CoP can be viewed as a reference document, used to build upon existing approaches to recreational fisheries. The value of the CoP for recreational fisheries is its coherent direction toward sustainable and—depending on local conditions and norms—ethically appropriate recreational fishing, thereby avoiding lengthy jargon on sustainable fisheries that is only tangentially related to the recreational fishing sector. Importantly, the CoP nests recreational fisheries within the ecosystem, addressing non-fishery-related anthropogenic impacts (e.g., water management), which is a different perspective than raised in the CCRF by FAO (1995) and particularly important in freshwaters.

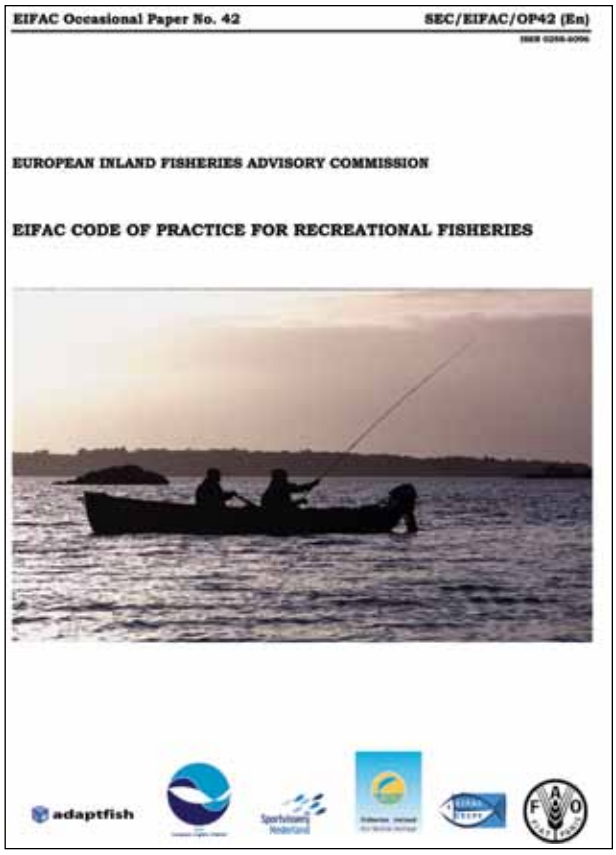

Figure 1. Front cover of the EIFAC code of practice for recreational fisheries as published by the Food and Agriculture Organization of the United Nations.

BENEFITS OF ADOPTING THE CODE OF PRACTICE TO RECREATIONAL FISHERIES

The CoP for recreational fisheries is mainly targeted at fisheries policy makers, representatives of recreational angler associations, unions and clubs, recreational fishers, the recreational fishing industry, local and regional fisheries managers, and fisheries scientists to serve as one of many possible approaches for outlining best practices for recreational fisheries management (Arlinghaus et al. 2010). Similar to the CCRF (FAO 1995), the most important impact may not be at the level of an individual angler but instead the raising of salient aspects of sustainable recreational fisheries among the recreational fishing community. Thus, the profile of recreational fisheries as providing critical ecosystem services could be raised by identifying the socioeconomic importance of recreational fishing among public bodies, NGOs, and individual stakeholders involved in conservation and management of aquatic ecosystems (Cowx and Arlinghaus 2008).

Integration of the CoP into public policy and management practices would probably result in a number of more tangible benefits to local and regional recreational fisheries management. Foremost, the CoP provides a logical framework to develop long-term sustainable management strategies. Further, benefits of the CoP through

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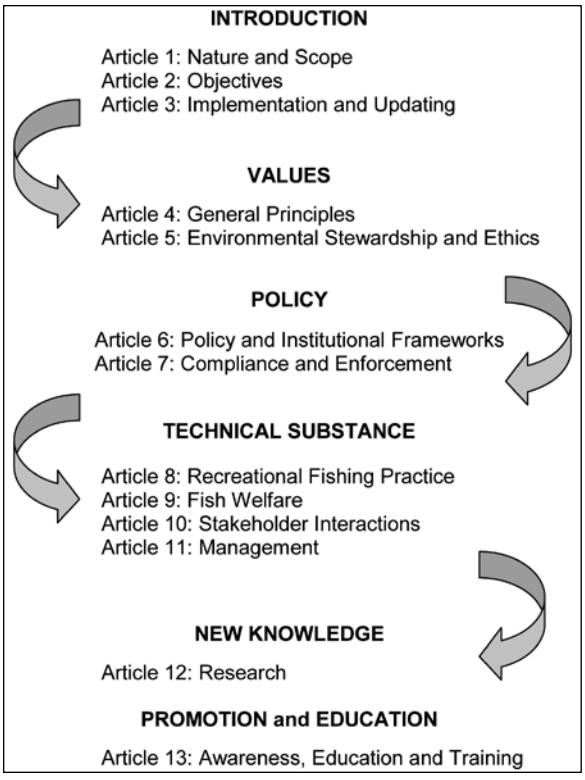

Figure 2. Content structure of the various articles of the code of practice for recreational fisheries. (Source: Arlinghaus et al. 2010.)

application of its provisions may include the following (Cowx and Arlinghaus 2008):

- increased awareness in the policy arena and an entry point for viable dialogue, at all levels of jurisdiction;
- improved understanding and management of impacts of recreational fisheries to move toward sustainability;
- better identification of issues of conservation concern;
- promotion of a platform for exchange of experiences and collaboration between organizations and jurisdictions;
- increased acceptance of the sector as a major player in the world's fisheries;
- improved assessment and potential resolution of conflicts between sectors and user groups;
- promotion of low-risk and sustainable enhancement measures;
- promotion of a positive image of recreational fisheries within society;
- promotion of integrated aquatic resource management and an ecosystem approach to recreational fisheries management;
- promotion of environmentally and socially responsible behavior of recreational fishers/anglers.

Other important benefits of the most salient articles of the CoP for individual stakeholders groups (managers, anglers/recreational fishing industry, and researchers) are summarized in Table 1. The benefits will vary in importance among countries and jurisdictions, but a number of general statements can be derived from adopting the principles inherent in the CoP. In terms of fisheries managers and management agencies, benefits include development of sustainable management practices, development of consistent approaches to recreational fisheries, and a scientific approach to recreational fisheries management. The CoP may also facilitate the development of common monitoring and research approaches to support recreational fisheries, an important issue given the limitations on financial and manpower resources for monitoring thousands of independent stocks (Fayram et al. 2009) and the increasingly recognized need for standardized sampling programs and the collation of data across jurisdictions (Bonar et al. 2009). Monitoring information that is coordinated across regions and states should in turn prove useful for identifying research priorities to support policy and management of recreational fisheries at a range of scales. Integration of the suggested CoP principles for management into agency policy may also help decrease the complexity in development of management policies for shared fisheries.

Anglers and the recreational fishing industry may benefit from the CoP because the CoP's provisions emphasize the "right" and opportunity to fish recreationally and demand the integration of anglers' interests in management decision making, including regulation planning (Table 1). Following the CoP would provide recreational angling stakeholders a seat at the table when discussions about management approaches are being developed. Further, anglers and the recreational fishing industry would be integrated into monitoring approaches necessary to understand the impacts of recreational fishing and the complexities of quantitative fisheries stock assessment. In a more abstract way, the principles of the CoP may result in enhancing the social priority and visibility of the entire sector if recreational fisheries are maintained sustainably and sustainable recreational fisheries are communicated and promoted in the public arena. Thereby, a more positive public image of recreational angling could be produced; for example, by using the guiding moral of the CoP, that of environmental stewardship (Chapin et al. 2010). In addition, with many anglers moving across territorial boundaries (Aas and Arlinghaus 2009), a common framework would mean that anglers would be cognizant of angling practices in new jurisdictions, which helps reduce conflicts and transaction costs.

The CoP also has the potential to provide a proactive framework for addressing the growing lobby against angling as a leisure and sporting pursuit. For example, inherent in the CoP is recognition that fish welfare is important and that all participants should be working toward incorporating strategies that maintain the welfare status of fish into their practices. By empowering anglers and other stakeholders with such knowledge about fish welfare through education and awareness, the CoP could help counter the growing lobby against angling on moral grounds through demonstration of responsible fishing practices that are scientifically supported to benefit both the individual fish and the individual angler.

Recreational fisheries researchers may benefit from an explicit statement in the CoP about the need for cutting-edge scientific infor-

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TABLE 1. Summary of the potential benefits and risks of adopting the code of practice for recreational fisheries (CoP) globally. Issues are ranked according to selected articles of the CoP. "Industry" refers to the recreational fishing industry.

Article	Group	Benefit of Adoption	Risk of Adoption
Article 5—Environmental Stewardship and Ethics	Management agencies	Aligns management policies with dominant social goals of environmental sustainability and preservation of biodiversity	Loss of constituency support by anthropocentric stakeholders
	Industry/anglers	Reassures the lost position of being the most important stewards of aquatic systems within society	Could lead to a more formal education regime and greater expectation of environmentally appropriate products
	Researchers	Provides direction in terms of the knowledge needed to ensure environmentally responsible angling and management practices	Research studying traditional objectives (i.e., maximizing yield irrespective of the fate of nontarget species) may lose acceptance in the wider society
Article 6—Policy and Institutional Framework	Management agencies	Provides the legal and institutional means for sustainable management	Shortage of fisheries professionals to meet institutional demands, inappropriate funds
	Industry/anglers	Assures access to resources	Reduced potential for self-organization
	Researchers	Assures a role for science to comply with institutional demands	Increased burden for access to fisheries in terms of sampling if fishing rights get privatized
Article 7—Compliance and Enforcement	Management agencies	Fewer enforcement needs, more sustainable exploitation	Increased communication of regulation needs, diversion of resources to enforcement
	Industry/anglers	Socially agreed-upon commitment to rule compliance, reduced rule-breaking behavior	Reduced enforcement resulting in free riding
	Researchers	Research on rule compliance and how to encourage rule compliance encouraged	Underdeveloped research methodologies
Article 8—Recreational Fishing Practices	Management agencies	Ensure sustainable exploitation	Conflicts with angler constituency if popular practices are curtailed
	Industry/anglers	Ensure high-quality fishing experiences, positive public image	Altering common practices difficult
	Researchers	Provide evidence of impacts of angling practices	Reductionist view on current practices in terms of research
Article 9—Fish Welfare	Management agencies	Ensures that constituency recognizes the important role they play in determining the fate of the angling event for the individual fish, reduced fishing mortality, and improved public image	May have to change the way in which fisheries are operated to ensure that fish welfare issues are mitigated, resulting in conflict with constituency
	Industry/anglers	Provides anglers with the knowledge and guidelines to properly handle and kill or release captured fish, more sustainable exploitation, improved public image	May have to change popular fishing practices to ensure that fish welfare issues are mitigated, industry may need to develop modified gear to comply with welfare concerns
	Researchers	Clarified research questions that require scientific study (e.g., development of thresholds for different handling practices, evaluating gear innovations)	Research efforts could be misdirected and fail to address the key issues facing recreational fisheries, research may put sector under increasing pressure from anti-angling groups that misinterpret results
Article 10—Stakeholder Interactions	Management agencies	Potential to reduce conflict and increase buy-in of management actions	Institutionalizing stakeholder engagement can prolong management decisions
	Industry/anglers	Potential to contribute to management process and reduce conflict within and among sectors	Vocal groups might yield suboptimal management and management response that is not democratic
	Researchers	Guidance of appropriate research to support development	Research may be influenced by constituency, loss of freedom, and increased need for communication of results
Article 11—Management	Management agencies	Ensures that management is in line with modern approaches and philosophies such as the ecosystem approach, justifies long-term monitoring programs in a standardized way across regions to improve management	Budgetary and financial constraints resulting in allocation issues and suboptimal priority setting across fisheries
	Industry/anglers	Professional approach to management may be more sustainable	Unrealistic expectations about management successes, potential for reduced stocking efforts in the future affecting fish abundance negatively
	Researchers	Data available for dedicated long-term research	Budgetary constraints result in suboptimal data collection
Article 12—Research	Management agencies	Scientific results for decision making	Scientific uncertainty to inform fisheries management remains, conflicts with idealized expectations about the potential of science
	Industry/anglers	Assurance management agencies are using science as a basis for management policy, cooperative research, input in research questions, and scientifically defensible management	Curtailing of popular practices; for example, stocking, evidence for negative impacts of fishing that were overlooked before
	Researchers	More applicable research findings	Increased interaction among fisheries researchers within various regions and with stakeholders might prove a burden
Article 13—Awareness, Education, and Training	Management agencies	Educated recreational fishing sector	Budgetary constraints resulting in ineffective education and outreach programs
	Industry/anglers	Up-to-date information on latest knowledge about recreational fisheries	Burden on education needs
	Researchers	Opportunities for research on effective education and awareness raising	Might become engaged in education, reducing time for research

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mation to inform recreational fisheries management. Scientific information can be shared with stakeholders through direct involvement in identifying the most relevant research questions. Finally, incorporation of research results into recreational fisheries management would help assure science-based approaches to management and policy, a necessary step for insuring sustainability.

RISKS AND UNCERTAINTY OF A CODE OF PRACTICE TO RECREATIONAL FISHERIES

Clearly, there are also risks and uncertainties associated with the CoP (Table 1). For fisheries managers these include increased demands for inclusive participation and conflict resolution that may outweigh the budgetary and financial possibilities of some fisheries bodies. Moreover, there is the risk that stakeholder integration into research and management will prolong decisions or that managers and researchers will be confronted with conflicting stakeholder demands and aspirations. As a consequence, many management bodies may lack the resources to fulfill other pertinent needs because limited resources are bound for participatory processes.

For anglers and the recreational fishing industry, adoption of the CoP (or the principles outlined in this document) may bring about changes to popular practices (e.g., how to kill or release a fish after capture) and gear used. Adoption of the CoP may also increase the expectations for pro-environmental behaviors and may result in greater educational needs. The issue of participation in fisheries management decisions may increase the potential for vocal minorities to increase their influence, and decisions may be prolonged due to participative procedures. Finally, the CoP takes a clear stance that management approaches should be science based, which may lead to changes in common practices (e.g., stocking), conflicting with the desires of some stakeholders.

For researchers, adopting the CoP may involve the need to expand into unfamiliar research disciplines (e.g., social science). Stakeholder involvement will also increase the need for communicating study findings in a language that is accessible to stakeholders.

Ultimately, however, despite obvious risks (Table 1), we believe that the benefits of the CoP outweigh their costs. We believe that as society continues to urbanize and become disconnected with nature, the threats to maintaining fishing as a recreational pursuit will increase. Mere self-interest of the recreational fishing sector will inevitably require implementation of frameworks and policies that have proven to provide a sustainable approach to protecting and sustaining fisheries. In the long run, the CoP can play a dual role, first, by influencing international fisheries management and policy through its incorporation into international agreements and conventions and, second, by providing national and local fisheries management agencies with a sustainable, agreed-upon approach to managing fisheries. A CoP that unifies the diversity of actors within the recreational fisheries sector in a region or state, such as the EIFAC CoP, might thus provide a vehicle to assure that recreational fisheries can be sustained in the face of a changing populace and changing social norms.

EXAMPLE OF USE OF THE CODE OF PRACTICE FOR RAISING THE PROFILE OF RECREATIONAL FISHERIES IN THE GLOBAL POLICY ARENA

The CoP has already strongly influenced the European Charter on Recreational Fishing and Biodiversity by the Council of Europe (2010). This charter was developed to comply with the Convention on the Conservation of European Wildlife and Natural Habitats, also known as the Bern Convention. The various principles in the European Charter on Recreational Fishing and Biodiversity constitute adaptations of principles of the CoP for recreational fisheries and thereby exemplify how the CoP may be shaped to suit particular conditions, in this case international policies. Overall, the charter is meant to "compliment [*sic*] and supplement those laid down in the EIFAC CoP with an emphasis on biodiversity conservation" (Council of Europe 2010). This is an outstanding example of how the CoP can be used as a guiding framework that is applied to development of more specific international policies. The same approach may hold true for regulations guiding certain angler organizations or for development of policies in a certain fisheries management region. In all of these cases, the CoP may provide the backbone around which specific policies tailored to specific conditions are developed.

RELEVANCE OF THE CODE OF PRACTICE FOR RECREATIONAL FISHERIES IN NORTH AMERICA

North American recreational fisheries are generally well developed and are fairly sustainable. However, after periods of stable participation in recreational fishing in the United States, rates have started to show signs of decline in participation (USFWS 2006), although not as precipitous as those experienced for hunting. This trend should be examined in light of the push in North America against fishing for ethical reasons (Arlinghaus et al. 2012). Irrespective, the trends suggest that it is naïve to pretend that increases in urbanization in North America will not eventually further impact the general public's acceptance of recreational fishing, and affirmative action is required. The CoP can provide one mechanism for creating sustainable approaches that may help provide "certification" of recreational fisheries that will be publically supported.

We recognize that many agencies or fisheries management bodies in both the United States and Canada have already developed and adopted various codes or policies for management of recreational fisheries, many of which are of the highest standards worldwide and already extend the principles of the CoP. For example, one successful program for promoting sustainable fishing practices in North America is the Ethical Angler program, which has been vetted through the U.S. federal registry process. The CoP is not meant to replace such existing

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approaches; instead, it can complement or enhance existing programs and, most important, provide a unifying framework of reference for all. The CoP provides a potential platform and unified framework, in which already well-grounded approaches can be expanded or checked to assure that they are working through all aspects of creating sustainable recreational fisheries. Further, recreational fisheries should examine their own management plans, policies, and procedures to see whether the CoP can either help provide consistency in thinking, a common planning framework, or identification of other concerns or approaches that could be integrated into current approaches. In this context, the CoP for recreational fisheries can facilitate exchange of knowledge and experiences across state boundaries and between North America and the rest of the world. Ultimately, given the high standards on recreational fisheries management in the United States and Canada, the CoP may also assist in the transfer of knowledge and experiences from this region of the world to other, less developed areas (e.g., South America).

CONCLUSION

Twenty years ago, no one could have predicted the proliferation of sustainable approaches to dining on seafood, yet there is now a plethora of "sustainable seafood" documentation that many individuals use when purchasing seafood (Philipps et al. 2003; Jacquet and Pauly 2007). Similarly, 20 years ago in some European countries, no one could have predicted the advent of the animal welfare concerns and their impacts on traditional approaches to recreational fishing in selected countries (Arlinghaus, Cooke, Lymna, et al. 2007; Arlinghaus, Cooke, Schwab, et al. 2007; Arlinghaus et al. 2009). However, in Germany and Switzerland it is now illegal to catch and release harvestable fish out of moral concern that harvesting fish is the only reasonable justification for recreational fishing (Arlinghaus 2007). Though this is an extreme example that is unlikely to be on the agenda in North America within the next decade, we can envision a time when anglers (or perhaps the general public) will be seeking a set of sustainable standards for recreational fisheries. One benefit of the CoP to participants in recreational fisheries will be to show proactive approaches by integration of a standard CoP into policies, approaches, and procedures potentially providing a single frame for future certification standards of sustainable recreational fisheries. Given the importance of professional fisheries societies—such as the American Fisheries Society—in the provision of best science to ensure sustainable recreational fisheries, development of a policy statement supporting the CoP as a set of possible practices could be an important step forward. Development of an American Fisheries Society policy statement would provide a signal of professional acceptability and hopefully quality of the code to the entire sector and the public at large.

Figure 3. Participants of the Workshop on the EIFAC Code of Practice for Recreational Fisheries at the Dutch Angler Association in Bilthoven, The Netherlands, November 2007.

At the highest political level, the next step is to ensure representation of the CoP for recreational fisheries in the FAO (1995) CCRF and development of more elaborate technical guidelines for sustainable recreational fisheries. This process is ongoing. In the meantime, agencies and governmental and nongovernmental organizations, angling bodies, and basically any stakeholder responsible for governance or management of local, regional, or national recreational fishing, can consider voluntarily endorsing, considering, or adhering to the principles of CoP. This involves and invites modifying the CoP to suit local and regional needs and particular fisheries. To overcome language barriers, various translations of the CoP are now available online (FAO 2012), which should help this process.

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