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# Policy Perspectives

Perspectives on resource management and environmental policy from the Centre for Resource Management and Environmental Studies (CERMES), Faculty of Pure and Applied Sciences, University of the West Indies, Cave Hill Campus, Barbados.

## Putting the Ecosystem Approach to Fisheries (EAF) into regional policy

The Centre for Resource Management and Environmental Studies (CERMES) has initiated this outreach publication, *Policy Perspectives*, primarily in order to share some of the lessons from recent projects. Our interdisciplinary applied research projects emphasise learning-by-doing through the collaboration of researchers, beneficiaries and other parties. The information in these policy briefs may be used by policy-makers and their advisers to strengthen the linkages between research and policy in the Caribbean. This connection is often weak in natural resource management and governance.

The area encompassed by the Caribbean Large Marine Ecosystem (CLME), for example, contains many mangrove, seagrass, coral reef and open sea ecosystems to name a few.

### *Trend towards ecosystem approaches, but several variations in terms and concepts*

The Caribbean Regional Fisheries Mechanism (CRFM) and the Caribbean Network of Fisherfolk Organisations (CNFO), like most fisheries organisations worldwide, are noticing and addressing the trend towards ecosystem approaches. They both mention ecosystems approaches in key statements (e.g. vision, mission, goal, principles), but their use of the term(s) is not consistent or coordinated. This is a potential problem.

When groups move towards practical implementation, one of the confounding factors is the wide variations in terms and concepts used to describe what, some would argue, are very similar ecosystem approaches. Unnecessary complications?

### *Single species, multi-species ...ecosystems*

As the fisheries models used to conceptualise what happens in the real world become more comprehensive their impact upon policy, and the impact of policy upon them, increases.

Although many fisheries models still focus upon the single major species in the catch, more attempt to address species interactions as multi-species models. These interactions include predator-prey relationships, competition, by-catch and more. Going further, the latest models incorporate entire food webs (or as much of them as known) and are known as ecosystem models. So how do we define an ecosystem?

One commonly used, brief, definition is from the 1992 Convention on Biological Diversity (CBD) in which an ecosystem is “**a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit**”. There are more sophisticated definitions, and a common elaboration is to define a physical unit or the scale of the ecosystem.



Caribbean Large Marine Ecosystem (CLME)

Since ecosystems are usually nested, a large ecosystem can contain several medium to small to micro-scale ecosystems.



Many similar terms and concepts

### *Ecosystem Approach to Fisheries (EAF)*

Despite the bewildering array of terms and concepts that policy-makers and advisers will find in the international agreements, regional instruments, national statements and technical documents...one stands out for use in fisheries.

For consistent and appropriate fisheries policy, the CRFM, CNFO and other fisheries stakeholders should consider using the ecosystem approach to fisheries (EAF) as their standard.

Garcia and others (2003) trace the history of the concept. They note that EAF was defined by Ward and others (2002) as “an extension of conventional fisheries management recognizing more explicitly the interdependence between human well-being and ecosystem health and the need to maintain ecosystems productivity for present and future generations, e.g. conserving critical habitats, reducing pollution and degradation, minimizing waste, protecting endangered species”. They cite the Reykjavik FAO Expert Consultation (FAO 2003) as agreeing that the “purpose of an ecosystem approach to fisheries is to plan, develop and manage fisheries in a manner that addresses the multiplicity of societal needs and desires, without jeopardizing the options for future generations to benefit from a full range of goods and services provided by marine ecosystems”.

The FAO definition of an ecosystem approach to fisheries is one that **“strives to balance diverse societal objectives, by taking account of the knowledge and uncertainties about biotic, abiotic and human components of ecosystems and their interactions and applying an integrated approach to fisheries within ecologically meaningful boundaries”** (Garcia and others 2003).

The EAF adds the ecosystem to fisheries, which is the current trend in the Caribbean compared to approaches based more upon biodiversity conservation, such as ecosystem-based management (EBM), that may add fisheries to the ecosystem.

### ***Connecting EAF to the Code of Conduct for Responsible Fisheries (CCRF)***

Another compelling reason for preferring the EAF concept and definition is that it also links back to the 1995 Code of Conduct for Responsible Fisheries (CCRF). The CCRF has been incorporated into the fisheries management plans (FMP) of most CRFM Member States as part of the regional process of FMP harmonisation. Extracts from the Code constitute the guiding principles of these national FMPs. Furthermore, the Code is also incorporated into the draft agreement to establish the Common Fisheries Policy, currently under negotiation. A strong link through the Code to the EAF via several regional and international statements and instruments is an asset to multi-level fisheries policy. This assists the scaling of policy both upwards and downwards.

### ***Keeping current with EAF is made easy***

For fisheries organisations and SIDS with limited capacity another appealing feature of EAF as the basis for policy is the ability to keep up with current thinking easily through FAO publications on the topic. The FAO has published a number of technical and non-technical documents in support of EAF.

Most fisheries organisations in the Caribbean can obtain FAO publications at little or no cost. Language and presentation of information is often geared to fisheries managers and fishery resource users. Recent documents such as De Young (2008) have also focused on the human dimensions of EAF which are especially important for our small-scale fisheries (SSF).



*Publications on the Code and EAF are easy to obtain and use*

### ***References and further reading***

- CBD. 2004. The Ecosystem Approach, (CBD Guidelines) Montreal, Secretariat of the Convention on Biological Diversity. 50 pp.
- De Young, C., A. Charles, A. Hjort. 2008. Human dimensions of the ecosystem approach to fisheries: an overview of context, concepts, tools and methods. FAO Fisheries Technical Paper. No. 489. Rome, FAO. 152 pp.
- Fanning L., R. Mahon and P. McConney. 2009. Marine Ecosystem-Based Management in the Caribbean: an essential component of Principled Ocean Governance. Report of Caribbean Regional Symposium, Solutions Centre, University of the West Indies, Cave Hill Campus, Barbados, December 10-12, 2008. CERMES Technical Report No. 17. 51pp
- FAO. 1995. Code of conduct for responsible fisheries. Rome, FAO. 41 pp.
- FAO. 2003. The ecosystem approach to marine capture fisheries. FAO Technical Guidelines for Responsible Fisheries, No. 4(Suppl.2). Rome, FAO. 112 pp.
- FAO. 2003. What is the Code of Conduct for Responsible Fisheries? Rome, FAO. 16pp.
- FAO. 2005. Putting into practice the ecosystem approach to fisheries. Rome, FAO. 76 pp.
- Fromentin, J-M, A. Fonteneau, V. Restrepo. 2006. Ecosystem approach to fisheries: a brief overview and some considerations for its application in ICCAT. Col. Vol. Sci. Pap. ICCAT, 59(2): 682-689
- Garcia, S.M., A. Zerbi, C. Aliaume, T. Do Chi, G. Lasserre. 2003. The ecosystem approach to fisheries. Issues, terminology, principles, institutional foundations, implementation and outlook. FAO Fisheries Technical Paper. No. 443. Rome, FAO. 71 pp.
- Morishita, J. 2008. What is the ecosystem approach for fisheries management? Marine Policy 32: 19–26
- Ward, T., D. Tarte, E. Hegerl and K. Short. 2002. Ecosystem-based management of marine capture fisheries. Australia, World Wide Fund for Nature. 80 pp.

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