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**Pro-poor Policies and Institutional
Arrangements for Coastal Management in the
Caribbean.**

**Experiment 2: Testing the Uptake of Co-management Tools and
Messages in Training Natural Resource Users and Managers**

**BELIZE CASE STUDY:
FISHERIES ADVISORY BOARD IN THE CONTEXT
OF INTEGRATED COASTAL MANAGEMENT**

A SUMMARY OF LESSONS LEARNT

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About this document

This summary of lessons learnt was developed from the Belize case study: Fisheries Advisory Board in the context of integrated coastal management, Caribbean Coastal Co-management Guidelines Project, Caribbean Conservation Association as an output of Experiment 2: *Testing co-management tools and messages for Training Natural Resource Users and Managers*, which forms part of the DFID funded research project “**Pro-poor Policies and Institutional Arrangements for Coastal Management in the Caribbean**”. The goal of the project was to ensure that integrated coastal management Research in the Caribbean is promoted and benefits those who depend on the resources of coastal areas, especially where there is poverty. The purpose was to test the uptake of products of a previous DFID funded project R8134: Caribbean Coastal co-management guidelines, focussing on establishing and sustaining successful co-management of coastal resources in the Caribbean. This summary of lessons learnt is aimed at the users and managers of coastal resources in the Caribbean and will be most useful for teaching students with an undergraduate degree, or training others with some prior experience in coastal resource management.

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Executive summary

Belize has a Fisheries Advisory Board (FAB) that has been a powerful force in fisheries development since its establishment along with the Fisheries Department in 1965. The FAB has persisted since then without being legally institutionalised. However, despite this longevity, it has not been well documented as an example of national level consultative co-management. This case was selected as an example of an enduring multi-stakeholder consultative fisheries committee, in contrast to the situation in Barbados and most of the eastern Caribbean islands.

During its existence, over 60 people from a wide range of backgrounds have been members of the FAB. In examining the minutes of over 100 FAB meetings it is clear that this body has considered a diverse set of fisheries management (both conservation and development) issues. A few agenda items, such as illegal fishing by non-nationals and screening the schemes of overseas entrepreneurs, have been recurrent.

The interaction of ministers with their advisory board has been varied. In a country that is said to promote participatory natural resource policies and management, the work of the Board as an arrangement for bringing together government and non-government actors is expected to be instructive. Fisheries cooperatives exercise considerable power in and through the FAB.

The Coastal Zone Management Authority and Institute (CZMAI) grew out of the Fisheries Department, but it does not have a seat on the FAB. There are challenges to the integration of fisheries into coastal management, as promoted by the Code of Conduct for Responsible Fisheries. Reasons include conflict between the Fisheries Department and CZMAI, and the FAB having enough under its own jurisdiction without spreading itself thinly over other areas in which there are already a multitude of organisations and institutions. Some say integrated coastal management has had much success mainly because the public in Belize is environmentally conscious and compliant. The institutional arrangements for success promoted by government rely on NGOs for assistance. Poverty is also an issue that affects fishing. The fortunes of the poor are closely linked to the global performance of Belize as a country whose economy is driven to a significant extent by agriculture and preferential markets for its products.

Stakeholder groups most directly involved in this case include government Fisheries and Cooperatives Departments; members of the Belize Fisherman's Cooperative Association and the other cooperatives; and the several other organisational members of the FAB. Lessons learned from the Belize FAB are expected to have implications for the struggling or absent Fisheries Advisory Committees in the eastern Caribbean and those of larger countries where small government administrations need to urgently address interactions between coastal users.

Lessons learnt

In this document we present the conclusions or lessons learnt about co-management based on the Barbados FAC case study. The lessons learnt are presented under headings which represent the key characteristics of successful co-management institutional arrangements. Emphasis is placed on understanding the conditions for successful co-management as perceived by the stakeholders at the case study research sites. The choice of conditions is also supported by empirical evidence from initiatives at more advanced phases of development in other regions of the world. Effort was also directed towards promoting the uptake of concepts and practices that may lead to co-management success. The main local partners in this case were the Fisheries Department and Belize Fishermen's Cooperative Association (BFCA). They assisted in mobilising past and present FAB members to participate in focus groups and workshops that examined all dimensions of the socio-economic and institutional analysis. Group activities were supplemented by semi-structured interviews with key informants and very brief questionnaires to obtain background information.

Type of co-management

The research framework summarises the main types of co-management as consultative, collaborative and delegated. The Belize Fisheries Advisory Board (FAB) is, strictly speaking, an example of consultative co-management as suggested by the title of the institution. However the power exerted by fishing industry stakeholders and the types of decisions that the body has taken causes it to exhibit characteristics of collaborative management on particular issues and under some policy-makers. With the expected passage of the Fisheries Development Authority Act, legally constituted Fishery Development Advisory Committees should replace the informal FAB and a Board of Directors will govern the Authority. As a statutory body, the Authority may

be better placed to promote co-management than the Fisheries Department, but it is too early to predict what the institutional arrangements will be in relation to the existing structures.

Phase of co-management

The FAB is an example of post-implementation co-management as its over thirty-five years of existence suggests. As a mature institution, its structure and operations have been accepted as standard practice. Although conflicts may arise within the institution and between it and other parties, ways have been developed to address, deflect or avoid perturbations. It will be instructive to note what features and mechanisms the new bodies acquire from the old in terms of institutional memory, or whether experimentation with institutional arrangements begins anew.

Boundaries

The FAB is a national institution and the laws of Belize set out the geographical areas covered. The country has a longstanding boundary dispute with Guatemala and marine areas in the south may be subject to changing jurisdiction. Moreover, the country's marine boundaries are porous, with fishing by foreign nationals a common occurrence. These issues are challenging for operations and decisions, but do not unduly constrain the FAB from being an institution of co-management.

Institutional boundaries are more complicated than geographic boundaries in Belize. There is considerable overlap in interest and jurisdiction of governmental agencies with their various committees, and they in turn face overlapping national and international NGOs, plus local CBOs. These institutional intersections provide opportunities for both useful synergy and counterproductive duplication and inefficiency. The institutional boundaries of the FAB and its successors require attention if co-management arrangements are to achieve the efficiency and effectiveness associated with good governance.

Membership and stakeholders

Although not prescribed in law, the membership of the FAB is relatively stable. Stakeholders in its operations and decisions are also easily identifiable. The composition of the body has adapted to circumstances. There were periods in which enforcement agencies such as Police and Customs had a presence, but now the emphasis is on fisheries management and business, including aquaculture. A conspicuous anomaly is that the CZMAI, which began as a fisheries project and is clearly a major stakeholder, is not a member of the FAB. Although the current FAB chairman is affiliated with the aquaculture industry, the absence of representation around the table is also notable given the importance of this sector to Belize. These are exceptions to the otherwise well balanced multi-stakeholder body.

Resource use problem

The FAB addresses all fisheries matters in Belize. This includes many resource use problems. Minutes of meetings suggest that resource use problems are well known by members, and agreement can usually be reached on solutions. However, implementation of FAB advice has proven challenging on several occasions, such as in the persistent case of illegal fishing.

Management objectives

There is no current and public comprehensive fisheries management plan, although schemes are under development for key fisheries. The objectives of management are shared within the FAB and the better-organised cooperatives that provide feedback to members from the FAB.

However the general public, non-governmental organisations and other agencies of government are not fully informed about matters of fisheries management. This is an area for improvement.

Scale of management

Within the waters of Belize most fishing activity and management takes place behind the barrier reef, leaving some room for expansion. The scale of management is not problematic, and well within the scope of the FAB to cover given its membership.

Management adaptation

There is a fairly constant stream of fisheries regulations, orders and amendments, illustrating attempts to keep fisheries management legislation current. The FAB has deliberated on changing the openings of seasons for several resources, the most contentious being lobster and shrimp. In the case of the latter there have been claims that the management has been too flexible at times, but the most common complaint is that the legislative process is too slow for adaptive management. The management regime should be made more adaptive without going to the extreme of becoming a source of uncertainty and apparent indecision.

Cooperation

Within the fishing industry, the alliance of primary cooperatives into a secondary body builds a series of bonds starting with the individual fisheries cooperative member through to the national level cooperative. There is generally good cooperation within this movement that is quite strong partly because of the high economic value of the exported lobster and conch catches. Amongst government agencies, cooperation is driven mainly by necessity to pool resources or ideas. The cooperation between fisheries and coastal authorities needs improvement. Relations between government and non-governmental organisations are mixed since the benefits of cooperation are known, but some NGOs are viewed as potentially threatening to government authority by adhering to their own, often externally driven, agendas.

Leadership

A leading person from the business sector with an appreciation for the public service typically chairs the FAB. The FAB usually has good leadership. The multiplicity of active organisations in the Belize fishing industry suggests that finding leaders is not an issue of much concern. However, reports indicate that the organisation of meetings and implementation of projects by several bodies related to fisheries and coastal use are not up to expected standards. Therefore strengthening of operational leadership is warranted. Leadership also appears to be adequate within government, although the frequency with which the head of the fisheries authority changed in recent years may impact negatively on co-management arrangements, if repeated.

Collective action

The longevity of the fishing cooperatives and most of the NGOs could not be achieved without commitment to collective action. This was said to be stronger among the resource users than among the managers who only recently are becoming more closely networked under coastal zone management strategies. The aquaculture farmers have also grouped themselves for collective action. In general the stakes in Belizean fisheries have been high and hence have motivated collective action by several categories of stakeholder. This is a positive feature.

Conflict management

Conflict, or at least rivalry, between the more powerful fishing cooperatives has become customary. The FAB has been used as an arena for such conflicts but does not incorporate any

formal mechanisms for conflict management. Although the potential for conflict between national and foreign fisheries is high, there is usually separation of operations that minimises this, and a formal tripartite body has been formed in the southern region where the problem is worst. As aquaculture and tourism expand, coastal conflicts will increase. It would be appropriate for the FAB to pay attention to this from a fisheries co-management perspective unless it is adequately covered in the overall context of coastal management, in which the CZMAI appears prepared to act as mediator.

Effective communication

There are many stakeholders in the coastal arena, with fisheries being only one of the activities. Communication takes place through the use of occupational, district and other categories of committees and groups. The FAB is only one example. Communication is not always effective because of the logistics involved, such as bringing members from distant locations, and due to inadequacies of organisational skills. The public learns little of the work of the FAB. There is room for improvement in communication, especially with the public and hence also fishers who are not members of cooperatives.

Coordination

Similar to the preceding comments, coordination in the coastal and marine arena, including fisheries, is complicated by the number of stakeholders. For the FAB, coordination of the policies and activities of its members has been variable. Efforts to coordinate enforcement aimed at reducing foreign illegal fishing have not been successful. However members were highly coordinated in their efforts to keep the lucrative shrimp fishery in Belizean hands. The coordination between government agencies and among NGOs seems largely based on necessity. Limited capacity is also one of the reasons for coordination being sub-optimal and in need of improvement.

Trust and respect

The legal mandates of government agencies are respected and trust exists among them. However, there is generally less trust between government agencies and NGOs or CBOs, for reasons alluded to previously that mainly concern external agendas and funding. Despite the large number of committees, there is also lack of transparency on the parts of all stakeholders, including government. In the FAB there is evidence of respect for official positions such as that of the Fisheries Administrator, but there is also evidence of mistrust between the fisheries authority and fishing cooperatives. These deficiencies have not been significant enough to seriously impede the FAB, but should be rectified if possible through demonstrating the benefits of collaboration and joint activity in co-management.

Organisational capacity

Organisational capacity is very variable across the spectrum of stakeholders. The offices of external NGOs have overseas resources to draw upon in support of local staff. These NGOs have local project partners who often benefit from this expertise, funding or other assistance. A question often raised is whether this access to external capacity is desirable and sustainable. However it has been argued that these NGOs are the driving forces behind the conservation and co-management initiatives of Belize, and without them the government would achieve little. To be effective as co-management partners, Belizean NGOs and government agencies require additional capacity as a matter of urgency.

Financial resources

The understaffing and under-budgeting of critical agencies is well documented, the Forestry Department being a classic case. The FAB has no capacity to act on its own. It is not set up with a staff or separate budget. In order for the FAB to be more effective it should have access to its own financial resources where action independent of government is considered beneficial. An example could be in the commissioning of independent fishery assessments. There is also very critical sharing of financial resources such as with the CZMAI supporting some MPA staff of the Fisheries Department. However, these relations have also been sources of tension between the organisations.

External agents

Prior sections mentioned the positive role that external agents play in supporting conservation and co-management. There is also the threat of agendas and actions that are not consistent with those of the country. One of the more important regional bodies is the Caribbean Regional Fisheries Mechanism (CRFM) that is headquartered in Belize. Several of the large international NGOs have considerable influence on coastal and marine matters including policy. Involvement of external agents will continue to be important in Belize, but more attention must be paid to setting the national and local agendas to ensure an appropriate foundation for co-management is available to guide these interactions.

Net benefits

Over nearly four decades of work, the benefits from the FAB (in terms of the best local advice available) would have exceeded costs considerably. Members participate without remuneration or funds to defray expenses. In coastal management more generally, many of the costs to date have been borne by external sources through assistance to institutions within Belize. There is little systematic measurement of costs and benefits, although attention is turning to this. One of the benefits of the FAB and other bodies is the potential for transparency that should facilitate the decision-making of stakeholders. This potential is not always realised. The number of overlapping jurisdictions and bodies poses a serious threat to sustained benefits due to the cost of inefficiency and participation fatigue.

Representation in decision-making

The representation on the FAB has normally been fairly congruent with the geography of the country and interests of fisheries stakeholders. The weakest district comprises the south from which a representative of the non-cooperative fishers has been drawn. The aquaculture industry and coastal authority require greater representation, but both are powerful stakeholders and may set up their own structures, as in the case of CZMAI. This increases overlap and potential for negative interactions, but may be beyond the sphere of influence of the FAB. Although there have been complaints that the policy makers do not pay sufficient attention to the advice of the FAB, the body appears to have reasonable power at present in this domain.

Enforcement

Enforcement of Belize's boundaries and contravention of fishing laws have been frequent FAB agenda items, especially in relation to illegal foreign fishing. It is an area in which the FAB has been most ineffective in addressing, but this goes beyond the fisheries sector into issues of national security. Co-management can be easily undermined if the State is unable to remove the uncertainty of intruders essentially free-riding on the efforts of co-management partners. In the cases of small NGOs and small-scale fishers with limited resources this can be a serious threat. More attention must be paid to enforcement, but as part of a larger national agenda.

Property rights

Property rights are not a distinctive feature of the fisheries of Belize, although territoriality in lobster fishing is reportedly well developed in some locations, but poorly documented. Some see the drive towards the formation of marine protected areas along the barrier reef as a threat to livelihoods from fishing. MPA properties typically exclude or restrict fishing. Where fishing is permitted, several communities report incursions of fisheries from distant areas as threatening their sense of access rights to, and efforts at conserving, the fishing locations nearest to their communities. Given the trend towards parcelling the marine areas around Belize, an integrated approach to determining the property rights within these areas is urgently needed.

Sharing decision-making

The FAB has functioned well as a forum for multi-stakeholder decision-making and advice to the policy level with which it has often been quite close. However, since the FAB is not a statutory body, the institutional arrangements function at the pleasure of the policy makers in power. The fact that it has lasted so long suggests that policy makers see benefits from this arrangement. However the FAB has also apparently been used for political convenience, with policy makers ignoring advice that is not favourable, using the FAB as a means of delay or deflection and only taking action on recommendations that coincide with decisions already taken. The structures proposed under the Fisheries Development Authority Act may change this relationship, but the fisheries authority becoming a statutory body also changes the context of decisions.

Decentralisation and delegation

Due to the size of the country there is some decentralisation of the fisheries administration with officers outposted in remote locations such as the fisheries officers in marine protected areas. The formal co-management agreements between the Fisheries Department and NGO partners for managing marine reserves are examples of decentralisation and delegation. However some of these agreements are said to institutionalise dependency on the Fisheries Department for support and allow that agency to retain most of the critical decision-making. The agreements also vary with the partner in question. The FAB itself is a mechanism for delegation given that many of its decisions, although nominally advisory, have been accorded the status of executive power under particular administrations and on particular topics.

Social and cultural fit

Belize is a developing democracy, having only recently severed colonial ties. The willingness of organisations to become co-management partners suggests a good social and cultural fit. Yet the readiness of these partners and their level of understanding of what co-management is in their circumstances has been called into question. It has been suggested that the fit is good due to misunderstandings and lack of a framework for terrestrial and marine co-management. It has also been suggested that co-management has been marketed in the context of parks and tourism as a means of income generation. These observations call for detailed examination of the socio-cultural fit in order to ensure that co-management is sustainable.

Priority action

Stakeholders in Belize recommended that priority be given to setting clear objectives and improving coordination in the coastal and marine area. They noted that improvement in trust and respect was fundamental, as was increasing organisational capacity. More transparency and systems of measurement were required to compare costs and benefits.

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Further reading

McConney, P., R. Pomeroy and R. Mahon. 2003. Guidelines for coastal resource co-management in the Caribbean: communicating the concepts and conditions that favour success. Caribbean Coastal Co-management Guidelines Project. Caribbean Conservation Association. 56pp.

McConney, P., R. Mahon and C. Parker. 2003. Barbados case study: the sea egg fishery. Caribbean Coastal Co-management Guidelines Project. Caribbean Conservation Association, Barbados. 74pp

McConney, P., R. Mahon and H. Oxenford. 2003. Barbados case study: the Fisheries Advisory Committee. Caribbean Coastal Co-management Guidelines Project. Caribbean Conservation Association, Barbados. 77pp

McConney, P., R. Mahon and R. Pomeroy. 2003. Belize case study: Fisheries Advisory Board in the context of integrated coastal management. Caribbean Coastal Co-management Guidelines Project. Caribbean Conservation Association, Barbados. 70pp.

Pomeroy, R.S. and T. Goetze. 2003. Belize case study: Marine protected areas co-managed by Friends of Nature. Caribbean Coastal Co-management Guidelines Project. Caribbean Conservation Association, Barbados. 69p.

McConney, P. 2003. Grenada case study: the lobster fishery at Sauteurs. Caribbean Coastal Co-management Guidelines Project. Caribbean Conservation Association, Barbados. 65pp.

McConney, P. 2003. Grenada case study: legalisation of beach seine traditional rules at Gouyave. Caribbean Coastal Co-management Guidelines Project. Caribbean Conservation Association, Barbados. 70pp

Pomeroy, R., P. McConney and R. Mahon. 2003. Comparative analysis of coastal resource co-management in the Caribbean. Caribbean Coastal Co-management Guidelines Project. Caribbean Conservation Association, Barbados. 30pp

Power point presentation. Guidelines for coastal resource co-management in the Caribbean: communicating the concepts and conditions that favour success. Caribbean Coastal Co-management Guidelines Project

- Almerigi, S. R. Mahon, Y. Alleyne, K. Atherley, J. Cumberbatch, and S. Mahon. 1999. Barbados Coastal Conservation Programme (Phase 1), Demonstration Projects. Participatory coastal zone management in Barbados. Coastal Zone Management Unit, 30 pp
- Appeldoorn, R. S. and W. Rolke. 1996. Stock abundance and potential yield of the conch resources in Belize, 1996. CARICOM Fisheries Resource Assessment and Management Programme, Belize.
- Arnstein, S. 1969. A ladder of citizen participation. *American Institute of Planners* 35:216-224
- Baird, I. G. 2000. Integrating community-based fisheries co-management and protected areas management in Laos PDR: Opportunities for advancement and obstacles to implementation. *Evaluating Eden Series Discussion Paper No.14*. London IIED. 17 pp.
- Belize Fisheries Department. 2002. Capture fisheries statistical report 2001. 26 p.
- Berkes, F., R. Mahon, P. McConney, R. Pollnac and R. Pomeroy. 2001. *Managing small-scale fisheries: alternative directions and methods*. International Development Research Centre, Canada. 320pp
- Brown, D.A.V. 2001. Poverty in the Caribbean. On-line lecture. University of the West Indies, St. Augustine Campus. [<http://www.caribbeanresearch.com/Social%20Development/>]
- Brown, D. 2000. Social assessment of the Belize section of the meso-american barrier reef system. Manuscript. 33pp.
- Brown, D.N. and R.S. Pomeroy. 1999. Co-management of Caribbean Community (CARICOM) fisheries. *Marine Policy* 23:549-570.
- Caribbean Conservation Association. 2001. Report of the Executive Workshop on Co-management (28 - 29 August 2001) and Executive Workshop on Education and Outreach (30 August 2001), hosted by the Toledo Association for Sustainable Tourism and Empowerment (TASTE) in Punta Gorda, Belize. Coastal and Marine Management Program (CaMMP) of the Caribbean Conservation Association. 42pp.
- Caribbean Natural Resources Institute. 1999. Principals of Participation and Co-management: A Workshop For Professionals. CANARI Technical Report No. 260:24 pp
- Caribbean Natural Resources Institute. 2000. Participatory resource management approaches for managers and decision-makers. Week 1: Building institutions for participatory resource management. CANARI Workshop Report. 3-7 July, 2000, Falmouth, Antigua
- Caribbean Natural Resources Institute. 2001. Participatory resource management approaches for managers and decision-makers. Week 2: Designing participatory institutions for effective management. CANARI Workshop Report. 22-26 January, 2001, Tobago
- Carney, D. ed.1998. *Sustainable rural livelihoods: what contribution can we make?* DFID, London. 213 pp.
- Central Bank of Belize. 2002. Twentieth annual report and accounts. Government of Belize. 72pp.
- Centre for Development Studies. 2000. *DfID Support for Pro-Poor Civil Society Organisations: A Good Practice Guide*. Manuscript. Department of Economics and International Development, University of Bath
- CFRAMP. 1996. Plan for operating the Fisheries Advisory Board of Belize. CARICOM Fisheries Resource Assessment and Management Programme.

- CZMAI. 2001. State of the coast report 2000. Government of Belize. 61 pp.
- CZMAI. 2003. National integrated coastal zone management strategy for Belize. Government of Belize.
- DFID-NRSP. 2001. Locating a poverty focus in natural resources systems research. DFID. 12pp.
- Dorward, A., S. Anderson, S. Clark, B. Keane and J. Moguel. 2001. Asset Functions and Livelihood Strategies: A Framework for Pro-Poor Analysis, Policy and Practice 1. Contributed Paper to EAAE Seminar on Livelihoods and Rural Poverty, September 2001. [Web doc.]
- Government of Belize.2000. Fisheries Act. CAP 210
- Friends of Nature. 2002. Draft Gladden Spit Marine Reserve Management Plan
- Geoghegan, T. and A. Smith. 1998. Conservation and sustainable livelihoods: collaborative management of the Mankòtè Mangrove, St. Lucia. 16 pp.
- Geoghegan, T., A. Smith, and K. Thacker. 2001. Characterization of Caribbean marine protected areas: an analysis of ecological, organizational, and socio-economic factors. CANARI Technical Report No. 287.
- Gibson, J. 1978. The successes and failures of the fishing cooperatives of Belize. Proceedings of the Gulf and Caribbean Fishers Institute. 30:130-140.
- Gibson, J. S. Strasdine and K. Gonzales. 1982. The status of the conch industry of Belize. Proceedings of the Gulf and Caribbean Fishery Institute, 35: 99-107.
- Government of Belize. 2000 (revised) Village Councils Act: Chapter 88.
- Government of Belize. 2000. Coastal Zone Management Act CAP 329
- Government of Belize. 2002. Estimates of Revenue and expenditure for fiscal year 2002/2003.
- Heyman, W. and R. Graham (eds.). 2000. The voice of the fishermen of Southern Belize. Toledo Institute for Development and Environment. Punta Gorda. 44 pp
- Heyman, W. and T. Hyatt. 1996. An analysis of commercial and sport fishing in the proposed Port Honduras Marine Reserve. Belize Center for Environmental Studies. 51pp
- ICLARM and IFM. 1998. Analysis of Co-Management Arrangements in Fisheries and Related Coastal Resources: A Research Framework. Report Prepared by the Coastal Resources Co-Management Research Project Core Staff at the International Centre for Living Aquatic Resources Management (ICLARM) and Institute for Fisheries Management and Coastal Community Development (IFM): 21pp.
- Jacobs, N. 1998. The Fisheries Advisory Board of Belize – a case study. Unpublished manuscript presented at the CFRAMP Regional Fishery Management Planning Workshop 22-24 April, Barbados
- Jacobs, N. 1999. Assessment of marine and fishers resources in the southern region of Belize. Environmental and Social Technical Assistance Project. (ESTAP-IDB Project No 999/OC-BL) 50pp
- Jentoft, S. 1989. Fisheries co-management: delegating government responsibility to fishermen's organizations. Marine Policy 13:137-154.
- Johnson, M. 2002. Consultancy to strengthen the Coastal Advisory and Marine Protected Areas Advisory Committees. Final Report to CZMAI. Belize City.

-
- Kairi Consultants. 1996. Poverty assessment report — Belize. Final Report, Volumes 1 and 2.. Report submitted to the Caribbean Development Bank.
- Kramer P. A. and P.R. Kramer (M. McField ed.) 2002. Ecoregional Conservation Planning for the Mesoamerican Caribbean Reef. World Wildlife Fund, Washington D.C.
- Kuperan, K and N.M.R. Abdullah. 1994. Small-scale coastal fisheries and co-management. *Marine Policy* 18:306-313.
- Kurien, J. 1988. The role of fishermen's organizations in fisheries management of developing countries (with particular reference to the Indo-Pacific region). *FAO Fish. Tech. Pap. No. 300*.
- Marin, A. 2001a. Belize lobster data collection programme and research activities: lobster data collection programme. Lobster Conch Terminal Workshop, Dominican Republic, pp 1-20 p.
- Marin, A. 2001b. Conch data collection programme and research activities. CFRAMP Lobster Conch Terminal Workshop, Dominican Republic, pp. 22-33
- McCalla, W. 1995. Compendium on environmental protection and natural resource management legislation in Belize. Government of Belize
- McConney, P.A. 1998. Using "common science" in co-management. *Proceedings of the Gulf and Caribbean Fisheries Institute* 50: 1115-1121.
- McConney, P.A. and R. Mahon. 1998. Introducing fishery management planning to Barbados. *Ocean and Coastal Management* 39: 189-195.
- McConney, P.A., A. Atapattu and D. Leslie. 1998. Organizing fisherfolk in Barbados. *Proceedings of the Gulf and Caribbean Fisheries Institute* 51: 299-308.
- Ministry of Agriculture and Fisheries. 1997. Agriculture and marine policies of the agriculture and fisheries sector. Government of Belize.
- Ministry of Agriculture, Fisheries and Cooperatives. 2002. The national food & agriculture policy 2002-2020. Government of Belize.
- Myvette, G and Quintana, R. 2002. The status of aquaculture in Belize 2001. Belize Fisheries Department, Belize City, Belize
- National Human Development Advisory Committee. 1998. National poverty elimination strategy and action plan 1998-2003. Government of Belize, Belmopan. 19pp.
- National Human Development Advisory Committee. 2000. Preparing for the new millennium: national human development report 1999. Government of Belize, Belmopan. 91pp.
- Noble, B. F. 2000. Institutional criteria for co-management. *Marine Policy* 24: 69-77.
- Normann, A. K., J. Raakjær Nielsen and S. Sverdrup-Jensen (eds.) 1998. Fisheries Co-management in Africa. Proceedings from a regional workshop on fisheries co-management research held 18-20 March 1997 at Boadzulu Lakeshore Resort, Mangochi, Malawi. Fisheries Co-management Research Project, Research Report No. 12.
- Pinkerton, E., ed. 1989. Co-operative management of local fisheries: new directions for improving management and community development. University of British Columbia Press, Vancouver.
- Pomeroy, R.S. 1998. A process for community-based co-management. *AFSSRN News. ICLARM Contribution #1448*.
- Pomeroy, R.S. 2001. Devolution and Fisheries Co-management. In R. Meinzen-Dick, A. Knox and M. Di Gregorio (eds.) *Collective Action, Property Rights and Devolution of Natural*

Resource Management – Exchange of Knowledge and Implications for Policy. Zentralstelle für Ernährung und Landwirtschaft, Feldafing, Germany.

Pomeroy, R.S. and M.B. Carlos. 1997. Community-Based Coastal Resource Management in the Philippines: A Review and Evaluation of Programs and Projects, 1984-1994. *Marine Policy*. Vol. 21, No. 5: 445-464.

Pomeroy, R. and F. Berkes. 1997. Two to tango: the role of government in fisheries co-management. *Marine Policy* 21: 465-480.

Pomeroy, R.S., B.M. Katon and I. Harkes. 2001. Conditions affecting the success of fisheries co-management: lessons from Asia. *Marine Policy*.25: 197-208

Programme for Belize. 2001. Baseline assessment of the Belize Barrier Reef Reserve System for the COMPACT project. Prepared for United Nations Foundation under the UNDP-GEF/SGP-COMPACT Project. Belize City.

Programme for Belize, BEST, ANDA. 2001. Belize COMPACT Programme Strategy 2001-2003. Involving communities and users in the conservation of the BBRWHS.

Ramos, Adele. 2002. Women's participation in democracy and development, and changing family structures. *SPEAR Ideas* Vol. 7(3): 9-10, 13

Ravndal, V. 2002. Community co-managed park system for Belize. Final Project Evaluation. UNDP/GEF Project. Unpublished report to the UNDP.

Renard, Y. 1991. Institutional challenges for community-based management in the Caribbean. *Nature and Resources* 27(4): 4-9.

Renard, Y. 2000. Case of the Soufriere Marine Management Area (SMMA), St. Lucia. Prepared for the Seminar Integrating Stakeholders in Participatory Natural Resource Management, Kingston, Jamaica, April 2000. CANARI Technical Report No. 285: 8pp

Richards, G. 1997. National report on the shrimp and groundfish fisheries of Belize. *FAO Fisheries Report* No. 544 (Suppl.): 1-4.

Strasline, S.A. 1988. The queen conch fishery of Belize: an assessment of the resource, harvest sector and management. M.S. thesis. University of British Columbia, Vancouver, Canada, 216 pp.

Sverdrup-Jensen, S. & J. Nielsen 1999. Co-Management in small-scale fisheries - a synthesis of Sothern and West African experiences. Institute for Fisheries Management and Coastal Community Development (IFM). 23pp.

Thompson, Ernest F. 1944. Report on the Fisheries of British Honduras. Development and Welfare in the West Indies Bulletin No. 21. 32p.

Vasquez, H. P. 1984. Belize, Central America: a profile of its fishing industry. Belize Fishermen Cooperative Association Ltd. 10pp.