



The future of coastal/inshore fisheries management workshop minutes

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Acronyms

SPC – Secretariat of the Pacific Community

WHO – World Health Organisation

DFAT – Department of Foreign Affairs and Trade (Australia)

APIA Policy – Pacific Islands Regional Coastal Fisheries Management Policy and Strategic Actions

FFA – Fisheries Forum Agency

IUCN – International Union for Conservation of Nature

SIDS – Small Island Developing States

FAME – SPC Division of Fisheries, Aquaculture and Marine Ecosystems

MSG – Melanesia Spearhead Group

HOF – Heads of Fisheries

FFC – Forum Fisheries Committee

PICT – Pacific Island Countries and Territories

RMI – Republic of Marshall Islands

MPA – Marine Protected Areas

TOC – Theory of Change

SMART – Specific, Measurable, Attainable, Relevant and Timely

FAD – Fish Aggregating Devices

NCD – Non-communicable Diseases

Day One

Introduction

Dr Colin Tukuitonga (SPC) welcomed participants and thanked the government of Australia and other partners for their support. Other key points include;

- The value in having community leaders and fishers present
- The role of communities in management and how their work can be supported at all levels
- Importance of fish in addressing diabetes and other lifestyle disease problems
- **Fishing provides 50% of households with their first or second source of income in pacific**
- More people eat fish in the Pacific than anywhere else in the world
- **115,000 tonne of fish and shellfish are required by 2030 to provide the growing population with sufficient nutrition**
- 50% of daily protein consumed by Pacific people should come from fish (WHO)
- In rural populations within the pacific, fish accounts for 50-90% of total animal source protein consumed; 40-80% in urban populations
- SPC strongly support coastal and inshore fisheries management and this area will not become compromised by resource strain

Dr Perry Head, (DFAT) welcomed participants and added the additional points;

- Participants share common objectives and recognize the importance of inshore fisheries to communities who rely on fisheries for livelihoods and food security
- A common understanding on current practice and best practice is required
- The aim of the workshop is to find common ground and identify challenges
- DFAT offers ongoing support for SPC and places a high value on the inshore sector

- **When the value of the inshore sector is calculated, it is usually considered to have an equal or greater value than the offshore sector and has additional benefits to nutrition and livelihoods**

Ian Cartwright gave some background information, outlined objectives of the workshop, the format and expected outputs. New points raised include;

- Fisheries management is difficult because it involves telling people what they cannot do
- It is important to consider the **fisherman's point of view**
- Previous related activities; APIA policy, FFA/SPC Future of Fishing, IUCN call for action, FAME strategic plan, SIDS conference outcomes and MSG roadmap
- The workshop will focus on effective management

Key Workshop Objectives

1. Improved understanding and knowledge of the successes and challenges of CEAFM
2. Greater understanding of how to roll out effective CEAFM on a national scale
3. Development of pathways for change, including identification of stakeholders and linkages

Outputs

At the end of the workshop, an outcomes report will be to HOF and FFC Ministerial meetings for endorsement. It will include;

- A non-specific suite of approaches to CEAFM
- Identification of key stakeholders and essential linkages
- Identification of required resources from multiple sources
- A framework for effective monitoring and evaluation

Part One

Moses Amos (SPC) presented on '*Pacific food security challenges, historical context of CEAFM and the stocktake of CEAFM*'. The key new points were;

- Coastal fisheries involve a diverse range of species, gear, fishing methods and stocks
- Unlike Tuna, there is no regional approach, it is considered the responsibility of each PICT
- Countries have employed a range of informal and formal management methods
- The failure of coastal fisheries management has led to the shutting down of some fisheries, greatly impacting on food security and livelihoods
- In general, coastal fisheries are fully exploited or overfished and are unlikely to grow
- **There will be a large gap between the amount of fish available and the amount of fish required in the next 30 years, as the population grows and supply declines**

Factors contributing to management failure

- Inadequate management plans and policies
- Lack of monitoring, control and surveillance measures
- Limited cooperation between stakeholders
- Low capacity of fisheries officers

- Focus on increased production instead of decreasing fishing effort
- Limited empowerment of communities and general political will and effort

In **discussion** following the presentation, new key points raised were;

- **Lack of data** (including export data) is a barrier to effective management
- **Population control** and access to markets is highly relevant
- **Livelihood effects** must be highlighted
- Communities must engage in market discussions so food security isn't compromised by export
- Fisheries and economic development sectors must work together
- Whilst there are many management plans in place, the challenge is implementing them and integrating them with national and regional frameworks
- **Plans must match the 'existing manpower'** if they are going to be implemented
- Communities need support to build their capacity in data collection
- There is a disconnect between fisheries departments and other relevant departments
- Legislation must enable communities to implement management plans
- One single donors can't solve the challenges
- The constraints of climate change should be considered
- Export data is easier to obtain than data on catch for local consumption

There were then **three presentations on the current situation in Melanesia, Micronesia and Polynesia**. The key points are summarised in the table in Appendix One.

New key points raised in discussion after the presentations include;

- People will not manage or maintain a resource if they don't have a sense of ownership
- Analysis of science data is a challenge and can be subject to interpretation by policy makers
- **Enforcement requires extensive resources**, that are often not available
- Community leaders must be engaged from the beginning
- Need to find a balance between what the community wants and what the data suggests
- **Women play a very important role** in the design and implementation of CEA FM
- Isolation and the expense of transport is a constant challenge
- In RMI, an interagency committee on fisheries management allows for resource sharing
- The Micronesia Challenge Young Champion Program encourages students to take on natural resource/marine management studies instead of political and business studies
- The Micronesia Challenge is a top down model, agreed upon by the five leaders of Micronesian nations to have 30% of marine area and 20% of terrestrial under management by 2020.
- **Political will** is required for adequate resource allocation and enabling legislation

Hugh Govan from the LMMA Network presented on '*Delivering Community Approaches at Scale*'.

The new key points raised include;

- Communities are more likely to respect rules they have set themselves and to enforce them.
- Communities have the rights over coastal resources

- Fisheries can be managed in three ways; 'leave it to communities', classic 'western' top-down approach or development of community plans
- In CEAFM, communities identify problems, develop solutions, agree on actions and implement them
- Effective management must be sustainable and supported
- Although there has been a rapid growth in the number of communities engaged in CEAFM, it is still a very small proportion of the total number of coastal communities
- **CEAFM can be very expensive, particularly salaries and travel**
- Decentralization is an effective way of managing costs
- Better targeting of the role of government also helps to manage costs
- Mapping out the key priorities of government, provinces and communities helps to guide work and allocation of resources

He concluded with the following recommendations;

- **Support all communities in sustainable management**
- **Redefine staff duties**
- **Get closer to the people**
- **Control commercial pressures**
- **Plan to increase recurrent fisheries budgets and ways to fund**
- **Transform strategies, policies and declarations into ACTION**

In discussion that followed new key points raised include;

- Getting information back to communities is important as communities is crucial
- When the incentive of over fishing is too great communities need government support
- Convening committees too frequently can be a waste of resources
- Licensing fees that come back to fishers associations are useful
- It is important to look at management issues from the fishers point of view; in many cases they are just trying to feed their family
- Mobile phones/technologies have the potential deliver messages cheaply

The participants divided into groups to answer two questions. The new key points were;

1. **What are the key successes you have had using a holistic approach CEAFM?**
 - 5 MPAs in Guam with effectiveness in 3 of these (effectiveness of other 2 unknown)
 - Interagency collaboration, pooling of resources and building capacity in communities
 - Transshipment vessels, fishing in village fishing grounds and designated anchor sites
 - In Palau, co-management of action by two states with justices agreeing on conditions relating to enforcement
 - Collaboration with the environmental department on ridge to reef approaches
 - Collaboration with NGOs to address poachers
 - Improving legislation
 - Population understanding development of by-laws
 - Banning the export of particular species
 - Utilizing traditional systems and knowledge

- Communities willing to participate in identifying problems and solutions and enforcement
- Communities understanding of management principles and partnering with government
- Outreach and awareness programs to communities, schools and church groups
- Prosecution (legal and traditional) of perpetrators
- Contribution of reserves to food security and economic opportunities
- Entry through a different point like health or education
- Special management areas in Tonga, supported by awareness programs in schools

2. What do you see as the challenges at expanding this to a National or Sub-national level?

- Long process to get agreement, even in small communities
- Geography and isolation of some communities
- Building partnerships
- Lack of motivation to act (including political will)
- Enforcement
- Increasing populations and urbanisation
- Pouching
- Sustainability and cost (including short-term funding cycles)
- Coordination and complexity, across multiple levels (including different legislation)
- Communities are not homogenous
- Short-term goals of communities aren't compatible with sustainability objectives
- Lack of MCS

Part Two

Eugene Joseph (Conservation Society of Pohnpey) presented on *'The application of Ecosystem Based Fisheries Management; A Pohnpey case study'*. The case study can be summarised as follows;

Context

- A bottom up approach to fisheries management was introduced to the region in 2003
- Currently, there are declines in abundance, fish size, water quality, number of species, habitat and income
- A single illegal fishing event had a dramatic impact in 1998
- Undersized and immature fish dominate the market (90%)
- The loss of ecologically important and iconic species has negative impacts on tourism
- Dredging has had an adverse effect on reefs
- The Micronesia Challenge is operating within the region

Fisheries reform measures currently being introduced and practiced

- 6 learning sites in Pohnpei where CEAFM is being practiced (20 + villages)
- An MPA executive council with 6 village chiefs, watershed steering committee, marine advisory council (including fishers and market owners) and fisheries working group
- Management plans that include tasks assigned to NGOs and governments

- Laws and restrictions in place relating to export, seasonal catch, fish size and net mesh size
- Fisheries awareness campaign
- Community based initiatives like data stock assessments
- Decentralization of resource management roles

Challenges and lessons learnt

- **Community buy in/involvement of fishers in decision making process**
- **Translation of science into management**
- **Enforcement and compliance**
- **Financial resources**
- **Data management**
- **Be adaptive and responsive**
- **Synchronize and align efforts**
- **Press leader to prioritize fisheries**

In the discussion that followed new key points raised include;

- It is unclear if the measures implemented ensure the future of inshore fisheries
- There are some species that are still thriving well
- If we don't do something now, it will be too late for some species

Kate Barclay (University of Technology Sydney) presented on *'The role of youth, women and culture in fisheries management.'* The new key points raised include;

- **Conventional male-focused fisheries perspectives don't acknowledge the role of women in the market chain**
- The fish chain approach covers four key areas; food security, livelihoods, social justice and ecosystem health
- Traditional culture is not the only type of culture that negatively impacts on the success of fisheries development projects; project culture (e.g the project cycle) and political culture can also limit the success of projects
- Fisheries are an important source of income for young rural people who have few other opportunities for employment
- **Conventional methods for data collection in fisheries often omit women**
- WorldFish work within Aquatic Agricultural Systems in the Solomon Islands highlights the centrality of women
- **Fisheries are socio-ecological systems; therefore the role of women, youth and culture should be considered in their management**

The participants divided into groups to answer two questions. Key new points were;

1. Where have you seen women or youth engaged in coastal fisheries management?
 - A WWF FAD project in PNG and the Solomons where men caught the fish but women sold them and had access to microfinance
 - Sometimes when women are involved in the income distribution, it is less uneven

- Women and men can't be grouped together initially as women are usually unwilling to speak in this situation
 - In Tonga, one representative for children and one for women were included in a discussion group
 - Although women are involved in the commercialisation of fisheries products, they usually have no say regarding fishing at sea
 - In Wallis and Futuna, women are involved in environmental associations, jewellery production and play a role in transmitting messages to the whole community
 - In Tuvalu, women collect valuable socio-economic data
 - Documents written by committees often use language that excludes women
 - Women are often not informed when traditional forms of communication are used
 - It is challenging to work with ministry for women as they are focused on other issues
 - Finding meaningful employment for women and youth is essential
 - In Guam, there is a biannual fishing derby for children
 - In RMI there is a beach and underwater clean up event with prizes for youth
 - In Fiji and Vanuatu women are involved in value adding activities
 - Women are also involved in the church, managing money and collecting data
2. Give examples of where culture has affected a coastal fisheries management intervention?
- In the Torres Strait, PNG and New Caledonia, it easier to involve communities in conservation when it connects to cultural preservation e.g sea turtles
 - Social hierarchies can affect the distribution of benefits within projects
 - In Tahiti, the perception of turtle as the 'king's diet' was an obstacle for conservation
 - Culture assisted in Tahiti with the preservation of the lobster in Rapa
 - In several countries (e.g Tonga and Palau), the chief must be obeyed and this can be utilised to deliver conservation messages

Day Two

Part Two (Continued)

Ian Cartwright gave a summary of the discussion from day one and outlined the agenda for day two.

Key points raised include;

- The current trajectory that includes a growing population and declining fisheries will result in a large fish gap in the Pacific
- **The fish gap will have significant consequences for food security and livelihoods**
- Current challenges include outdated policy and legislation, lack of information, limited capacity and resources, inadequate empowerment of communities, lack of political will, lack of stakeholder collaboration, geographical isolation and issues relating to scale up
- **Clear, innovative pathways to change are required**
- Recent successes include increase application of CBFM, strong support from regional agencies and universal acceptance of the importance of CBFM
- Management of fisheries must start with communities but include NGOs, government and other stakeholders, be supported by fisheries agencies, utilise existing cultural systems and be supported by politicians, policy and legislation

- Finally, CBFM has to be **upscaled to meet national needs**

In addition to Ian's summary participants added the following points;

- CBFM is not just about amount of fish produced but also finding a balance for sustainability
- In French territories, local policy, French policies and customary laws are all operating so consistency across all levels is difficult to achieve
- CBNRM cannot be considered 'the key strategy', as it isn't appropriate in all situations e.g urban area

Will Allen, presented on '*Developing pathways for change; using a theory of change*'. Key points raised include;

- **TOC is about creating a work plan that guides us towards a change**
- A TOC is both a **process and a product**
- It is **dialogue-based** and helps to describe a sequence of events, presented in a 'road map'
- Situation analysis → action plans → outcomes → desired future
- Monitoring and indicators need to be built into the plan

Developing a theory of change

1. Set context and vision
 2. Articulate outcomes and intermediate outcomes
 3. Map sequence of events
 4. Clarify our assumptions
 5. Creating an M and E plan
- An example of a theory of change for increasing technical support to CBFM was shown
 - **An effective pathway to change will consider each program/project, focuses on where we are trying to get to, explain our understanding of change and challenge us to explore it further**

In the discussion that followed new key points raised include;

- Measuring impact is easier if chosen **outcomes are SMART**
- Change is difficult to implement and PICTs departments need further training
- Resistance to change can be addressed by forming a common vision and assisting stakeholders to understand why change is required
- Theory of change needs to lead us to a **new way of thinking and process**, not just result in the same type of planning as we've always done.

Mike Savins, presented on '*Improving livelihoods; Roles of the private sector and financing mechanisms*'. His recommendations provide a good summary and are as follows;

- Take a grass roots approach
- Build entrepreneurial management skills within livelihoods programs
- Invest in appropriate technology and build viable income generation
- Expand SPC livelihood's activities

- Establish country working groups with creative thinkers that can build links
- Improve government policy to support entrepreneurs
- Develop appropriate finance mechanisms

Samasoni Sauni, FFA, presented on *'The future role of Tuna in meeting Pacific food security needs'*.

The key new points raised include;

- Tuna provides USD323 million in access fees and close to 20,000 regional jobs (2013)
- 56% of the world's Tuna is caught in the Pacific
- Tuna provides fish for consumption and livelihoods and is important in combating NCDs
- There are also concerns relating to fish in the diet (e.g mercury and ciguatera fish poisoning)
- **Tuna needs to provide at least 12% of the fish consumed by PICTs in 2020 and 25% in 2035**
- The supply of tuna and by-catch from industrial fleets to urban areas needs to be managed
- Ensuring tuna for food and revenue requires a value chain approach and isn't impossible
- **A threat to fisheries in PICTs is a threat to food security and economic viability**

Participants divided into groups to answer questions. The key points can be summarised as follows;

1. How can alternative livelihoods realistically contribute to coastal fisheries management?
 - Using appropriate technologies is important. E.g For FADs, communities must be able to maintain them and income must be equally distributed)
 - Non-extractive activities like eco-tourism and canoe building activities
 - Ornamental fish/aquarium trade
 - Value adding activities e.g Tuna jerky and handicraft
 - Improvement in transport and accessibility of markets
 - Making options known to communities and engaging youth
 - Not all communities need to be offered alternative livelihoods
 - Refocusing energy into growing of local produce
 - Addressing communities immediate nutrition needs
 - Considering climate change impacts and other external drivers
 - Introduce population planning
 - Pursue sustainability standards
 - Explore alternative food and protein sources
 - Introduce entrepreneurship training into schools
2. What needs to be done within the fishery sector to reduce the fish supply gap?
 - Investigate aquaculture e.g Tilapia (needs to be evaluated) and mariculture
 - Realise the fish gap may not be filled with fish
 - Better management of resources and increased management capacity
 - Must consider where the fish gap will occur e.g urban versus rural
 - Solutions must match local contexts
 - Identify and explore less targeted species
 - Family planning, awareness, education and changing of dietary choices
 - Restore degraded habitats and promote sustainable fishing practices
 - Limit export and redistribute revenue raised by access fees to coastal management
 - Prioritise food security

- Increase R & D funding to alternative fishing methods
- Increase MPAs

Moses Amos, SPC presented on *'The role of institutions in CBFM'*. He outlined roles of each institution (refer to powerpoint). The top priority of each institution is highlighted below.

Institution	Top priority
National	Policy and management plans
Subnational	Management measures under by-laws
Regional	Facilitation of management approaches
Subregional	Facilitation of management approaches
Donors	Provide funding through regional agencies and under bilateral arrangements aimed at addressing national needs and priorities
NGOs	Activities relating to food security and sustainable livelihoods

Other key points raised include;

- **Only one third of PICTS have a coastal fisheries policy or advanced draft**
- Investment in coastal fisheries as a percentage of the total fisheries is insufficient (15%)
- Investment in human resources allocated to coastal fisheries is insufficient
- **Dramatic change is required**
- Key recommendations include developing policies and legislation, modifying household income surveys to measure the success of management practises and structuring institutions to better engage stakeholders

The participants divided into groups, were given the proposition that by 2020 there are sufficient legal conditions and funding to support effective coastal fisheries management at scale and asked how this would happen. Suggestions for how to progress to this were;

Broadly

- Inform leaders and create an enabling environment for change
- Align resources
- Mainstream fisheries into a development perspective (nutrition, food, NCDs, youth and economic benefits) rather than a biodiversity perspective and create a robust communications strategy
- Create regional strategies including conventions and measurable indicators
- Take a whole of systems approach
- Allow communities to identify their needs and drive solutions
- Create specific fisheries sector policy
- Take an interagency approach

Creating sufficient legal conditions

- Set measurable objectives for 2020 and have member countries develop their own framework that aligns with regional objectives
- Address marine tenure issues
- Prioritise and implement activities within existing frameworks
- Utilise regional and subregional instruments e.g the Micronesia Challenge
- Develop policies where there are gaps in policy
- Review and improve existing legislation (with a focus on coastal fisheries)
- Avoid overcomplicating legal frameworks and policies
- Rangers should be recognized as authorised officers
- Fish wardens should be present in communities and assigned to enumeration
- Capacity building of national fisheries officers

Generating sufficient funding

- User pay models for coastal management and other new sources of revenue
- Coordinate and integrate donor funding
- Market and promote the economic importance of coastal fisheries
- Formalise trust funds to relocate profits from other fisheries sectors into coastal fisheries
- Develop a co-financing sustainable plan
- Align and coordinate efforts to seek funding
- Protect iconic species that attract tourism and conservation NGOs
- Channel revenue from tuna licensing into coastal fisheries
- Create ecotourism opportunities
- Mainstream into national development strategies

Ian Betrum presented on '*Understanding fisheries management tools and data needs*'. The new points raised include;

- Management tools include closures, limiting fishing gear (e.g explosives), limits on species, bag limits, ban on exports and rotation of harvest species
- Traditional taboos and practices influence fisheries management (e.g totem species or limits on fishing in period of mourning, piling of clams for communal use)
- **A mixture of management methods are usually needed to achieve goals**
- Types of data collection include biological studies, water assessment, demographic studies, spawning sites and seasons studies, tagging to determine movement patterns, socioeconomic information and physical data (e.g substrate/water)
- Challenges to management were listed but these have been described by earlier
- Ways of measuring management progress include studies before and after, comparative and perception surveys and socio-economic surveys
- **Respond to measuring of management progress by practicing adaptive management**

Participants divided into groups to answer the question: What information do we realistically need to support coastal fisheries management at local and national scales?

Results of the group work is summarised below.

Community level	National level
Use traditional knowledge to gain understanding of spawning season/area	Standardise data collection and centralized data storage
Perception vulnerability assessments (e.g effect of climate change)	Baseline and follow up monitoring
Community profiling	Vulnerability of crucial food fish (including link to reef health)
Traditional practices (including regulations and fishing habits)	Annual consumption rates, catch and landing data
Socioeconomic analysis	Legal framework information
Historical data	Fish life cycle and impact of development projects
Population of areas (people)	Catch quantities and size of fish
Level of community understanding	Habitat mapping
Marine tenure information	Water quality parameters
	Fish markets (including trends)
	Mapping of CBRM activities
	Reef productivity
	Climate change data
	Export data
	Catch and effort information
	Size at maturity
	Value of species
	Socio-economic analysis (including maximising value of HIES)

All groups emphasised the important role of communities in data collection, especially capturing traditional knowledge related to spawning sites and seasons of local species.

Day Three

Part Three

Ian Cartwright presented a draft outcomes document with the following key components;

- The **new approach** will focus on understanding the facts, advocacy and political will, scaling up , balancing offshore and inshore fisheries, supporting communities, closing the gap, working together, a holistic approach, using the right methods and maintaining livelihoods (further information in the outcomes document).
- Current **barriers** include lack of political profile, inadequate focus on coastal fisheries, outdated management documentation, lack of information, limited capacity and resources, inadequate empowerment of communities, lack of stakeholder collaboration, inadequate MCS and variable/inadequate sanctions and geographical isolation (further information in the outcomes document).

New agenda for the day was explained and participants broke into groups. They were asked identify outcomes they want to work towards for improving coastal fisheries management and were given the following example outcomes;

1. Improved wellbeing of coastal communities; and
2. Productive and healthy ecosystems and fish stocks.

Their suggestions were synthesised and refined into the following;

1. Informed, empowered coastal communities with clearly defined user rights
2. Adequate information to inform management and policy
3. Recognition of, and strong political support for, coastal fisheries management at a national and sub-national scale
4. Refocussed fisheries agencies that are transparent, accountable and adequately resourced, supporting coastal fisheries management underpinned by CBFM
5. Strong and up-to-date management policy, legislation and planning (guided by evidence)
6. Effective collaboration and coordination between stakeholders, including across levels of government and key sectors of influence
7. More equitable distribution of benefits and decision making within communities, including women and youth and improved sustainable livelihoods

Participants broke into groups and were asked to use a 'Theory of Change' approach to develop intermediate outcomes, key players and indicators for allocated outcomes (1-2 outcomes per group).

Theories of change approaches were synthesised into the draft outcomes document and participants were asked to read the draft and provide feedback. The final outcomes of the Workshop can be found [here](#).

Appendices

Appendix One – Table Summary of Regional Presentations

Geography	Challenges	Current Activities	Lessons Learnt	Future Requirements
Melanesia	<p>Growing population Weak governance Destructive poachers Weak enforcement Undersize nets Smaller fish Limited alternative livelihoods Marine tenure systems Land disputes Climate change/erosion</p>	<p>Management committees Management Plans Setting MPAS Controls on fishing gear in some open areas Ridge to reef Address land and reef management Adaptive management Church minister/chief blessing MPA/Plan Restocking some species Turtle conservation Replanting trees Cleaning up rubbish Organic farming Alternative activities e.g tourism and seaweed farming Providing research findings to the community</p>		<p>Clear government regulations that empower communities to manage Support with enforcing rules Capacity building Awareness of environment, resources and sustainability Continue and improve school curriculum on NRM</p>
Micronesia (FSM)	<p>Management plans are very focused Pouching Planning is easier than implementation There is no budget for voluntary community conservation officers In Pohnpei and Kosrae government fines for illegal fishing are not a deterrent Gaining community buy-in 'Traditional use' exemption</p>	<p>Six learning sites with management plans in Pohnpei An additional eight learning sites in other areas</p>	<p>Seeing tangible benefits of management in adjacent areas Target traditional leaders</p>	<p>Consolidate and amend regulations to support CBNRM Greater empowerment of local government</p>
Polynesia	<p>Outsiders taking fish Favouritism among family members Raising awareness and understanding in communities Resources (staff and equipment)</p>	<p>Community fisheries management in many areas Gear control National/Island/Village/Community rules and laws Controlled harvest e.g Bonefish and trochars Enforcement by community/island council/national authority</p>	<p>Utilise community representatives Translate scientific results into terms the community can understand Run awareness programs Introduce penalties and fine</p>	<p>National/regional and international bodies need to better understand community level challenges Better communication at all levels Integration of NRM into school curriculum Better resourcing Follow up and maintain momentum</p>