

# Sharing the Fish '06

## Allocation issues in fisheries management

27 February–2 March 2006  
Fremantle, Western Australia



Preparation of this document

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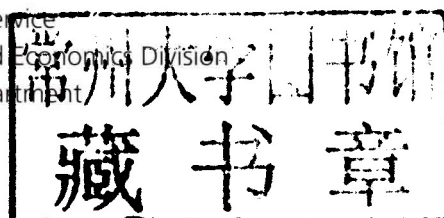
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# Preparation of this document

The “Sharing the Fish ’06: Allocation issues in fisheries management” conference was organized to address the fundamental, and essential, question of “When fisheries are under fishing pressure, who gets what?” It was also an obvious next step after the FishRights99: Use of property rights in fisheries management conference that was also held in Fremantle, Western Australia, and similarly hosted by the Department of Fisheries of the Government of Western Australia in cooperation with the Food and Agriculture Organization of the United Nations (FAO) six years prior. As previously, over 345 delegates attended.

These proceedings provide the main papers and presentations from Sharing the Fish ’06 Conference, which identify and show how the fisheries sector has tried to grapple with some of the many issues that are associated with:

- allocations across jurisdictions (including governmental, regional and multilateral issues);
- allocations within sectors; and
- allocations between sectors.

This document has been prepared by a team consisting of Ms Dana Isokawa, Ms Yuanbo Liu, Dr Fred Wells and Dr Rebecca Metzner. The attached CD-ROM contains the complete version of all contributions presented during the conference.

The sponsorship received from governments, organizations and companies who permitted their staff to provide time and effort in support of the various Sharing the Fish ’06 Conference Organizing and Steering Committees was, and still is, most greatly appreciated. Finally, the conference would not have been able to proceed without the financial support of its sponsors, and that support is greatly appreciated.



# Abstract

These proceedings contain the main papers and presentations from “Sharing the Fish ’06: Allocation issues in fisheries management” conference that was held in Fremantle, Western Australia, 27 February to 2 March 2006. They include the substantial work of the keynote and invited speakers covering the three themes of the conference which addressed the critical fisheries management topics of: (i) allocations across jurisdictions (including governmental, regional and multilateral, and national allocation issues); (ii) allocations within sectors (including extractive and non-extractive allocations issues; management issues; and, commercial, artisanal and tourism allocations issues); and (iii) allocations between sectors (including customary/indigenous, recreational, commercial, and artisanal/subsistence allocation issues). The enclosed CD-ROM contains the papers from the concurrent sessions which delved further into each of these allocation topics as shown in the Conference Programme section and mentioned in the Summary Reports and Overview section.

**Metzner, R.; Isokawa, D.; Liu, Y; Wells F. (eds).**

Sharing the Fish ’06: Allocation issues in fisheries management.

Fremantle, Western Australia, 27 February–2 March 2006.

*FAO Fisheries and Aquaculture Proceedings*. No. 15. Rome, FAO. 2010. 253p.

Includes a CD-ROM.

# Note from the editor

## THE ALLOCATION ASPECTS OF FISHERIES MANAGEMENT

We all know that fishing means vastly different things to different stakeholders. If you are a subsistence fisherman, catching fish may mean the difference between having food to put in your child's stomach and going hungry. If you are a commercial fisherman, catching fish is about making money and may mean the difference between being able to pay your bills and having the bank foreclose on your boat. For recreational fishermen, it may be that the quality of the fishing experience may mean as much or more than actually bringing home fresh fish, but the recreational outing or event certainly involves having a "sporting chance" of at least having some fish to catch. And, for the folks who simply like to know that there are sustainable levels of fish somewhere "out there" to enjoy knowing about and for our grandchildren to appreciate, it is simply just knowing that fisheries are not overfished.

Once upon a time, there were fewer people and our fisheries resources plentiful enough that all people could fish and all types of different interests could all be accommodated. But that was once upon a time. Nowadays, we're in the invidious situation that we have limited resources, many more people, and we have to share what we have. This means finding ways of sharing that do not cause conflicts, either within stakeholders groups, or between them. But what can we do to share successfully?

All types of fisheries management regulations, inevitably but implicitly, allocate fish in some way, and hence it is important to also consider the allocation impacts that regulation can have. Time closures can affect participants with less powerful boats in ways different from more powerful boats, gear restrictions may affect users of one gear type more than another gear group, vessel size restrictions may affect different vessel owner groups, area closures can affect participants originating from different ports, etc.

Indeed, it is important to consider the positive and negative forces and impacts that are created by fisheries management regulations and to be aware of the effects that different management approaches will have on management costs and complexity, fishing capacity, stakeholder groups, social objects, and sustainability and resource objectives.

## TACKLING THE QUESTION OF SHARING THE FISH

The idea for the conference was first raised when Peter Rogers was closing the *FishRights99*: Use of property rights in fisheries management – a conference that was also held in Fremantle, Western Australia, and similarly hosted by the Department of Fisheries of the Government of Western Australia in cooperation with the Food and Agriculture Organization of the United Nations (FAO) six years prior. The topic was also an obvious next step after *FishRights99*, given the emerging realization that such sorts of management systems are frequently more successful than command and control approaches to managing many types of fisheries for both economic and biological viability.

This brings us to the question of rights-based fisheries management systems. Rights-based fisheries management systems – of which there are *many* types and *infinite* variations – have to grapple with the issue of allocation on an explicit basis, both in their design phase and in their implementation phase. Indeed, one of the obstacles to establishing rights based fishery management systems involves resolving issues of initial and subsequent means of allocation instead of simply choosing to ignore them or relegating them to the "too hard" basket. Thus, it made sense to at least start to try



to address the complex and multifaceted issue of allocation in the hope that we may improve our understanding of what has worked, what has not worked, when, where, how, and why.

And so, the idea was nurtured by both the FAO and the Department of Fisheries Western Australia to create Sharing the Fish '06 Conference. Indeed, it is a tribute to the Department of Fisheries Western Australia that it hosted another globally relevant conference – attracting 346 delegates – on an issue that is at the heart of all we do in fisheries management, and FAO again enjoyed collaborating and cooperating with the Department.

Given the short duration and lengthy nature of the topic, the conference organizers designed an artificial structure that was intended to help participants focus on the fundamental question of: “How may fisheries managers and policy-makers go about considering, undertaking and implementing the allocation of fish resources to ensure their sustainability, be these issues considered at the stakeholder, local, national, international or regional level?”

Of course, the reality of the fisheries world is quite a far cry from our “optimal” visions – as the overlaps and similar messages that emerged from these different themes serve to remind us. Nonetheless, the conference was structured under three main themes with a substantive keynote and several invited speaker presentations serving as the starting point for further discussions on:

- Allocation across jurisdictions – including governmental, regional and multilateral issues at the high seas, regional and national levels;
- Allocation between/across sectors – including spatial/temporal, extractive/non-extractive issues as well as those of allocation between the indigenous, commercial and recreational sectors; and
- Allocation within sectors – including the allocation issues which come up as part of commercial and recreational management.

In addition, there was a concurrent session on some of the approaches and tools that can be used to approach the problem of allocation as well as one on the mechanics of the reallocation of resources between the commercial fishing sectors of the Torres Strait.

## LOOKING BACK AND FORWARD

From the perspective of the years subsequent to the Conference, the slow pace with which allocation issues are being addressed reflects the sensitive nature of the topic and the difficulties associated with grappling with it. Yet, progress – and it is progress – is being made, and there is now more interest in this topic than that which existed at the time of Sharing the Fish '06 Conference.

This seems to be being driven by two fundamental realizations. First, there is an ever increasing awareness of just how unsuccessful – and expensive – our management efforts have been in fisheries around the world. Second, there is a growing realization that establishing fisheries rights systems – of one sort or another (and *not* just individualistic systems) – is a responsible way forward for ensuring viable and sustainable fisheries.

Thus, we need to get on designing the *best* systems for our many different types of fisheries. Whether rights-based systems are group, territorial or individualistic, their design and subsequent implementation require addressing the notions of exclusion and inclusion – of allocation – and so it behoves us to do this thoughtfully and with strong awareness of the human, economic, and biological implications of our actions. Real life is messier than theoretical models, yet models of so-called perfection can also serve as useful backbones for our real life and, hence, messier management undertakings.

## SUPPORT FOR SHARING THE FISH '06 CONFERENCE

Sharing the Fish '06 Conference was possible only through the generous support of a number of sponsors who provided either direct financial support or made available

staff who were essential for the conference's success. Special thanks go to Peter Rogers, Peter Millington, Greg Paust, and Fred Wells of the Department of Fisheries of the Government of Western Australia. Special thanks, too, are due to the Western Australian Fishing Industry Council's Guy Leyland and the MG Kailis Group's George M. Kailis who have seen the need for the fishing sector to constructively engage with government and academia to start addressing the core issues of concern for the fishing sector's future.

To all, named and unnamed, my deep thanks for your intellectual support to continue the Fremantle Series and for your personal efforts to cover the gaps created by my repeated surgeries during the planning years and, as life would have it, the week prior to the conference. I drew heavily on a number of personal relationships to have people to fill in for me, and I am very greatly indebted.

### **Conference organizing committee**

Unlike many other conferences which may have both a Steering and a Programme Committee, these were merged into a Conference Organizing Committee which was responsible for the overall direction of the conference, its organization, content and the detailed development of the conference themes, including selection of the keynote speakers. Members were:

- Peter Millington (Chair), Director of Fisheries Management Services, Department of Fisheries Western Australia
- Greg Paust (Program Chair), Deputy Director – Integrated Fisheries Management, Department of Fisheries Western Australia
- Rebecca Metzner, Fishery Officer, Policy, Economics and Institutions Service, Fisheries and Aquaculture Policy and Economics Division, FAO Fisheries and Aquaculture Department
- Mark Edwards, Manager, Fisheries Policy, Ministry of Fisheries New Zealand
- Cream Gilda S Mau, Senior Policy Officer, Domestic Fisheries Policy, Australian Government Department of Agriculture, Fisheries and Forestry
- Catherine Smith, Manager, Domestic Fisheries Policy, Australian Government Department of Agriculture, Fisheries and Forestry
- Guy Leyland, Executive Officer, Western Australian Fishing Industry Council
- Steve Dunn, Deputy Director, Pacific Islands Forum Fisheries Agency

### **Sponsors**

Sharing the Fish '06 Conference was only possible because of the generosity and commitment of its various sponsors:

Australian Government's Fisheries Research and Development Corporation

Department of Agriculture, Fisheries and Forestry

AusAID

New Zealand Ministry of Fisheries

Queensland Government Department of Primary Industries and Fisheries

Government of South Australia Primary Industries and Resources SA

Northern Territory Government Department of Primary Industry, Fisheries and Mines

MG Kailis Group

Western Australian Fishing Industry Council Inc

### **PREPARATION OF THE PROCEEDINGS**

The preparation of these proceedings can only be described as the result of a serious team effort. Dr Fred Wells, Western Australia, made the enormous undertaking of tackling the papers from the concurrent sessions for their primary editing. At the FAO end, without the transcriptional and editorial efforts of Ms Yuanbo Liu and Ms Dana



Isokawa, the documentation and presentation of the papers from the plenary talks and daily recaps of the concurrent sessions would have made my work of attempting to establish a more uniform style of presentation – in part dictated by my institution’s publishing conventions – and the documentation of the sessions almost overwhelming.

Finally, I have to beg the indulgence of the keynote and invited speakers who carefully scrutinize my documentation of their work or presentations and assure them that I made every effort to ensure their messages have come across as intended but, in the end, any errors are mine.

## CONCLUSION

From a much more personal perspective, after investing several years in the process of designing and organizing the conference, I was unable to attend for health reasons. Thus, preparing these proceedings – listening to the presentations, transcribing, editing and organizing the papers – has been much more than the process of preparing proceedings.

Indeed, I have had the opportunity – and privilege – to learn more about the personal and intellectual aspects of each and all of the participants as well as to gain a sense of what one participant aptly described as a *stimulating and thought-provoking experience*. The conference was not as representative as it could have been in a more perfect world with many sponsors and low travel costs, but it was a start and has provided a foundation, identified gaps in our thinking, and set the scene for much-needed additional work on the topic.

Markets and their use of money certainly are an understandable medium of exchange that results in decisions that may be less arbitrary than, for example, policy decisions premised on subjective or other means of measurement – but the questions remain as to (i) whether markets and money are really the “best” vehicle and, if not, (ii) what alternatives there are. It has become clear to me, too, that it is important to work towards maintaining (but not necessarily pigeon-holing or otherwise constraining) cultural values and social structures without compromising the economic benefits of fisheries resources.

In closing, I am most thankful that each and every one of the participants has provoked and inspired changes in how I – and perhaps future readers, too – will think about how to go about working on the question of sharing the fish. More than ever, it is clear that rights-based fisheries management systems need to be designed to consider social and cultural values, existing governance and institutional structures (or the lack thereof), the strength of legal systems and their ability to uphold rights, to name a few. In short, it is imperative that we genuinely mean it when we say there is not one single style of rights-based system that will work for all fisheries situations – and, having said that, we *act* accordingly.

### Rebecca Metzner

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# Summary reports and overviews

## 1. CONFERENCE THEME REPORTS

The Organizing Committee made a conscious effort to bridge the inevitable information gap created by concurrent sessions by designing time into the program each morning for reporting to the plenary about the topics and issues raised in each previous day's afternoon concurrent sessions. Thus, the summaries which follow here have tried to capture the main issues and ideas that emerged from the thirteen thematic sections of the concurrent sessions as presented by the rapporteurs.

Thanks go for the great effort on the part of the concurrent session chairs and, in particular, the appointed rapporteurs who had to distil the substance of their sessions and prepare reports. Special thanks go to those involved in making this work as well as it did.<sup>1</sup> The documentation provided by the reports is also gratefully acknowledged, and great thanks are due to the whole of conference rapporteurs, Profs. Hanna and Hilborn. Their task was daunting, yet it was beautifully, thoughtfully and constructively executed.

As Prof. Hanna noted at the beginning of her end of program overview, the conference was designed to bring some sort of systematic order to what is a very large topic – the subject of allocation and all its many dimensions across jurisdictions, across sectors, and within sectors. By necessity, not all topics could be considered within the three thematic areas, but that simply creates room for future conferences to continue work on this topic and to go further in demystifying and systematically addressing and sharing information about the allocation issues arising in many, but certainly not all, types of fisheries in our world.

### 1.1 Theme 1: Allocations across jurisdictions

The topic of allocations across jurisdictions was divided into issues of allocation on the high seas, at regional and national levels, and also covered some of the allocation issues relation to the involvement of Australian indigenous groups in fisheries management.

#### 1.1.1 *High seas allocation issues*

Although the talks in this theme covered a wide range of topics, there were several recurring themes that came from the presentations and papers in this concurrent session:

- In determining fair allocation shares, it is useful to have guiding principles of resource sharing and to be aware of the incentives that can drive or impinge on negotiation processes that are part of setting these up.
- The strengths and weaknesses of management arrangements of regional and high seas fisheries (predominately those in the southwest Pacific Ocean) are becoming clear.
- The legal and policy precedents of international allocations and the trading of fisheries quotas or shares among States do exist.
- Economic analyses are valuable for assessing the benefits and costs of policies, including the unintended consequences of management decisions in one fishery and their impacts in others. and

<sup>1</sup> In alphabetic order, morning rapporteurs' reports were ably provided by: Britt Maxwell, Len Rodwell, Richard Sisson, and Neil Thomson for Day 1; Transform Aqorau, Andrew Hill, Graeme McGregor, and Mark Pagano for Day 2; and Heather Brayford, Rick Fletcher, Amanda Hamilton, Antony Lewis, Jo McCrea, and Guy Wright for Day 3.

- There are challenges to regulating unregulated high seas fisheries, but it is useful to remember that is also a range of solutions available, from outright moratoriums to market-based systems of management.

In looking forward, it was noted that it would be useful to combine the knowledge and experience from these sessions into a paper, with the objective of starting to outline what is best practice in high seas and regional fishing governance and allocation arrangements. Doing so, it was noted, would provide the platform for addressing the questions of: (i) What can we do now? (ii) Where are the gaps? and (iii) Does a market solution – or any other solution, for that matter – start to fill the gaps?

### 1.1.2 *Regional allocation issues*

Whether bilateral or multilateral, the regional allocation issues theme similarly had several recurring messages which emerged:

- The setting of limits within the membership of a regional management entity provides an opportunity for members to introduce a rights based approach to management and, subsequently, increase the benefits members can derive the fishery or fisheries in question.
- The resolution of allocation issues by members is critical to addressing conservation concerns.
- The management measures already taken do, as is mentioned elsewhere, have allocation aspects which will, in many cases, continue to flavour the design details of future rights-based systems.
- The success of sharing arrangements – as when developing any management arrangement – may be heavily influenced by the extent to which the factors of accountability, flexibility, efficiency and the use of the ecosystem-based approach to fisheries management are present and upheld. Indeed, it was considered that ownership of the process, from fishermen to participants involved at the regional level, is a key ingredient for success.
- There is a role for explicit equity-related provisions in sharing fish between developed and developing countries.

The main lesson learned was that, inevitably, there will be similar approaches to allocation adopted. There are only so many ways to share, to allocate fish – so it is critical to look at the circumstances that provide the best results for the participants involved.

### 1.1.3 *National allocation issues*

Of all the papers presented, if there was one key message, it was that *expectations* – rational and otherwise, based on historical facts, traditions or merely perceptions – play an important part in any discussion about resource allocation.

The array of interrelated presentations presented a variety of perspectives – those of the facilitating resource sharing arrangements, those involved in them, those having to manage them, those stakeholders who want to be involved, and of those designing them – and yet managed to highlight several consistent themes. Key findings of the sessions included that it is important to:

- develop a process or work within a policy framework, not only in terms of jurisdictions and legal responsibilities, but also in terms of respective roles;
- clearly establish who is involved and in what capacity (partner or stakeholder);
- determine the facts, especially regarding pre-existing rights (and whether real or perceived);
- use comprehensive (and preferably compatible) data, as it is crucial to good decision-making;
- identify, clarify and manage expectations;
- extensive and meaningful consultation is essential; and



- take ecosystem needs into account before allocating the biomass to various fishing sectors.

Again, and especially from the practitioners' perspective, it is critical to be able to identify what can and cannot be achieved when undertaking allocation actions – i.e. to genuinely clarify expectations among all involved – and to have a resource sharing agreement that includes, comprehensive data, transferable allocations, and manageable and measurable total extractions.

#### **1.1.4 Australian indigenous allocation issues: South Australia and Northern Territory perspectives**

The papers in this session focused on the ways and means of involving indigenous Australians in fisheries management. Although early decisions have been based on customary non-commercial use of fisheries resources, the principles and networks developed generating the Indigenous Land Use Agreements (ILUAs) under the Native Title Act 1993 will provide a significant degree of trust to commence discussions about the allocation of resources for indigenous commercial fishing as well as customary indigenous fishing.

Key points and findings of the presentations related to what was learned in terms of management, legal issues, and responding to aboriginal and commercial fishing interests:

- Management – The lessons learned include the need to: (i) establish broadly agreed principles on which negotiations and actions are based (e.g. the National Principles); (ii) maintain enough flexibility to let local issues drive local arrangements; and (iii) include allocation in management decisions to avoid management making allocation by proxy through management arrangements.
- Legal issues – The inclusion of indigenous customary use in new fisheries management plans was, in part, as an alternative to the uncertainty, duration and potential divisive nature of the litigation process and, indeed, the outcomes of such a process.
- Aboriginal stakeholders – The inclusion of aboriginal stakeholders in the decisions demonstrated the importance of providing a legitimate place at a table which includes all stakeholders and ensuring that spokespeople are genuinely representative and aware of the spiritual, emotional and substantive issues.
- Commercial fishing stakeholders – benefits and strategic approach to identify goodwill, potential means of limiting the diminishing of commercial fishing rights, and the training of indigenous people in fishing.
- Definition of rights, co-management opportunities, and the allocation of future commercial interests to valid stakeholders.

It was clear that relationships and communication are central to developing strong, successful and enduring outcomes that enable people to move forward in the fishing sector. In particular, the two key recommendations from the session were that:

- frameworks which build a set of mutually reinforcing systems need to be developed; and
- building trust and communication allows for negotiation and the development of appropriate arrangements which satisfy the aspirations of management, commercial, recreational and indigenous interests.

## **1.2 Theme 2: Allocations across sectors**

Within the theme of allocations across sectors, there were four concurrent themes: Spatial/temporal allocation issues, extractive/non-extractive sector issues, allocation between commercial and recreational sectors, and commercial management issues.



### 1.2.1 *Spatial/temporal allocation issues*

The ten papers within this session regarding spatial and/or temporal allocation issues made the respective key points of:

- If an allocation framework is really necessary, it should not necessarily involve the government intervention.
- For equity reasons for the fishing industry, allocations to non-fisheries sectors should be reconsidered, if not reduced.
- Spatial allocation exclusively to the recreational fishing sector can promote harmony through increases in fish stocks.
- Data is essential, particularly in situations where localized targeting of stocks may or may not coincide with spatial allocations.
- It may be useful to implement spatial and temporal programs up front, not after a fishery has been well established.
- Competition for coastal space, especially between aquaculture and capture fisheries, security of access rights is a fundamental element of successful programs.
- Representative stakeholder interest and involvement, from a variety of sectors, is vital for successful and enduring allocation systems and minimize conflicts.

In summarizing the session, it was noted that there were three possible categories of issues raised: first, who fishes where – with rights going to either the commercial or the recreational sector; second, who decides where to fish – whether through direct government intervention or other means; and third, how the decision is made regarding who gets to fish and where – whether through non-regulatory actions, co-management activities, market-based systems, or means. Perhaps the most innovative proposition of the session was for the establishment of dedicated protected productive commercial fishing areas to secure the future of the fishing industry, with the caveat that other users access the other areas should have temporal access rights.

### 1.2.2 *Extractive/non-extractive sector issues*

There were essentially two groups of papers presented: those about marine planning and processes that have affected marine resource allocation, and those about their direct and indirect impacts on allocation of marine resources. Zoning and rezoning topics – and the social challenges including compensation associated with these were flagged as important elements. Key points and findings included that:

- Marine protected area zoning may result in de facto reallocation from the commercial fisheries sector to tourism and/or conservation.
- Zoning processes can significantly alter the economic viability of (fishing) activities.
- Resolving conflicts before users and implicit allocations become entrenched is useful.
- Social impacts tend to be underestimated (particularly in the absence of full information) and, when underestimated, can create significant challenges to planning and budgets.
- Broad management frameworks are useful for marine planning to guide the myriad of considerations that should be taken into account.

Where there are processes for non-fishing planning, it was noted that it is useful for MPA and fisheries managers to work together to achieve both economic and conservation issues. Broad-based marine planning processes need to fully identify the scope of all users, stakeholders, and uses.

Authors pointed out that competition between uses – such as between the establishment of MPAs and commercial fishing – need to be recognized and addressed along with the potential to create a race for space. Political and human factors can and will strongly influence outcomes, and it is vital to encourage full stakeholder engagement and participation. Both market and planning approaches can co-exist

usefully, but it is important that these approaches be consistent across and within various sectors. Mechanisms to provide economic returns to those affected by direct or implicit reallocations from one group to others are an important, but frequently unaddressed, consideration. In particular, with establishing marine protected area networks, it was emphasized that clear rights and objectives, stakeholder values, accountability and recognition of biological, social, and economic impacts are important elements of successful programs.

### *1.2.3 Allocation between commercial and recreational sectors*

While it was noted that there are far more users than simply commercial and recreational fishers, including indigenous, customary, conservation users, the session focused on the former. Two common themes in the two sessions included the (lack of) data especially, for the recreational fishing sector and the need for the involvement of all stakeholders in processes. Key messages of the session included:

- Recognition of both stakeholders' respective rights and responsibilities is vital, particularly as allocations among sectors are increasingly clarified.
- Discretionary allocations can be problematic, and the use of more rigorous framework can be constructive for providing certainty and the opportunity to maximize value of fisheries resources.
- While most attention to date is on initial allocation issues, it is useful to consider subsequent reallocation issues, particularly as fisheries grow and change.
- Clear allocation policy, catch and effort data, extensive stakeholder involvement, and reliable commitment to policy are essential ingredients for secure and successful systems.
- Clear priorities are extremely useful for facilitating allocation decisions, along with security, exclusivity, permanence, and transferability.
- Reallocation of sector shares may be catch-based, negotiated, valuation-based or market-based, with advantages and disadvantages in terms of legitimacy, operational and enforcement costs, and stakeholders' incentives.
- Policies collaboratively developed and operated with stakeholders can provide guidance, structure, and flexibility for achieving users' respective outcomes.
- The design of allocation programs should reflect the unique characteristics of a fishery or fisheries prior to selecting on particular approach to management.
- The lack of data, particularly for the indigenous, customary, and recreational fishing sectors needs to be addressed.

In summary, it was noted that no one size management approach fits all situations, and that the conditions and characteristics of the participants in a fishery need to be seriously considered and taken into account in the design of allocation strategies and management systems.

### *1.2.4 Commercial management issues*

Addressing current inadequacies, especially regarding ownership and control matters, harvesting rights, and quota management systems were the focus of papers in the session. The emphasis was on the economic and social objectives that can focus the choice of individualistic or community-based systems among other things.

Key success factors mentioned included sustaining high resource rentals, while ill-defined guidelines, indeterminate timeframes, lack of funding, and a lack of financial incentives for stakeholders were noted as undermining rights-based systems. Additionally, it was noted that evolutionary changes to rights-based systems and issues such as the encroachment on such systems by allocations to sectors outside the management framework can seriously threaten the success of (commercial) sector management using rights-based systems.



### 1.3 Theme 3: Allocation within sectors

The allocation within sectors theme was supported by four groups of concurrent session papers: those addressing commercial allocation issues and sector allocation management; commercial allocation issues: allocation and reallocation processes; recreational allocation issues; indigenous, recreational and commercial allocation issues; and approaches to the allocation problem and regional allocation issues.

#### 1.3.1 *Commercial allocation issues: sector allocation management*

Papers in this session revisited and highlighted the definition of economics, namely, that economics is the study of the allocation of scarce resources among competing uses.

Ways forward for improving the economic aspects of fisheries management and management advice include: greater stakeholder involvement in management processes to increase awareness of the commercial and economic aspects of fisheries and their management, and the use of bioeconomic – not simply biological – stock assessment. The strength of linkages between good governance including independence from both internal and external political influence, equity, transparency, economics, biology and social sustainability were put forward as strongly influencing the success of fisheries management systems.

As in some other sessions, it was highlighted that even the use of rights-based systems may not result in successful outcomes if the particular form of rights-based system is not appropriate for the resource being considered. Hence, it is useful to consider the range of rights-based systems that are available and implement accordingly.

Key points reinforced messages throughout the conference, including that:

- People management is as important as stock management.
- Common managerial characteristics include the will to succeed, the ability and a supportive governance structure to make decisions in uncertainty, the ability to take a long-term perspectives, and industry cohesion.
- Stakeholder concerns, aspirations, and perceptions need to be addressed equitably
- A one size fits all management approach does not fit all fisheries conditions.
- Management approaches need to be based on biological, economic, and social considerations.
- The absence of property rights elements in a management system will likely commit a program to failure.

#### 1.3.2 *Commercial allocation issues: allocation and reallocation processes*

Several papers in this session continued to emphasise livelihood agendas and economic agendas – in addition to biological agendas – and their importance for successful management regimes. Issues of social justice, internal and external perceptions of fairness, artisanal concerns and community concerns need to be addressed. Because property rights can and do have distributional and equity issues, participants noted that both for individual fishermen and for fishing communities, the benefit flows from rights-based systems will be influenced by ownership rules. Additionally, it was noted that management of expectations and undertaking processes when stocks are in relatively good condition can facilitate these activities.

Participants recognized that the economic and local social impacts of management processes need to be rigorously considered, including community versus individual objectives, and that broader issues include who can own shares and the related topic of consolidation of shares.

#### 1.3.3 *Recreational allocation issues*

The session covered a diversity of topics, including recreation sector involvement in allocation processes, fishing for food or for fun, management of recreational fishing,