

All PICTs have targeted subsistence and artisanal fisheries for coral reef associated finfish, and both inshore and off-shore pelagics. Most commonly targeted food finfish are *Lethrinidae*, *Serranidae*, *Carangidae*, *Lutjanidae*, *Mugilidae*, *Scrombidae*, *Scaridae* and *Sphyrænidae*. Commercial fishing mostly involves the exploitation of pelagic tuna stocks.

Sea cucumbers and trochus are the most important invertebrates fished, with a wide variety of bivalve molluscs (including giant clams), crustaceans (crabs, prawns and lobsters) and octopus also taken.

The ornamental aquarium marine organism fishery is active in Fiji, Tonga and Kiribati; whilst Fiji and Kiribati also have some coastal communities growing seaweed for export.

Gender divisions show that male fishers are more predominant in fishing activities. For example, during surveys in 2005 in Niue, the total annual estimated catch from coastal fisheries amounted to 16 mt, of which 82 % was taken by male fishers, with women taking species easily collected off the reef flats and easily accessible coastal waters.

Fishing in PICTs forms an important part of livelihoods to varying degrees, ranging from 22 % of households, contributes to 41 % of all household income; to 58 % of households in south Tarawa in Kiribati involved in fishing, of which 82 % are full-time fishers; to 72 % of households engaged in fishing activities in Vanuatu.

Fisheries Landings

Of the four PICTs that provided details of their fisheries landing, Fiji was the largest producer of marine resources compared to other PICTs (Table 2).

Table 2: Subsistence and commercial fisheries landings by year and metric tonnage

Year	Fiji		Kiribati (South Tarawa)		Samoa		Vanuatu	
	Fish	Inverts	Fish	Inverts	Fish*	Inverts	Fish	Inverts
2003	3,419	2,384	111	12	89	9	42	78
2004	4,890	2,496	118	19	48	45	33	48
2005	5,257	2,348	111	45	86	29	17	45
2006	4,922	2,911	91	21	100	27	25	44
2007	4,147	2,127	366	36	108	37	n/a	67

Note: **Figures are indicative only** as survey methods or level of monitoring coverage may differ over years, and may not include all marine resources exploited. *Includes processed fish.

Environmental Impacts on Fisheries in PICTs

Several environmental impacts were reported by PICT Fisheries Managers or Officers as having impact on their coastal fisheries. The majority of these impacts can be linked to land-based pollution or disturbances or to human modification of coastal zones (Table 3).

Table 3: Environmental impacts reported to be having an impact on fisheries in PICTs

Measure	Kiribati	Nauru	Samoa	Tonga
Aggregate mining	✓		✓	✓
Anchor damage	✓			
Bleaching			✓	
Cyclone damage			✓	
Destructive fishing methods			✓	✓
Dredging		✓	✓	
Fishing pressure			✓	
Foreshore development		✓	✓	
Human effluent	✓			
Land reclamation				✓
Logging		✓		
Pollution	✓		✓	✓
Sea wall construction	✓			
Sedimentation	✓	✓	✓	✓
Turbidity	✓	✓	✓	✓

Fisheries Management in PICTs

All management policies, acts or regulations that are specifically enacted by PICT governments all involve similar themes with regards to their management objectives. These involve ensuring capacity is maintained for food security of their populations and that maximum economic benefits is ensured through the sustainable development, management and conservation of stocks; utilising legal frameworks, sound scientifically and technologically-based information, management capability, and appropriate education and awareness outreach (see Table 4 for specific legislation for fisheries management in PICTs).

Table 4: Fisheries management legislation in PICTs

Country	Legislation
Cook Islands	Manihiki Pearl Farming Management Program (2006-2016) Takitumu Lagoon Plan (2007)
Fiji	Fisheries Act (under review) Inshore Fisheries Management Plan (to be submitted to Cabinet)
Nauru	National Fisheries and Marine Resources Act (1997) Fisheries Regulation (1998) Marine Environment Bill (draft finalized) (Community-based Fisheries Management and Coastal legislation drafted)
Niue	Domestic Fishing Act (1995) Domestic Fishing Regulations (1996)
Samoa	Fisheries Act (1988) Fisheries Regulation (1995) <i>Lands, Surveys and Environment Act (1989)</i>
Tonga	Fisheries Management Act (2002) Marine and Parks Reserves Act (1988)
Vanuatu	Fisheries Act (2005) <i>Decentralization Act</i> <i>Environmental Management and Conservation Act</i> <i>VIPA Act</i> <i>Maritime Zone Act</i>

Note: Supporting legislation not related specifically to fisheries management are in *'italics'*.

In all PICTs, management authority is invested in specific Fisheries Divisions and/or Departments with support provided by other government agencies (Table 5).

Table 5: Government agencies responsible or supporting fisheries management in PICTs

Country	Management Agency(ies)
American Samoa	<ul style="list-style-type: none"> • Department of Marine and Wildlife Resources • <i>Department of Conservation</i> • <i>National Marine Fisheries Service of the National Oceanic and Atmospheric Agency</i>
Fiji	<ul style="list-style-type: none"> • Fisheries Division • <i>Environment Department</i> • <i>Police Department</i> • <i>Customs Department</i>
Kiribati	<ul style="list-style-type: none"> • Ministry of Fisheries and Marine Resources Development • <i>Ministry Environment, Lands and Agriculture Development</i> • <i>Police Services</i> • <i>Ministry of Communications, Transport and Tourism Development</i> • <i>Ministry of Foreign Affairs and Immigrations</i> • <i>Office of the Attorney General</i>
Niue	<ul style="list-style-type: none"> • Fisheries Division • <i>Environment Department</i> • <i>Police Department</i>
Samoa	<ul style="list-style-type: none"> • Fisheries Division of the Ministry of Agriculture and Forestry • Environment and Conservation Division of the Ministry of Natural Resources and Environment • <i>Police Department</i> • <i>Samoa Port Authority</i> • <i>Council of Chiefs</i>
Tonga	<ul style="list-style-type: none"> • Fisheries Division of the Ministry of Agriculture, Food, Forests and Fisheries • <i>Department of Environment of the Ministry of Lands, Survey, Natural Resources and Environment</i> • <i>Ministry of Police</i> • <i>Defence Services</i> • <i>Customs Department</i>

Note: Supporting agencies not related specifically to fisheries management are in '*italics*'.

Current management measures deployed by PICT Fisheries Divisions and/or Departments and as enacted by legislation include a range of 'conventional' fisheries management tools, with area restrictions, gear restrictions, size limits and effort controls being the most ubiquitous (Table 6).

Table 6: Fisheries management measures across PICTs

Measure	Fiji	Kiribati	Niue	Samoa	Tonga	Vanuatu
Area Restrictions	✓		✓	✓	✓	✓
Effort Controls	✓			✓	✓	✓
Gear Restrictions	✓	✓	✓	✓	✓	
Permitting system				✓	✓	
Quotas/Bag limits			✓		✓	✓
Size Limits	✓	✓	✓	✓	✓	
Temporal closures			✓		✓	✓
Total Allowable Catches						✓

Several management limitations were reported by PICTs with limited financial and human resources, and limited enforcement ability being the most reported (Table 7). Other important issues reported were limited stock information and conflict between traditional and National management agendas.

Table 7: Fisheries management limitations in PICTs

Limitation	American Samoa	Fiji	Kiribati	Niue	Samoa	Tonga	Tuvalu	Vanuatu
Conflict between traditional and National management agendas	✓				✓		✓	✓
Lack of awareness on management regulations				✓	✓			
Limited capacity to stop imports of Illegal gear sizes			✓					
Limited enforcement ability		✓	✓	✓		✓		
Limited financial and human resources	✓	✓	✓	✓	✓	✓		
Limited stock information		✓	✓			✓		
Poor governance			✓		✓			
Poor judiciary processes			✓					
Weak legislation			✓		✓			

Community-based Fisheries Management

Several PICTs have established Community-based Fisheries Management (CBFM) programmes which are either supported by respective Fisheries or Environment Divisions and/or Departments or with assistance from other agencies (e.g. University of the South Pacific in Fiji) or Non-government Organisations.

In the Cook Islands, efforts have been made to restore the traditional closure and management system known as '*raui*'. The current form of '*raui*' involves 'traditional' leaders mandating certain restrictions that may involve limitations on access to a particular area or resource for a certain period of time, and the Cook Islands Ministry of Marine Resources has been active in supporting the re-introduction of the '*raui*'. More formal programs for community-based co-management have also been initiated such as the Takutea Community Conserved Areas, and the formulation of a Fisheries Plan for the Marine Resources of Palmerston Island.

In Fiji, customary management is driven through the Fiji Locally Managed Marine Area, which the Fiji Fisheries Division acts as the Secretariat.

In Niue, customary marine tenure restrict fishers from fishing in an area or at a certain time. These systems of management are supported by the Niue Fisheries Department. A series of size restrictions for some fish species and lobster, and bag-limits have also been implemented at the community level. Currently, there are two Marine Protected Areas (MPAs) in place with one declared open October of this year. There has been extensive work done on the development of CBFM plans with two communities developing CBFM plans under the previous International Waters Programme and five others developed with assistance of SPC.

In Samoa, there are two CBFM programmes. The first involves the establishment of fisheries reserves with the support of Samoa Fisheries Division. The second involves more formalized Marine Protected Areas in the Aliepata and Safata Districts, which are supported by the Samoa Ministry for Natural Resources and the Environment. Both projects involve the establishment of village management plans and community fisheries rules; and in some cases alternative livelihood projects to off-set opportunity costs to establishing fisheries reserves or no-take zones

In Tonga, several Community-based Special Management Areas (SMAs) have been established under Section 13 of the *Fisheries Management Act* (2002). These are the 'O'ua, Ha'afeva, Felemea, Ovaka, 'Atata, 'Eueiki and Minerva Reef SMAs. SMAs also incorporate Fish Habitat Reserves (i.e. no-take areas) as part of their overall management objectives. Tonga has also developed more formal parks and reserves, which have been established under the Marine and Parks Reserves Act (1988). These include Hakaumama'o Reef Reserve, Pangaimotu Reef Reserve, Ha'atafu Beach Reserve; Mounuafe and Malinoa Island Parks and Reef Reserves; and Fanga'uta and Fangakakau Lagoon Reserves.

In Tuvalu, the Nukulaelae and Vaitupu communities have implemented CBFM plans with support from the Tuvalu Fisheries Department. This program is planned to be extended to other communities pending financial resources.

In Vanuatu, community management of coastal and marine resources is supported by the Vanuatu Fisheries Division. This involves mostly, supporting traditional mechanism for management such as the use of 'tabu', whereby certain restrictions on access, gear type, and species catch may apply.

Appendix A: Presentation References

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