

# The future of Pacific Island fisheries



## Summary

*Pacific Island fisheries are the major renewable resource available to the region for food security, livelihoods and economic growth. Despite considerable progress in fisheries management and development, many of these fisheries face collapse over the next 25 years and major development opportunities will be missed unless strategic action is taken. An independent study provides the basis of the following outlook for the Future of Pacific Island Fisheries.*

This document presents a short summary of a study on “The Future of Pacific Island Fisheries”. The report was prepared and written by Robert E. Gillett and Ian Cartwright – with the active participation of a panel of international experts, a steering committee and regional senior fisheries officers – for the Secretariat of the Pacific Community (SPC) and the Pacific Islands Forum Fisheries Agency (FFA).



**SPC**  
Secretariat  
of the Pacific  
Community



**FFA**



## The fisheries

In 2007, fisheries production in the 22 Pacific Island countries and territories (PICTs) was worth USD 2 billion. PICTs that have seen an improvement in the investment climate are those that have become more open to international investors. The more dynamic private sector is taking on an increasing role in the economy.

**Offshore fisheries** include mainly tunas, which migrate widely across the Pacific. There is good scientific knowledge of their behaviour and regular stock assessments inform PICTs about the status of these resources. Offshore fishing is now dominated by increasingly efficient purse-seine vessels, which accounted for 92% of all tuna catches in 2007. Offshore resources make an important contribution to the region's GDP (about USD 200 million in 2007). There is also direct revenue for governments from access fees paid by international tuna fleets, which are increasingly attracted to PICTs' waters as other oceans become overfished. Offshore fisheries have also allowed for the development of domestic processing industries in a few

locations, such as tuna canning and loining, which accounted for 19,000 jobs in 2007.

**Coastal resources** comprise a wide variety of finfish and invertebrates. They are harvested for commercial and subsistence purposes, and provide direct and tangible benefits to populations in terms of food, employment and cash income. They also are the basis for many small-scale fisheries. Domestic consumption is the main use. However, a few highly sought-after species have contributed to exports, mainly to growing Asian economies.

**Aquaculture** is dominated by the culture of black pearls in French Polynesia and shrimps in New Caledonia, which alone represent 95% of this sub-sector's earnings. There is also some culture of finfish, giant clams and seaweed.

**Freshwater fisheries** are mainly a subsistence activity, confined to islands with large land areas. In most cases, there is little information on production, although freshwater fisheries are clearly important in some countries.



## A network of agencies

Fisheries management, research and development are the focus of efforts from agencies at the national, regional and international level. Effective national fisheries agencies are the key to a successful future, although the relative priority assigned by governments to staffing and resources generally do not reflect this importance. At the regional level, the two main agencies are the Pacific Islands Forum Fisheries Agency (FFA) and the Secretariat of the Pacific Community (SPC). Their assistance to PICTs varies from providing scientific knowledge necessary for management, to monitoring and surveillance, and managing regional

treaties. They have become increasingly aware of the need to help build fishery management capacity at a national level. Sub-regional agencies and groups — including Parties to the Nauru Agreement (PNA), Western Pacific Fisheries Management Council (WPFMC), and the Sub-committee on South Pacific Tuna and Billfish Fisheries (SPTBF) — play an increasing role in addressing common interests. At the wider international level, the Western and Central Pacific Fisheries Commission (WCPFC) was created in 2004 out of the region's determination to exert effective management over fishing on the high seas.



# Many threats

**F**isheries resources are crucial to the Pacific Islands' food security and economic independence. They are renewable, yet easily damaged. There is a dangerous misconception that these resources will always be there, but this is not true. Offshore resources are showing signs of overfishing; coastal resources are largely overexploited; aquaculture has not yet realised its potential; and fisheries agencies need to adapt in order to face the growing complexity of fisheries management. Realistic scenarios and scientific projections suggest that future challenges will be the magnifications of today's weaknesses. On that basis, today's visible threats are the seeds of tomorrow's collapse of Pacific Island fisheries, unless decisive action is taken to reverse current trends.

PICTs' economies have to contend with the consequences of globalisation, as trade barriers continue to fall, labour-intensive industries (such as fish processing) move to lower-wage countries. Fuel prices and other factors affecting comparative advantages are expected to increase with impacts on many fisheries. PICTs and their fisheries are expected to be strongly affected by **climate change**, mainly through ocean warming and acidification, changes to rainfall patterns, and intensified cyclones. Over and above these threats, and despite a decline in fertility, the region can expect to see a population growth of 50% over the next 25 years, to 15 million. This will drive the need for economic growth, more jobs and above all, more food.

**Signs of overfishing in offshore resources** are already visible in the Pacific. Stocks of bigeye tuna are being harvested beyond maximum sustainable levels, and yellowfin tuna fishing is reaching dangerous levels. Skipjack is abundant at the moment but the management of the three species is inter-related because they swim and get caught together. The growth in the number and efficiency of purse-seine vessels, the use of fish aggregating devices, the shared nature of the resource, and the range of impacts in different areas, are among the many factors

that threaten future stock levels. Ineffective fisheries management frameworks are resulting in a 'race to fish', an unstable investment climate, and industry looking for short-term gains rather than contributing to long-term sustainable development outcomes.

**Foreign fleets** continue to dominate offshore fishing in Pacific exclusive economic zones, with catches trans-shipped for processing outside the region, and PICTs governments facing increasing pressure (as world scarcity heightens) from fleets of distant-water fishing nations for access rights. Often these fleets are subsidised. This direct revenue is more readily available to governments, yet it may undermine the alternative development of value-adding, job-creating and domestic industries. Existing processing plants in PICTs are currently heavily dependant on preferential access to the European Union market. Any future developments in this area will have to adjust to the expectation that world trade agreements will eventually reduce import tariffs generally, and thus phase out such preferential treatment. Illegal, unregistered and unreported fishing is also a growing problem, which deprives countries of revenue and threatens the resource.

**Population growth and urbanisation** are major threats to coastal resources, with their likely consequences of rising levels of unemployment and poverty. Currently, it is estimated that one-third of the PICTs population lives under the national poverty line and most countries are far from reaching their Millennium Development Goals. It is expected that by 2035, many more Pacific Islanders will be living in urban areas. An increasingly concentrated number of Pacific Islanders will be eating a reduced amount of fish, and they will be drawing from limited fishing grounds near to cities. Island infrastructure, as it is today, does not allow for transport of more distant coastal production to cities in many PICTs. Today's food requirements will understandably take priority over any future sustainability considerations.

# Many threats

**No future growth is expected in coastal fisheries**, even in best-case scenarios, as resources are considered to be 'mature' in fishery development terms. In many PICTs, the catch per unit of effort is falling, and the sizes of individual fish are getting smaller. When biological limits for targeted species are surpassed, total production falls, while some of the more sought-after species may become locally extinct. According to an SPC report in 2008, most sites surveyed in the Pacific Islands are currently seriously depleted of commercial invertebrate resources. The degradation of coral reefs and other coastal habitats — made worse by expected climate changes — will further reduce the yield of coastal fisheries, as well as adversely impact tourism. Beyond depletion of coastal resources, the issue is regional food security, as coastal supplies cannot meet the growing demand in the next 25 years.

**Aquaculture has suffered from a lack of competitiveness, skills, market access, and incentives** to respond to domestic and export opportunities. Government-led assistance has not fixed these problems. Apart from a few successful enterprises, aquaculture in the Pacific has not been able to compete with efficient international producers, nor even with domestic capture fisheries. Subsidies have helped start projects, but many initiatives have withered once support is withdrawn. Ecological mistakes have also been made, with the introduction of invasive species. Aquaculture has yet to find a cost-effective development model in many countries. Expected effects of climate change (e.g. floods), increased ocean acidification, and higher water temperatures further threaten aquaculture.

**Freshwater fisheries face environmental challenges** and are adversely affected by many human activities such as logging, mining and agriculture. Production is not expected to grow.

With fisheries resources becoming both increasingly scarce and attractive, fisheries agencies have to deal with more complex

management issues. Most national agencies face heavier workloads with shrinking budgets and limited human capacity. They generally lack good planning and monitoring procedures, personnel qualified to meet new and complex challenges, and performance-based incentives. The dominant bureaucratic model has often kept fisheries agencies cut off from fishery stakeholders — particularly the private sector and local communities — and has not encouraged an integrated view, looking at links and synergies between fisheries and other economic sectors.

Increased workloads from multilateral and regional arrangements, related mainly to offshore fisheries (including extensive travel and time-consuming meetings) have diverted attention from domestic management tasks and especially coastal resources, which usually rank second in priority, despite their crucial role in the domestic economy. PICTs are increasingly concerned about the resource burden caused by WCPFC. A number of unsustainable national projects have created general donor fatigue and other problems. Funds will be more readily available for projects and activities that have integrated the conservation factor, and will be increasingly conditioned to accountability and performance.

**Regional disparity** in size, focus and level of development, needs to be recognised. PICTs have made good progress in affirming their sovereignty over their marine resources. Regional solidarity must be strengthened to prevent 'outsiders' from taking advantage of the region's wealth. Sub-regional arrangements, for groups of PICTs that share common interests, need to avoid the perception that solidarity is being lost.



# Seven steps to a better future

**T**he good news is that if the collapse of Pacific Island fisheries is a plausible scenario, so is their development toward a secured future. The opportunities are significant despite undeniable threats and challenges. However, while the worst-case scenario requires no effort, a promising future can only be the result of major changes and much effort. Wealth requires wise stewardship, otherwise it is lost. Only through strong political commitment, the collective use of sovereign rights, community involvement, and individual performance can Pacific Island fisheries feed, support, and finance future generations of Pacific Islanders.

## 1. Strong political commitment

The region's future is dependent on the will of the 22 individual PICTs to drive their respective economies. The future of Pacific Island fisheries cannot be secured without strong leadership from the top, at the national government level. Strong political commitment to long-term outcomes will have to supersede short-term political life cycles when, for example, the enforcement of unpopular restrictions will be more sustainable and ultimately be beneficial than other measures that may appear more expedient in the short term. Improvements in governance will be essential.

## 2. Ensure food security

Fisheries must be considered in view of broader issues such as demographics, infrastructure, food security, employment and social implications. Fisheries cannot stand alone. They both influence and are influenced by the broad spectrum of economic activity, and synergies with areas such as health and nutrition, agriculture, environment, education, infrastructure, and tourism to be integrated when planning for the future of fisheries. Food security issues in particular will have to transcend the traditional boundary between offshore and coastal fisheries. Future food needs must be assessed and planned for, including protein from fisheries and other resources.

## 3. Involve and support the private sector

Fisheries agencies have traditionally had a management and development role, often under the authority of a civil servant who is not a fisheries specialist. National fishery agencies need to become management service providers. Fisheries stakeholders must have a say; where this has been the case, management improvements are obvious. Agencies need to aim at involving and promoting the interests of stakeholders, communities and (especially) the private sector. The development of fisheries in the next 25 years needs to be based on economically viable and sustainable private-sector operations. Fisheries agencies' focus should be on creating favourable conditions and strong foundations for the development of private initiatives through transparent policies, a positive investment climate and a reliable legal base. Fisheries agencies need to get involved in areas that may be new to them, such as industry promotion, trade policy formulation and objective economic analysis.

## 4. Strengthen fisheries agencies and build national capacity

The fisheries manager of today has an increasingly crucial role. Experience in many disciplines will be required, including biology, economics, political science and organisational management. Clear management objectives and hard work are required to build a strong future for Pacific Island fisheries. Performance-based remunerations and incentives will be the key to ensuring that the right people are attracted to fisheries careers. Meeting these requirements will require better education and training, which must be made available in the region. A change of structure may be needed to achieve this.

Regional organisations will need to play a key role in building bridges within and between the region's universities and other training institutions. They have become increasingly

# Seven steps to a better future

aware of their role in building national capacity. Their staff and programmes need to keep pace with countries' evolving needs, with more emphasis on in-country work. A programme-based strategy is required but must be responsive to country needs, and organisations must provide technical material and advice that is appropriate.

## 5. Maximise long-term benefits from offshore resources through regional solidarity

Most of the future increases in benefits from fisheries in PICTs will be associated with securing greater economic returns from offshore fisheries. Control over resources must be used collectively to gain economic control. Regional approaches will need to recognise differing national circumstances, priorities and aspirations, but collective action — as a region or in coherent sub-regional groups — is the key. Ways of managing the resource must be negotiated and implemented to achieve overall catch rates that optimise benefits for all PICTs while maintaining vulnerable species at acceptable levels. PICTs can choose between building a healthy future on their many common interests, or become increasingly vulnerable because of national disagreements.

## 6. Coastal communities to protect coastal resources

Inshore fisheries produce most of the food and employment for Pacific Islanders. Resilient inshore fisheries, with appropriate conservation measures, will absorb shocks and continue to deliver these benefits to coastal communities. Greater understanding of species and ecosystems will help determine sustainable management objectives while customary and traditional management of coastal resources should be encouraged through active community partnerships.

## 7. Measure and manage

Accurate assessments, relevant sector-specific and cross-sector indicators, clear reporting structures, monitoring of change, and performance incentives will be critical for driving effective and efficient management and policy development. Fisheries production, changes and impact need to be measured.





# The best case

If the right environment is created, opportunities can come to life. New ideas can thrive when the entrepreneurial spirit and creativity of Pacific Islanders is encouraged and supported, in an environment of good governance.

Offshore fisheries could support stable, high catch rates with healthy resources at levels that maximise benefits for PICTs. Effective control over these resources, including controlling illegal, unregistered and unreported fishing activities, could leverage much greater economic benefits than at present. An orderly reduction of foreign access and its replacement by genuine, locally based investments would, with an enabling environment, see the development of competitive domestic industries. Growing Asian markets and the trend for ecocertification could create opportunities for innovative and alternative tuna products. Effective management of bycatch and discards can assist with food security and create commercial opportunities. Management of the resource would consider the interests of all users.

Coastal resources could be better protected, made more resilient to damage, and continue to deliver benefits to coastal communities. Tight controls on export fisheries could ensure a sustainable and beneficial flow of high-value exports. Cities and rural areas could meet one another's needs through the development of profitable transport links. The tourism industry could thrive in the context of a protected environment and better infrastructure.

Aquaculture holds promise if private initiative is encouraged. Competitive production could supply the market with fish for domestic consumption, take pressure off capture fisheries, and provide employment and contribute to exports. Freshwater fisheries will largely remain a subsistence, activity yet their sustainability is relevant to food security in remote inland areas, and will improve

with increased attention to environmental considerations that also affect other fisheries.

PICTs cannot afford to muddle through the tremendous opportunity to maximise benefits in a sector that yielded USD 2 billion worth of production in 2007. The desire to achieve a sustainable and bright future for Pacific Island fisheries is evident. However, the resources are vulnerable and current structures are inadequate. If changes are not made now, the road ahead could be a bleak one.

On the other hand, if PICTs are united and increase their efforts towards a sustainable future, they will greatly benefit. The year 2035 is only a generation away, and is determined by today's choices.





# Fifteen priority actions

<b>Reform and build fisheries agencies for better services</b>	<ol style="list-style-type: none"> <li>1. Consider using alternative models for fisheries agencies, especially those that enhance stakeholder input, improve attractiveness to future staff, and have secure income streams.</li> <li>2. Promote community empowerment and legislative and other support for coastal fisheries.</li> <li>3. Carry out objective economic appraisal of costs and benefits arising from management systems at regional and national levels.</li> </ol>
<b>Maximise long-term national benefits from offshore resources</b>	<ol style="list-style-type: none"> <li>4. Regulate effort/catch at levels that create scarcity, influence world market prices and return maximum benefits.</li> <li>5. Compare economic impacts of alternative fisheries management measures on PICTs, including trade-offs between purse-seine and longline fisheries.</li> </ol>
<b>Sustain coastal communities</b>	<ol style="list-style-type: none"> <li>6. Develop national coastal fisheries management plans, with substantial support from regional agencies (as was the case for offshore management plans).</li> <li>7. Highlight the economic importance of coastal fisheries and undertake economic assessments of the national costs of poor coastal fisheries management and failed development projects.</li> </ol>
<b>Feed our growing populations</b>	<ol style="list-style-type: none"> <li>8. Consider various schemes to mitigate shortages of inshore fish species, including restrictions on the export of coastal food fish, and facilitating rural/urban transport of fish, piggybacking on future agriculture transport infrastructure.</li> <li>9. Develop supplies of fish from other sources, notably FADs, schemes to encourage the landing of fish from offshore industrial fisheries, and small pond aquaculture.</li> <li>10. Monitor the food security issue over time, noting that exchange rates, supply of imported fish and substitute products will have major effects.</li> </ol>
<b>Support private sector 'winners'</b>	<ol style="list-style-type: none"> <li>11. Increase input of private sector and other stakeholders into the policies and operations of the fisheries agency.</li> <li>12. Assure that any subsidies used in fisheries management and development are subjected to economic scrutiny, are transparent, and have an exit strategy.</li> </ol>
<b>Support from the top</b>	<ol style="list-style-type: none"> <li>13. Bring to the attention of national leaders the results of a country specific 25-year 'look to the future' exercise that focuses on long-term tangible outcomes and benefits from fisheries.</li> <li>14. Identify, quantify and publicise the tangible benefits from the fisheries sector and changes to those benefits.</li> </ol>
<b>Measure the change</b>	<ol style="list-style-type: none"> <li>15. Develop and use simple and clear reporting structures that give information relevant to identifying trends in benefits and impacts of management and development.</li> </ol>

