Priority adaptations to climate change for fisheries and aquaculture in Fiji: reducing risks and capitalising on opportunities

SPC, AusAID, GIZ, Fiji Ministry of Fisheries & Forests, Fiji Ministry of Foreign Affairs and International Cooperation, and FAO

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Suva, Fiji

Background

Fisheries and aquaculture are vital to the development goals of the Pacific Islands region. Nowhere else in the world do so many countries and territories depend as heavily on the benefits derived from catching or growing fish and shellfish. Industrial fish processing operations and fishing fleets account for a substantial proportion of gross domestic product in several countries and territories. Licence fees from distant water fishing nations also make even more significant contributions to government revenue, especially for small island states.

Fish is also a cornerstone of food security in the region. Fish consumption is at least 2–4 times greater than the global average in more than half of all 22 Pacific Island countries and territories (PICTs). In rural areas, fish often makes up 50–90% of dietary animal protein and most of the fish consumed (60−90%) comes from subsistence fishing.

Fisheries and aquaculture are also an important source of jobs and opportunities to earn income. More than 12,000 people are employed in tuna canneries or processing facilities, or on tuna fishing vessels, throughout the region. Fishing also makes important contributions to livelihoods in rural areas - an average of 47% of households in coastal communities across the region earn either their first or second income from fishing. In some remote atolls, pearl farming is an important source of employment and in inland Papua New Guinea there are now more than 10,000 freshwater fish farms.

To maintain or improve the important contributions made by fisheries and aquaculture in the face of the many drivers affecting the sector, many PICTs are implementing the plans required to (1) optimise the economic benefits derived from industrial tuna fisheries, (2) provide sufficient fish for the food security for rapidly growing populations, and (3) identify the number of livelihoods that can be sustained from coastal fisheries and aquaculture.

Climate variability and climate change are among these drivers and climate change expected to progressively increase in significance. SPC and FAO are assisting PICTs to

understand how climate change may affect their plans to maintain or improve the benefits they derive from fisheries and aquaculture, SPC has co-ordinated a comprehensive assessment of the vulnerability of tropical Pacific fisheries and aquaculture to climate change[1], and FAO has produced a global overview of the current scientific knowledge and adaptation and mitigation options for the sector[2].

With the generous support of AusAID and GIZ, SPC, the Ministries of Forests and Fisheries, and Foreign Affairs and International Cooperation, in Fiji, and FAO, are jointly organising this workshop to help the broad range of stakeholders in the fisheries and aquaculture sector in Fiji use this information to identify priority adaptation actions to climate change with the ultimate aim of building resilience and flexibility at the community, and enterprise levels.

Objectives of the Workshop

The objectives of the workshop are to provide the government departments in Fiji, non government organisations, communities, enterprises and staff and students at the University of the South Pacific with a sound understanding of the main projected effects of existing climate variability, global warming and carbon dioxide emissions on the ecosystems supporting fisheries and aquaculture, the consequences for current and future production, food security and livelihoods and the actions required to reduce the risks and capitalise on the opportunities.

An interactive format will allow participants to work closely with a broad range of technical experts to:

- understand the direct and indirect effects of climate change, including potential disasters, and ocean acidification on oceanic, coastal and freshwater fish stocks and aquaculture production;
- identify the implications of the projected changes to fisheries and aquaculture activities for economic development, food security and livelihoods;
- choose and prioritise the adaptations and policies needed to build the resilience of enterprises and communities to the projected threats and to equip them to take advantage of the potential opportunities; and
- localise vulnerability assessments and communicate the adaptation actions needed to communities.

Expected Outputs

Participants will leave the workshop with (1) an increased awareness of climate change implications for fisheries and aquaculture in Fiji; (2) knowledge of the tools to better understand the vulnerabilities of enterprises and communities to these changes; and (3) clear ideas about the planning and actions needed to assist the sector adapt to climate variability, climate change and the risk of natural disasters.

[1] Available at http://cdn.spc.int/climate-change/fisheries/assessment/
[2] Available at http://www.fao.org/docrep/012/i0994e/i0994e00.htm

Programme for Fiji Climate Change Workshop

Wednesday 12 December 2012	
08h00	**Registration** and tea/coffee – Holiday Inn, Suva
Session 1: Welcome and introduction	
09h00	Welcome, opening remarks and prayer Fiji Ministries and FAO
09h20	The fisheries and aquaculture sector in Fiji – Aisake Batibasaqa
09h40	Objectives and structure of the workshop – Johann Bell
COFFEE & TEA: 10h00 – 10h30	
Session 2: Understanding the projected changes to surface climate and Pacific Ocean	
10h30	Observed and projected changes to surface climate – Janice Lough
10h50	Breakout groups to discuss surface climate
11h30	Observed and projected changes to the ocean Part 1 – Alex Sen Gupta
11h50	Breakout groups to discuss the ocean Part 1
LUNCH: 12h30 – 13h30	
13h30	Observed and projected changes to the ocean Part 2 – Alex Sen Gupta
13h50	Breakout groups to discuss the ocean Part 2
Session 3: Understanding projected changes to tuna	
14h30	Projected changes to food webs for tuna – Valerie Allain
14h50	Breakout groups to discuss effects on food webs for tuna
COFFEE & TEA: 15h30 – 16h00	
16h00	Projected changes to tuna stocks – Sri Nandini
16h20	Breakout groups to discuss effects on tuna stocks
17h00	**Summary Day 1 (Rapporteur)**
18h00	**Cocktail**

Thursday 13 December 2012	
08h00	Recap of Day 1 (Rapporteur)
Session 4: Understanding changes to coastal fisheries	
08h20	Projected changes to coral reefs – Janice Lough
08h40	Breakout groups to discuss effects on coral reefs
09h20	Projected changes to mangroves, seagrasses and tidal flats – Johanna Johnson
09h40	Breakout groups to discuss effects on these coastal habitats
COFFEE & TEA: 10h20 – 10h50	
10h50	Projected changes to coastal fisheries production – Morgan Pratchett
11h10	Breakout groups to discuss effects on coastal fisheries production
Session 5: Understanding changes to aquaculture	
11h50	Projected changes to coastal aquaculture – Tim Pickering
12h10	Breakout groups to discuss effects on coastal aquaculture
LUNCH: 12h50 – 14h00	
14h00	Projected changes to freshwater aquaculture – Tim Pickering
14h20	Breakout groups to discuss effects on freshwater aquaculture
Session 6: Understanding changes to freshwater fisheries	
15h00	Projected changes to freshwater fish habitats – Peter Gehrke
COFFEE & TEA: 15h20 – 15h50	
15h50	Projected changes to freshwater fish stocks – Peter Gehrke
16h10	Breakout groups to discuss effects on freshwater habitats and stocks
16h50	**Summary of Day 2** (Rapporteur)
19h00	**Workshop dinner**

Friday 14 December 2012	
08h00	Recap of Day 2 (Rapporteur)
Session 7: Implications, adaptations and suggested policies	
08h20	Implications, adaptations& policies for economic development – Johann Bell
08h40	Breakout groups to discuss implications, adaptations and policies
09h20	Implications, adaptations & policies for food security and livelihoods – Johann Bell
09h40	Breakout groups to discuss implications, adaptations and policies
COFFEE & TEA: 10h20 – 10h50	
Session 8: National Action Plan and disaster risk management	
10h50	National climate change strategies and action plans – Waisea Vosa
11h10	Integrating climate change adaptation (CCA) and DRM – Kirstie Meheux
11h30	Breakout groups to discuss CCA and DRM
LUNCH: 12h10 – 13h10	
13h10	Working groups to identify priority adaptations, including how these fit into/are supported by existing national climate change strategies/plans
COFFEE & TEA: 15h10 – 15h30	
Session 9: Working with communities	
15h30	Communicating climate change concepts to communities – Etuati Ropeti
15h50	Localising vulnerability assessments – Johanna Johnson
16h10	Breakout groups to discuss communication and local vulnerability assessments
17h00	**Concluding remarks**