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Title:	From assessment to strategy – Pacific aquaculture innovations for a Blue Transformation
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Summary:

A Regional Aquaculture Assessment report was presented to 14<sup>th</sup> Heads of Fisheries (HoF14) Meeting as a summary of the aquaculture needs and priorities of PICTs. Heads agreed with the conclusion of the report that “Aquaculture has great socio-economic value and economic potential within the PICTs region but remains largely under-developed” and agreed to use the report as a guide to help inform the development of a Pacific Regional Aquaculture Strategy.

Heads of Fisheries requested SPC to prepare a revised proposal on the process to develop a Regional Aquaculture Strategy, taking into account feedback received during HoF14. This revised proposal is outlined in a new paper labelled HoF14 WP6 Addendum.

For formulation of the Regional Strategy, RTMCFA5 is an opportunity to consult governments and administrations about regional aquaculture technical innovations that can contribute towards a “Blue Transformation” for PICTs to meet the goals of Agenda 2030, and also comprise part of PICT National Pathways of actions following the 2021 UN Food Systems Summit.

Recommendations and outcomes:

Members are invited to:

- a) **Note** the acceptance of the Regional Aquaculture Assessment report IP12 of HoF14 as a guide on members’ priority issues and needs in aquaculture to help inform the development of a Pacific Regional Aquaculture Strategy;
- b) **Note** the attention that is being given to aquaculture at very high level, both in this region and globally, because of its potential to assist Blue Transformation and contribute to Food Systems National Pathways in PICTs in order to achieve the goals of Agenda 2030;

- c) **Assist** SPC FAME to identify aquaculture innovations, both from other regions and those that are uniquely Pacific, which ought to be priorities for inclusion in a Regional Aquaculture Strategy and targeted for tech transfer and/or scaling-up.

## Towards strategies to address the priority issues of Pacific aquaculture

### *Regional Aquaculture Assessment report*

1. At the 14th SPC Heads of Fisheries Meeting (HoF14) held between the 14-17 June 2022, a report IP121 was presented as the output of a consultative Regional Aquaculture Assessment process. The Assessment was conducted on the needs and priorities of PICTs to address numerous challenges that continue to deny the Pacific region the long-term benefits that can be derived from the development of sustainable aquaculture. These challenges are found to be limiting the extent to which the aquaculture sector can contribute to employment, food security, livelihoods, environmental protection, fisheries and ecosystem enhancement, and economic growth.
2. In the Regional Aquaculture Assessment report, the needs and priorities for SPC PICTs on aquaculture are examined. A consultative process for development of a regional aquaculture strategy is recommended, and areas that should be included in a strategy are proposed. An outline is provided for what the strategy could look like.
3. Heads of Fisheries agreed with the report's conclusion that "Aquaculture has great socio-economic value and economic potential within the PICTs region but remains largely under-developed" and agreed to provide feedback to FAME on identified key issues, objectives, constraints, or omissions, and any further points on the contents of the draft Regional Aquaculture Assessment to inform development of the Pacific Regional Aquaculture Strategy.
4. Heads of Fisheries accepted that the Regional Aquaculture Assessment represented a fair account of the current status of the aquaculture in the region and agreed to use the Regional Aquaculture Assessment as a guide on members' priority issues and needs in aquaculture to help inform the development of a Pacific Regional Aquaculture Strategy.

### *Regional Aquaculture Strategy process update*

5. Heads of Fisheries requested SPC to prepare a revised proposal on the process, stakeholder consultations, and timeline to develop a new Pacific Regional Aquaculture Strategy, based upon the draft process outlined in 14th Heads of Fisheries Working Paper 6 and taking into account feedback received during HoF14, for dissemination to members for an intersessional decision by HoF. This revised proposal is outlined in a new paper labelled HoF14 WP6 Addendum2.
6. The main implications of the feedback from HoF14 delegates were that:
  - a. flexible country-by-country approaches should be developed for the consultation process, rather than a prescriptive and one-size-fits-all approach, and;

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<sup>1</sup> Integrated Aquatic Solutions. 2022. Assessment of the aquaculture needs, priorities and future direction in the Pacific Islands region. Draft final report, 8 May 2022. Information paper 12. 14th Heads of Fisheries Meeting, 14–17 June 2022. Noumea, New Caledonia: Pacific Community. 94 p. <https://purl.org/spc/digilib/doc/pxwff>

<sup>2</sup> IP6: HOF14 Working Paper 6 Addendum: Revised proposal for inter-sessional decision on process, stakeholder consultants, and timeline to develop a new Regional Aquaculture Strategy. <https://purl.org/spc/digilib/doc/vntf4>

- b. the time taken to develop these approaches, seek support for them, and implement them, will over-run the available time period between HoF14 and the 5th Regional Technical Meeting on Coastal Fisheries and Aquaculture (RTMCFA5) in October 2022. The best option is for SPC to seek inter-sessional validation of the draft Strategy during the period October 2022 to March 2023 (RTMCFA5 to HoF15).
7. During the 3rd Regional Fisheries Ministers Meeting (RFMM3) held in Kiribati on 25 August 2022, Ministers highlighted the importance of coastal fisheries and aquaculture for food and nutrition security, cultural preservation and economic development, and identified the significant socio-economic value and economic potential of aquaculture within the PICTs region, and that it remains largely under-developed as identified in the Regional Aquaculture Assessment.
8. Ministers commended the progress on developing the process and timeline for a Pacific Regional Aquaculture Strategy with a focus of ensuring that some of this potential is realised. Ministers highlighted the need for the strategy to consider aquatic biosecurity, increasing resilience by decreasing dependence on imported goods and materials used in the sector, learning from other regions with successful aquaculture, and the role of the private sector in accelerating progress.
9. Ministers endorsed the need for a regional approach to developing aquaculture and noted that this work is important in implementing blue economy elements of the 2050 Strategy for the Blue Pacific Continent.

## Aquaculture innovations for Blue Transformation in the Pacific

### *High-level support for unlocking aquaculture's potential*

10. This importance placed by Fisheries Ministers upon aquaculture for the blue economy, and upon the development by SPC members of a Regional Aquaculture Strategy, draws from a wider global context. As PICTs identify which aquaculture needs and aspirations should be priorities for inclusion in a Regional Aquaculture Strategy, members can draw upon international initiatives, experiences and new concepts developed to achieve the goals of Agenda 2030 (the SDGs). We can anticipate how advancement and innovation in aquaculture of the Pacific will fit in to this changing international landscape for aquaculture, especially when this sector is viewed through a Food Systems lens.
11. PICT aquaculture practitioners are already trying out various aquaculture innovations. It is timely to take stock of them, and any others we may have heard about but haven't yet tried, to identify those which are particularly promising for further strengthening and support. SPC FAME asks for your help today to identify particular innovations that this region should invest in.

### *Agenda 2030 and the Blue Economy in the Pacific*

12. A context for doing this can be derived from the ways that the global aquaculture sector is rising to the challenge of contributing towards Agenda 2030. Examples are world events like the decadal Global Aquaculture Conferences (GCAs) organised by FAO which in 2021 resulted in the Shanghai Declaration, and the keynote aquaculture papers and expert panels of the 2021 UN Food Systems Summit UNFSS. These set out in practical terms many ideas for what the aquaculture sector can do toward the SDGs.
13. A briefing to SPC members about a global shift from "food security" thinking towards "food systems" thinking was the subject of HoF14 Background papers BP9, BP10 and BP11. Most PICTs have now developed National Pathways towards strengthened food systems that emphasise integration across the Green and Blue Economies (see BP10).

14. The term “green economy” stems from Rio+20 Conference in 2012 and refers to the objective of achieving socio-economic growth without environmental degradation. The “blue economy” is the application of this same concept to the oceans. The key challenge facing food production from the blue economy is getting the right balance between societal outcomes and ecological sustainability. This can be achieved through blue transformation, which at the same time will ensure that the blue economy can contribute to food system transformation.
15. Blue transformation is now FAO’s vision of how to achieve a balance between the need for positive societal outcomes and ecological sustainability in food production from the blue economy. It has three core components:
  - Sustaining fish supplies and feeding the world through aquaculture intensification. As aquaculture will provide the majority of supply increases – scale-up, address resource-use bottlenecks and transfer knowledge through sustainable development of aquaculture.
  - Transforming fisheries through better management. By addressing overfishing and overcapacity, combating illegal, unreported and unregulated (IUU) fishing and rebuilding overexploited stocks, fisheries can improve livelihoods and supply. However effective management is non-negotiable.
  - Upgrading fish value chains. Improving the efficiency, viability and inclusiveness of fish value chains. Providing additional supply sources and ensuring socio-economic benefits, just distribution and access.
16. To achieve the needed increases in sustainable fish supply, FAO has identified the following as priority areas for blue transformation in aquaculture. PICTs are not constrained by this list, however it provides a useful focus for our thoughts:
  - Innovation in biosecurity and disease control
  - Innovation in feed ingredients and feeding technologies
  - Genetic improvement and diversification
  - Digital technologies and intelligent systems
  - Ecosystem integration approaches and effluent treatment (zero waste fish value chains and the circular economy)
  - Climate change impacts and opportunities.
17. One example of an innovation that can unlock great potential is aquaculture of edible bivalve shellfish, which as of now is a minor activity among PICTs. This is a type of “restorative aquaculture” that improves the environment, does not require added-feeds, filters coastal waters, sequesters carbon, provides habitat for fish, can be linked to CBFM, and provides nutrient-dense aquatic foods for both food security and livelihoods, and can engage women and youth. It can therefore “tick the boxes” of innovation in: feeding; diversification of aquaculture species; diversification of aquaculture environments; biosecurity; inclusivity; climate change opportunities; ecosystem integration (with fisheries), and; effluent treatment. To unlock this potential, however, targeted interventions are required in hatchery capacity and in food safety and quality assurance.

18. Taking into account both that “Aquaculture has great socio-economic value and economic potential within the PICTs region but remains largely under-developed”, and that there is a global call for “blue transformation” in aquaculture, it is timely to consider:
- a. the extent to which Pacific aquaculture is already headed in the direction of “blue transformation”, and
  - b. how much further is it yet possible for Pacific aquaculture to innovate?

#### Recommendations and Outcomes:

Members are invited to:

- a) **Note** the acceptance of the Regional Aquaculture Assessment report IP12 of HoF14 as a guide on members’ priority issues and needs in aquaculture to help inform the development of a Pacific Regional Aquaculture Strategy;
- b) **Note** the attention that is being given to aquaculture at very high level, both in this region and globally, because of its potential to assist Blue Transformation and contribute to Food Systems National Pathways in PICTs in order to achieve the goals of Agenda 2030;
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## Break-out groups: Aquaculture innovations for Blue Transformation

### *Break-out group questions*

1. What aquaculture innovations (either tried, or untested) do you find interesting and/or appropriate for the Pacific aquaculture contexts, and why?
2. What experiences or learnings do you have on aquaculture innovations –
  - a. that are now considered ready for up-scaling to contribute toward Blue Transformation, or
  - b. which are considered impractical at this time, but their potential could be unlocked through targeted interventions?
3. What kind of interventions are needed to upscale or make practical these promising aquaculture innovations among PICTs?
4. Note: if time does not permit to sufficiently discuss these innovations, then focus the discussion on (i) Restorative Aquaculture, and (ii) Digitalisation and Intelligent Systems (particularly to improve aquaculture data and statistics at both farm level and at national levels).