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# COST RECOVERY AND OPTIMISATION OF COMMISSION SERVICES COSTS REPORT

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**COST RECOVERY AND THE OPTIMISATION OF COMMISSION SERVICE COSTS**

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**Paper prepared by Nick Wyatt and Paul Wallis**

**Note: As a result of comments received during TCC revisions have been made to pages 13 and 15 of this paper only.**

# Cost Recovery and the Optimization of Commission Services Costs

Report to the Secretariat of the Western and Central Pacific Fisheries Commission

Nick Wyatt
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August 2011
Revised version March 2012
Revisions have been made to pages 13 and 15

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## Preface

The Western and Central Pacific Fisheries Convention's (WCPFC) objective is to ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean. The Convention specifies that the Secretariat shall be cost effective and take into account existing regional institutions' capacity to perform certain technical functions.

The Commission's priorities include fairness and equity in the attribution of the organization's program and operational costs to members and to ensure that costs of the organization are efficient and kept within reasonable bounds. In 2010, the Commission approved a study to review these issues and to consider the application of a cost recovery model to the Commission's operational programs. The Terms of Reference for this study are attached as Annex I.

The Review Team has taken the principal objectives of this report to be:

a. Identify areas in the Commission program where greater efficiencies could be realized,

b. Analyze options for realizing such gains that may result in overall budget reductions without compromising Commission operations,

c. Considering in particular the use of cost recovery to increase cost-effectiveness while ensuring fairness and equity across those that use and/or benefit from the Commission's services.

At the same time as this review, the Commission and the FFA jointly commissioned a review of the cost and structure of current VMS services in the Pacific, to ensure that the arrangements were the best vehicle to provide VMS services to the members of organizations. That review team, led by Mr. Robert Martinolich, has recently provided its report. The Review Team of this report has relied upon the findings of the partner study, because of the expertise of its authors.

We sought the views of several members on the costs of Commission activities and areas where costs could be optimized. Views were sought from Cook Islands, Palau, Niue, Japan, Korea, Chinese Taipei, and the United States of America. The authors are grateful for the information and input provided.

Information was sought from the Secretariat of the Pacific Community (SPC). Information was also sought on the costs of services of regional fisheries management organizations (ICCAT, IATTC, CCAMLR and NAFO). The authors are grateful for the information and input provided from these regional fisheries management organizations and the SPC.

We would like to express out appreciation for the guidance, support and assistance of the WCPFC Commission Secretariat.

Any omissions or errors are the fault of the authors.

We trust the Commission finds this report a useful contribution to its desire to see cost efficient management of the valuable highly migratory fisheries resources of the Western and Central Pacific Ocean.

Nick Wyatt and Paul Wallis

August 2011

## Acronyms

| | |
|---|---|
| ALC | Automatic Location Communicator |
| CCAMLR | Commission for the Conservation of Antarctic Marine Living Resources |
| CMM | Conservation and Management Measures (issued by the WCPFC Commission) |
| CNM | Co-operating Non Members |
| EEZ | Exclusive Economic Zone |
| FAD | Fish Aggregating Device |
| FIS | Fisheries Information System |
| FFA | Pacific Islands Forum Fisheries Agency |
| IATTC | Inter-American Tropical Tuna Commission |
| ICCAT | International Commission for the Conservation of Atlantic Tunas |
| IOTC | Indian Ocean Tuna Commission |
| MCSP | Mobile Communication Service Provider |
| MSC | Marine Stewardship Council |
| MTU | Mobile Transmitter Unit |
| NAFO | North Atlantic Fisheries Organization |
| PNA | Parties to the Nauru Agreement |
| RFMO | Regional Fisheries Management Organization |
| RFV | Record of Fishing Vessels |
| ROP | Regional Observer Program |
| SLA | Service Level Agreement |
| SPC | Secretariat of the Pacific Community |
| VDS | Vessel Day Scheme |
| VMS | (Satellite) Vessel Monitoring System |
| WCPFC | Western and Central Pacific Fisheries Commission |

## Executive Summary

### General

The Commission programs are funded primarily through the contributions of its members. The costs of its services compare favorably with those of other tuna RFMOs. Nevertheless, the Commission is to be commended for seeking to optimize the costs of its services, to ensure that its members obtain the maximum value from their investment in the fishery, as well as ensuring an equitable allocation of costs across members.

Cost recovery has been suggested as a way of optimizing the costs of Commission services. The key way for this optimization to occur is when those who face the costs are able to influence those costs by changing their behavior. Where those fishing are not influencing the level or cost of services, then cost recovery will yield few cost optimization benefits.

Vessel operators may be able to optimize 'variable' costs (i.e. those costs that vary depending on the level or type of fishing activity) through cost recovery. But as vessel operators have no influence over the remaining 'fixed' costs, cost recovery from vessel operators will not lead to the optimization of such costs. The Commission Secretariat is in a better position to determine how to optimize these fixed costs, particularly through its determination of the level of services required and choice of service provider.

In general, services provided to ensure or enhance the sustainability of a fisheries resource benefits those who hold the long-term rights to exploit the fishery. The costs of these services are generally fixed, at least over the period of a year or two, and can be recovered as fixed levies. The costs of these services should not be recovered from current users on efficiency grounds, but should be recovered from the rights holders on equity grounds.

In this international fishery, the long-term exploitation rights have not yet been allocated, so a mechanism for allocating the costs of these services needs to be negotiated and agreed among the member states. Once the rights in the fishery are allocated, the costs should be allocated in the same proportion as those rights. Until such an allocation occurs in the Convention area, no cost allocation can be judged superior to the 70:20:10 formula currently used for member contributions to the Commission budget.

Cost recovery should not be used as a mechanism to cross-subsidize inefficient activities or to generate a return on the use of the fisheries resource (a "royalty" such as foreign fishing vessel license fees). Other specific and transparent mechanisms should be used for these purposes

### Services

#### VMS

The current Service Level Agreement (SLA) with the FFA should be replaced with an arrangement whose variable charges more accurately reflect the variable costs of the VMS service. An equitable share of the fixed costs of the service should be shared between agencies that use the Pacific VMS.

We concur with the recommendations for new service provision recommended in the joint FFA & WCPFC report *Vessel Monitoring System Review*. In particular, two options should be considered: FFA and WCPFC jointly develop an expanded fisheries information system, which eliminates the current duplication, or amend the SLA to ensure that charges are reviewed annually so that they better reflect actual costs.

Vessel operators should face the variable costs they impose on the VMS, being the MCSP charges, FFA data transfer charges, and the MTU Recurring Cost and any activation charges.

If the SLA is replaced, other WCPFC-specific charges (the MTU Recurring cost, activation charges and the FFA data transfer cost) may no longer apply. However, if these charges remain, vessel operators should be charged the equivalent amount for each month their vessel operates in the Convention Area; Commission members should bear any remaining costs through member contributions to the budget.

Fixed costs, including helpdesk and back-up charges and staff costs, should continue to be met by member states through member contributions to the budget.

### Regional Observer Program

Cost recovery already applies to certain services as the vessel operator meets the variable costs of observers' placement on vessels.

The main cost to the Commission is for data entry. No change is required to current service arrangements, as long as current external funding sources (New Caledonia, US Tuna Treaty and FSM Arrangement) for data entry remain in place.

Should any current external funding sources be removed or reduced, the WCPFC should enter into new commercial arrangements with service providers for data entry. These new arrangements should optimize the costs and level of services by ensuring observer coverage and data capture matches the benefits sought by management measures.

The potential for on-board electronic data entry, with its cost savings opportunities, should continue to be investigated as a longer-term approach wherever practicable.

Vessel operators should face the costs of data entry, as a charge per transshipment (for vessel transshipments) or per fishing trip that may be required to carry an observer. A different data entry fee should be set for each of the following categories: transshipment, purse seiner, long line (offshore), long line (distant water), and new gear types that are introduced to the ROP. These fees would be based on the data entry costs for each of these categories averaged over all the vessels in that category.

Member states should continue to pay fixed costs of the ROP, including training, audit and staff salaries through member contributions to the budget.

### Record of Fishing Vessels

The RFV should become a register of flag vessels wishing to fish in the Convention Area outside their domestic EEZs, in each fishing year. Vessel operators should face a small annual fee registration fee, which covers the costs of entering information into the Commission databases. A benefit of this move will be that the vessel register will be a more meaningful indication of vessels in the fishery and the costs they generate.

WCPFC and FFA should look to integrate vessel registers and share the consequent fixed costs, which are primarily information management costs. These fixed costs should be divided between respective memberships.

### Co-operating Non Members

CNMs vessel operators should face exactly the same charges that vessel operators from members face (i.e., variable costs of vessel registration, VMS and ROP). Given they don't have voting rights, but do share the benefits of Commission services, each CNM should contribute to the Commission costs 50% of the contribution it would face if a Commission member.

### Observers at meetings

Observers should be allowed to attend meetings free of charge, with the consent of the Executive Director, as long as the number of people attending can be easily controlled. Should the number of observers wishing to attend increase; a tiered system could be used. Here the Executive Director would allow one or two attendees from each observer organization to attend free of charge, and set a modest fee intended to cover the additional costs generated by additional attendees.

### Carriers and Bunkers

Carriers and bunker vessels come from states that do not contribute in any material way to the management of the fishery. The additional costs that such vessels generate are the same as those they would generate if they were member or CNM vessels. They should pay the same charges for services as those vessels, to remove any incentives to reflag to avoid costs.

On equity grounds, a contribution to the fixed costs of the Commission can be justified. The additional risks managed, or benefits received, cannot be quantified to set the appropriate level for such a contribution, so the current annual fee of $2500 should be retained until the practice is reviewed.

### Administrative Implications

An administratively simple way of implementing the cost recovery system is by a single invoice to each member and CNM. The invoice would comprise: (i) the charges faced by vessel operators and (ii) the member contribution to the Commission budget. The invoice to each member and CNM should be broken down by the services provided, including the fixed costs of the VMS, ROP and RFV, plus general administrative costs, and the costs faced by each vessel operator. The member or CNM pays the invoice, but may then recover the charges attributed to vessel owners using the information provided on the invoice.

This invoicing system would have higher costs for the Secretariat than the current system, but costs should still be modest.

### Fiscal Burden

Implementing the above cost recovery recommendations shift the burden of Commission costs towards those members with relatively more vessels in the fishery. In all cases, where members pass vessel specific costs onto their sectors, all member governments will end up paying less. Other initiatives to optimize costs should lead to further reduction in costs to members, including vessel operators.

Three scenarios have been modelled, based on slightly different assumptions, including revised lower costs for the VMS SLA with FFA and an increase in the number of vessels. While the scenarios show some variations in the allocation of costs, the general results remain unchanged.

## Recommendations

The Review Team recommends that the Commission:

(a) **Note** that the costs of Commission services compare favorably with other regional tuna fisheries management organizations

(b) **Note** that:

   (i) Cost recovery can create incentives that help to optimize Commission services, and hence the costs, but only when those who face the costs are able to influence those costs

   (ii) Many of the Commission costs are not directly linked to the level of fishing vessel activity, so other means of allocating these fixed costs are required

### Vessel Monitoring System

(c) **Agree** that the Secretariat pursue alternative arrangements for providing VMS to members, including development of a joint FFA/ Commission system and renegotiation of the SLA with FFA

(d) **Agree** that vessel operators face the costs of installation, activation, deactivation and ongoing transmission costs of ALCs

(e) **Agree** that remaining costs of the Commission's VMS service be paid out of the General Fund, as members are currently the main beneficiaries of this service

### Regional Observer Program

(f) **Agree** that vessel operators face the costs of data transfer on a per trip basis

(g) **Agree** that the fixed costs of the ROP be paid out of the General Fund, as members are currently the main beneficiaries of this service

### Record of Fishing Vessels

(h) **Agree** that the RFV be established as the core Pacific vessel register, linked directly to the VMS and other fisheries management systems

(i) **Agree** that vessel operators face the variable costs of registering a vessel

(j) **Agree** that the fixed costs of the vessel record be paid out of the General Fund, as members are currently the main beneficiaries of this service

### Co-operating Non Members (CNMs)

(k) **Agree** that CNM-flagged vessels should face same costs (as per recommendations (d), (f) and (i) above) as those faced by vessels from member states

(l) **Agree** that CNMs should pay a 50 percent of equivalent member contributions, as they do not have voting rights but they do receive benefits from engagement in the fishery

### Observers at Commission meetings

(m) **Agree** that the Executive Director be given the power to set a maximum number of individuals from each observing organisation who may attend the Commission meetings without paying a fee

(n) **Agree** that a sum reflecting the additional costs of providing for each additional individual from an observer organisation be charged to the respective organisation

### Carriers and Bunker Vessels

(o) **Agree** that the fees charged to carriers and bunkers be the same as those applied to similar classes of vessels from members and CNMs

(p) **Agree** that the current annual fee of $2500 be continued until the Commission reviews the practice in 2013

### Administration

(q) **Agree** that, if the above recommendations are agreed to, the Secretariat transmits a composite invoice to each member and co-operating non-member indicating:

(i) Payment required based on the costs attributed to each of its flag vessels, and

(ii) Payment required based on the contributions formula for the General Fund

### Shift in Fiscal Burden

(r) **Note** that the above cost recovery recommendations shift the burden of costs towards those members with relatively more vessels in the fishery, but that, if vessel-specific costs are passed on to the industry, all members will pay less.

These are the major recommendations of the report. Other proposals that the Review Team considers should be given consideration are found in the body of the report.

## Background

1. This section briefly outlines the Convention, the Commission and its Secretariat. The Secretariat services provided to Commission members are briefly described. The current mechanism for funding these services is described. This is followed by a discussion of the principles for designing a cost recovery mechanism that can optimize the costs of Commission services.

### Convention, Commission and the Secretariat

2. The Western and Central Pacific Fisheries Convention's (WCPFC) objective is to ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean. The Convention establishes a Commission and specifies a range of functions to enable it to achieve this objective.

3. A Secretariat has been established to ensure the smooth running of the Commission. Article 5 of the Convention specifies that the Secretariat shall be cost effective and take into account existing regional institutions' capacity to perform certain technical functions.

4. The Commission budget funds the Secretariat to carry out certain services to implement its Conservation and Management Measures (CMMs). For example:

   (a) Vessel Monitoring System (CMM 2007-02)

   (b) Record of Fishing Vessels (CMM 2009-1)

   (c) Regional Observer Program (CMM 2007-01).

### Current Funding Mechanism

5. The Commission budget requirements to be met from its General Fund in 2011 are $6,570,000. Seven other funds pay for specific activities, including the Western Pacific East Asia Oceanic Fisheries Management Project Fund (which contributes $406,000 towards scientific research) and the Regional Observer Program Support Fund (which will contribute $200,000 for activities to support the ROP). These contributions are not guaranteed into future years and may put increased pressure on the General Fund if they do not continue at the levels required to fund the relevant activities.

6. The General Fund budget funds the administrative expenses of the Secretariat, science services and research, and the technical and compliance work program. After income from other sources[1] is included, approximately $6,400,000 of the General Fund budget is provided by contributions from Commission members.

7. The contributions from members are calculated as follows (the "70:20:10 formula"):

   (a) Base fee component: 10 per cent base fee divided in equal shares between all members of the Commission

[1] Estimated income and other income, fees and charges collected for non-member carrier and bunker vessels.

(b) National wealth component: 20 per cent national wealth component based upon an equal weighting of proportional gross national income (calculated on a three-year average) per capita and proportional gross national income (calculated on a three-year average) and

(c) Catch component: 70 per cent fish production component based upon a three-year average of the total catches taken within exclusive economic zones and in areas beyond national jurisdiction in the Convention Area of all the stocks covered by the Convention for which data are available (including the main target tuna species, as well as the four main billfish species (black marlin, blue marlin, striped marlin and swordfish)), subject to a discount factor of 0.4 being applied to the catches taken within the EEZ of a member of the Commission which is a developing State or territory by vessels flying the flag of that member. In the case of a member that has part of its EEZ inside the overlapping area, and is a member of the Inter-American Tropical Tuna Commission and contributes to the budgets of both IATTC and WCPFC, only 50 per cent of catches made by its flag vessels in the overlap area between the two Commissions shall be included in the calculation of a member's contribution based on catch.

8. Using this calculation formula, contributions by members range from $1,335,125 to $30,048. Table 1 contains information on contributions from some of the Commission members.

**Table 1: Member Contributions: 2011**

| Member | Dollars | Percent of Total |
|---|---|---|
| Nauru | $30,048 | 0.47% |
| Cook Islands | $50,488 | 0.79% |
| Australia | $123,490 | 1.93% |
| Vanuatu | $183,416 | 2.87% |
| Papua New Guinea | $314,355 | 4.92% |
| China | $330,523 | 5.17% |
| European Union | $399,072 | 6.25% |
| United States of America | $846,435 | 13.25% |
| Japan | $1,335,125 | 20.90% |

9. These contributions are paid into the Commission's General Fund. The Commission has seven other funds that are earmarked for specific purposes: Western Pacific East Asia Oceanic Fisheries Management Project Fund, Special Requirements Fund, Regional Observer Program Support Fund, Working Capital Fund, Japanese Trust Fund, Voluntary Trust Fund, and Fees and Charges Trust Fund.

## Growth in Costs

10. Members are keen to see that the Secretariat is providing the services required for the Commission functions in the most cost efficient way. The budget of the Commission has grown by 56% since 2009 to $6,760,000 in 2011. This 2011 figure is some 31% higher than was indicated in the budget estimated back in 2008. This means the Commission's costs have grown by over twice as fast as the members were expecting.

11. Three major factors have contributed to this growth:

    (a) An increase in SPC science services costs

    (b) An increase in VMS costs, due to a higher number of vessels in the fishery than was expected, and

    (c) An increase in ROP data entry costs, due to increased observer coverage rates.

12. It is worth noting that the Commission's costs compare favorably with other tuna RFMOs. Because of the different services provided by each Commission, drawing definitive conclusions from budget materials is not possible (for example: not all provide a central VMS). Table 2 indicates the WCPFC Commission costs against those of the Inter-American Tropical Tuna Commission (IATTC) and the International Commission for the Conservation of Atlantic Tunas (ICCAT).

**Table 2: Budget Costs of Tuna RFMOs**

| RFMO | Budget Cost | Catch (tonnes) | Unit Cost by Catch |
|---|---|---|---|
| IATTC | $8,374,000 (2009) | 590,000 (2009) | $14/tonne |
| ICCAT | €2,936,000 (2009) | 570,000 (2009) | €5/tonne |
| WCPFC | $6,760,000 (2011) | 2,430,000 (2009) | $3/tonne |

13. The costs of Commission services equate to around $3 for every tonne of tuna harvested. Or, put another way, these costs equate to 0.17% of the value of the tuna catch in the WCPO ($4.084 billion in 2009).

## Cost Recovery Objectives

14. Cost recovery mechanisms can be used to encourage the optimization of costs in natural resource management. In principle, the Commission employs a cost recovery mechanism already – the members' contributions through the 70:20:10 formula (discussed above). In this paper, however, cost recovery means a mechanism that seeks to attribute to, and recover costs from, the users of the fisheries resource.

15. Cost recovery mechanisms have been employed in a range of jurisdictions to achieve a number of different objectives:

    (a) *Efficiency* – to incentivize users to demand more cost-effective services

    (b) *Equity* – to ensure that some users are not unfairly burdened with costs

(c) *Fiscal* – to reduce the burden on taxpayers' funds and

(d) *Compensation* – to obtain some of the value of the resource for the owners.

16. Not all of these objectives can be achieved simultaneously, so prioritization or trade-offs are required to guide development of any cost recovery mechanism. The terms of reference for this study prioritize the efficiency objective for cost recovery, more particularly cost effectiveness. Yielding efficiencies depends on several supporting factors, which are discussed below and in the following sections. Equity is also important, but it tends to be a consideration that lends itself to negotiation between affected parties. It is an objective that is included in the allocation of costs of services that are shared amongst several users.

17. Using cost recovery for fiscal purposes is a common objective in some parts of the world. However, it normally has the effect of transferring the incidence of the costs of decisions away from those who actually make the decisions. Where the fishing sector is charged for certain costs (e.g., science services) they are often afforded little ability to influence the nature and extent of the services because such services are normally determined by Government agency. Poor incentives can be created, in times of fiscal constraint, to shift costs away from taxpayers and onto an "easy" target: the fishing industry. This rarely results in cost-effective decision-making.

18. Compensation is rarely a good objective for cost recovery. Obtaining a return to owners of the resources is best achieved through appropriate pricing of access rights to the fishery. The value of days under the PNA VDS is a good example of this in the purse seine fishery. The return to countries from selling days to the fishing industry is the value being returned to the resource owners. In other contexts, foreign license fees can represent a share of the return to the fishery received by the resource owners.

### Efficiency Gains and Sharing the Costs

#### *Where individual service users can be identified*

19. The above discussion suggests that, on efficiency grounds, when an individual user who requires a service can be identified, the user should be charged the cost of providing that service. The corollary to this point is, that the parties facing the costs must be able to directly influence the costs of services by changing their actions for there to be any efficiency gains. For example: a vessel operator, by varying the length of his or her trip, should be able to influence the VMS service costs he or she faces.

20. This conclusion will be applied to the analysis of Commission services in the next section of this report. For each service the analysis will need to ask the question: can the user be identified and can the user directly influence the cost of that service?

#### *Where services are shared amongst users*

21. Most services, however, are shared by a number of users, or even different sectors, and their costs are largely fixed. In these circumstances – which characterize services used when managing WCPFC fisheries – cost recovery becomes an allocation issue.

22. Different approaches to allocating shared costs can be used:

(a) *Avoidable cost* – a sector pays the full cost of a service that could be avoided if that sector was not using the resource. This approach is based on poor assumptions; it assumes that without authorized fishing no fisheries services would be required. The opposite is more likely as science and compliance services would be needed to ensure conservation and protection of the resource from unauthorized fishing.

(b) *Attributable cost* – the costs of a service are shared across users according to some attribution of its use of the service. This is a more realistic approach than avoidable cost. It requires the use of proxies (substitutes that can be measured) to attribute use between different users. Catch or value of catch is often used as a proxy for use of a service.

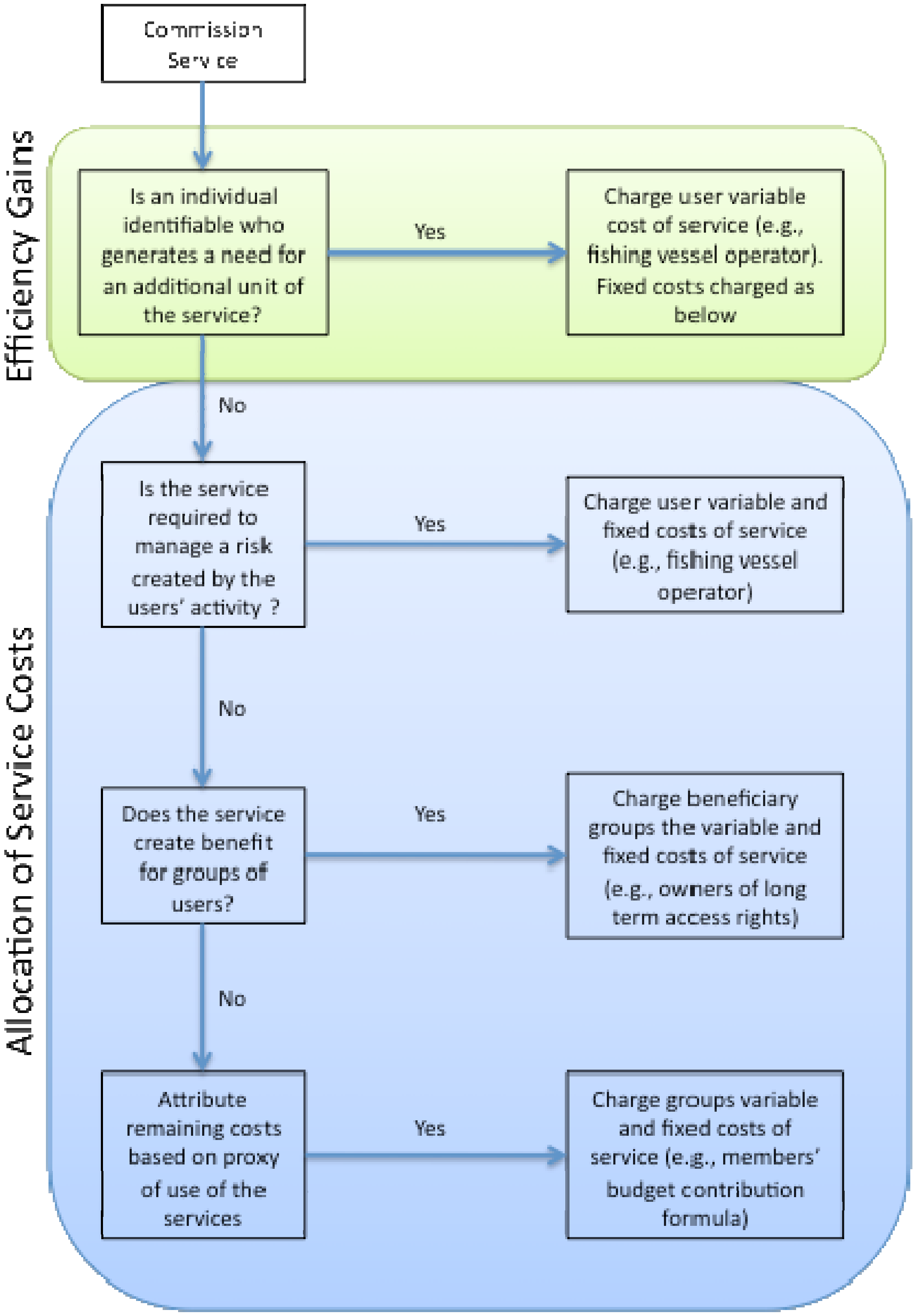
(c) *Beneficiary pays* – the costs of a service are allocated across users based an assessment of benefits obtained from the service. This is also a realistic approach but it requires identifying the long-term beneficiaries of fisheries services. Where fisheries are managed with long term secure access rights, the benefits of services accrue to rights holders (e.g., quota owners in quota managed fisheries). Other beneficiaries include those who accrue an existence value from fisheries resources.

(d) *Risk creator pays* – the costs of a service are allocated across users based on a measure of the risk posed by users resulting in the need for the service. This is generally applicable to fisheries services that reduce or mitigate a risk to the fishery. Harvesters – authorized and unauthorized – generally pose these risks through their fishing practices.

23. Services provided to ensure or enhance the sustainability of the fisheries resource benefit those who hold the long-term rights to exploit the fishery. Costs of services not recovered from current users on efficiency grounds should be attributed to these rights holders on equity grounds. Once the rights are allocated, the costs should be allocated in the same proportion as the rights. Until this allocation of rights is made, there are no criteria that can be used to judge any cost allocation superior to the 70:20:10 formula currently used for member state contributions.

24. Figure 1 outlines the approach developed using the above principles for analyzing each of the Commission's services and deriving recommendations.

**Figure 1: Analytical Approach for Charging Costs of Commission Services**



## Commission Services Reviewed

25. This section analyzes each of the Commission services using analytical approach developed in the previous section (see Figure 1).

26. The terms of reference for the report indicate the services to be covered by this analysis:

    (a) Vessel Monitoring System

    (b) Regional Observer Program

    (c) Record of Fishing Vessels

    (d) Costs of fish carrier and bunker vessels operating in the WCFPC area and

    (e) Costs of observer delegations attending Commission meetings.

### Vessel Monitoring System

#### What is the service?

27. The VMS provides information on the location of fishing vessels. This is primarily for compliance monitoring purposes, to ensure that those in the fishery are complying with the rules. The VMS also serves as a cross check on the science information, such as logbooks and observer reports, and is used to verify information used in stock assessments.

28. The Commission VMS uses the Pacific VMS infrastructure managed by the secretariat of the Pacific Islands Forum Fisheries Agency (FFA) based at Honiara, Solomon Islands. The Pacific VMS also supports a VMS for the FFA members (FFA VMS) covering their respective national waters.

29. The Pacific VMS is an open architecture, integrated service utilizing FFA-owned IT VMS infrastructure, software and services. It comprises co-location services under an FFA contract with the Macquarie Telecom Data Centre based at Sydney, Australia. Automatic Location Communicators (ALC) [also known as Mobile Transmitter Units (MTU)] in use by the Commission VMS includes those reporting via satellites operated by Inmarsat-C, Iridium and CLS Argos. The rate of positions reported to the Commission VMS by these ALCs/MTUs varies from 1-4 hours.

30. Absolute Software provides intermediary software and VMS management services, for the FFA and indirectly for the Commission. Absolute Software takes the data from Macquarie Telecom and sends it to FFA and the Commission depending on vessel location. FFA contracts with Absolute Software for this service, but the Commission has no direct contractual arrangements with Absolute Software or Macquarie Telecom.

31. The Commission has a Service Level Agreement (SLA) with the FFA for the Pacific VMS services. Approximately 3,000 fishing vessels are currently being monitored in the high seas of the Convention Area by the Commission VMS. Of these, approximately 1,500 report directly to the Commission VMS and 1,500

report to the Commission VMS via the FFA VMS when they enter the high seas in the Convention Area[2].

### Optimising costs of delivery of service

32. The main cost drivers for the WCPFC VMS are the charges contained in the SLA agreement and the polling charges (the MCSP).

33. The SLA does not provide FFA or the service provider with incentives to optimise costs or to allocate shared costs transparently. The current SLA arrangement should be replaced with one whose charges more accurately reflect variable and shared fixed costs, for both current and future use. The Joint Report to the FFA and the Commission *"Vessel Monitoring System Review"* sets out cost-effective options for replacing the SLA. It is recommended that the options that should be considered are those proposed in the Joint Report:

    (a) Develop a single system, jointly by FFA and the Commission, that stores all data provided and is accessible by both agencies and as appropriate by member countries and authorised vessel owners. The SLA would be replaced with an agreement that clearly identifies the roles and responsibilities, including the costs to be borne, of FFA and the Commission. Provision of the service would be tendered out.

    (b) A comprehensive review of the SLA, so that it clearly sets out the deliverables and the responsibilities of both parties, and provides for costs to be set annually to reflect the actual costs faced by each party.

34. The main cost drivers for polling relate to each vessel's choice of ALC/MTU and the VMS reporting requirements:

    (a) The reporting rate by vessels and

    (b) The amount of data being transmitted.

35. Managing the costs relating to the choice of ALC/MTU should be left to the vessel operator (see next paragraph). The reporting requirements could be reviewed to see if they are too stringent and can be relaxed, while still meeting management requirements, to allow cost reductions.

### Efficiency gains

36. Once a vessel is required to carry an ALC/MTU and to report, there is little the operator can do to manage the cost of the service. The vessel operator chooses which ALC/MTU to install, and pays its capital cost, and should also meet the variable cost (i.e., the MCSP charge) to ensure all costs are taken into account in making that choice. The operator should also pay the activation charge provided for under the SLA, as that is a cost that the operator generates. This means that, while the Commission will need to set the standards that any ALC/MTU needs to meet, it should not be involved in choosing which make or model of ALC/MTU is to be used – that is a choice that the vessel operator is best placed to make, if he or she faces all the relevant costs.

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[2] Approximately 800 vessels of the 1,500 reporting via the FFA VMS enter the high seas in the Convention Area each month where they are monitored by the Commission VMS.

### Managing a risk

37. Compliance monitoring may be considered a service that is provided to manage risks created by vessel operators. But it is a routine activity that is not dependent on the extent of operators' non-compliance and furthermore operators cannot choose to not use the service.

38. Most routine compliance activity, in the fisheries and other sectors (e.g. road traffic), is considered to be a core role of government and is funded by governments. On equity grounds, the argument for recovering the fixed costs from the industry of the VMS service, such as system maintenance or management salaries, is very weak.

### Creating a benefit

39. The main benefit of an effective compliance regime is a level of assurance that rules are being adhered to, and hence that the sustainability of the fishery is being maintained and that the management system has credibility. The main beneficiaries are therefore those who have long-term access rights to the fishery and those responsible for the management of the fishery. Until long-term access rights are defined, the member states are the main beneficiaries of this resource sustainability and system credibility.

### Other RFMOs

40. Other RFMOs do not have CMMs that require simultaneous VMS reporting of vessel position information to a Commission as well as to flag state authorities. For other RFMOs, vessel position information is normally relayed to the relevant Commission via the flag state authority. The costs of keeping collating and relaying VMS data is covered in the general budgets (member compulsory contributions) and by funds supported by voluntary member contributions.

### Recommendation

41. It is recommended that the Commission:

    (a) **Agree** that the Secretariat pursue alternative arrangements for providing VMS to members, including development of a joint FFA/Commission system and renegotiation of the SLA with FFA

    (b) **Agree** that vessel operators face the costs of installation, activation, deactivation and ongoing transmission costs of ALCs and

    (c) **Agree** that remaining costs of the Commission's VMS service be paid out of the General Fund, as members are currently the main beneficiaries of this service.

## Regional Observer Program

### What is the service?

42. The WCPFC Regional Observer Programme (ROP) that commenced in 2009 is a key component of scientific data collection and compliance monitoring for the Commission. This applies to target species and for the growing interest in minimizing by-catch. It is particularly important for the verification of compliance with fishing during the FAD closure, ensuring no purse seiners fish in the closed high seas pockets, ensuring no transhipment by purse seiners on the high seas, and for meeting the likely requirements of MSC Certification.

43. The likely new 2011 CMM for yellowfin and bigeye tuna, 100 per cent observer coverage on purse seine fishing vessels, and the requirement by 2012 for 5 per cent observer coverage of all longline fishing vessels dictate the need for 400-450 trained observers at present with an additional 200-250 trained observers by 2012 as a minimum, with continuing maintenance of these levels due to attrition.

44. National and sub-regional observer programmes currently recover costs for observer deployment observer salaries, and allowances through national observer service providers, and the tuna fishing industry. Costs for the training of observers from Pacific Island members of the FFA and SPC are generally covered by donor and member contributions to those two organizations. WCPFC members that are not members of the FFA and/or SPC are required to fund their own training courses so that their observers are trained to meet regional standards.

### Optimising costs of delivery of service

45. The main cost driver of the ROP is the observer coverage rate. The costs of observer training and audit, observer salaries and incidentals, and data entry all depend on these rates. Because of the range of purposes for the ROP, it is not possible to specify its primary objective, and hence what the optimal coverage rate is for each vessel or gear type. This is a question that will need to be addressed by the WCPFC in each situation.

46. The main cost faced by the Commission in its budget is data entry. How best to manage these costs depends on the timescale under consideration:

(a) In the long term, on-board electronic data entry may be the best approach in a number of situations. While it requires capital investment, it appears to have lower on-going costs and fewer validation issues than the current system of post trip manual data entry. New Zealand's experience with on-board electronic data entry suggests that software development is the most costly item, as it is purpose built. The competitive nature of the electronics market keeps hardware costs manageable. If electronic data processing becomes used more widely in fisheries management, ready-made software packages should become available at a lower cost than bespoke ones.

(b) Who is in the best position to manage data entry service delivery then becomes a medium-term issue. The consultants were not able to find strong arguments as to whether national or regional management would drive more cost-effective service delivery.

(c) In the short term, the Commission should continue to take steps to reduce the costs to its members, including a requirement for subsidies from parties who wish to use higher cost providers. In the event that these costs cannot be kept down, the Secretariat should be given the authority to enter into commercial arrangements that will best manage costs. This could include realigning data requirements with the needs generated by fisheries management measures.

### Efficiency gains

47. Transhipments are clear cases where identifiable individuals generate the need for a service with additional costs. Vessel operators already incur many of the costs associated with observers in such cases. Vessel operators who require

observers for transhipments should also meet the costs of entry of data from those observers.

48. Vessel operators requiring observers for the duration of a fishing trip can do little to directly reduce the costs of data entry, but there are choices they can make that influence the costs. The main cost driver is the number of trips undertaken. Costs are also known to vary between different types of trip; in particular, purse seiner, longliner (offshore) and longliner (distant water) trips have different cost levels associated with the amount of data to be entered. This suggests that vessel operators should be charged a data entry fee for each trip undertaken, with different fees applying for each trip category: purse seiner, longliner (offshore), longliner (distant water), and other gear types that are introduced into the ROP.

49. Decisions regarding fishing activity should not be affected by whether an observer is to be placed on a particular vessel or not, as this is likely to result in inefficient gaming behaviour (i.e., transferring fishing from observed trips to unobserved trips to avoid costs). In categories where coverage is less than 100%, an average data entry fee should be imposed on all vessels undertaking fishing trips.

### Managing a risk

50. The presence of observers can reduce the risks of illegal fishing practices, but this is only one purpose of the ROP, and is unlikely to be the main driver of its costs. For this reason, we do not consider that that the service is required to manage a risk created by fishing activities. Therefore, we do not consider that there is a case for recovering the remaining, largely fixed, costs of the ROP (training, data management and technical support) from fishing vessel operators on these grounds.

### Creating a benefit

51. The ROP has links to both science and compliance monitoring services, as the ROP contribute to both of these. Both of these services contribute to the long-term sustainability of the fishery. The main beneficiaries are therefore those who have long-term access rights to the fishery. Until long-term access rights are defined, Commission member states are the main beneficiaries.

52. However, it should be noted that, if the main driver of observer coverage rates (and hence costs) is to meet MSC Certification requirements, ROP data entry costs should be allocated on a basis that reflects the additional benefits to be obtained by each member from MSC Certification.

### Other RFMOs

53. Other RFMOs use observer programs for a range of purposes. NAFO's observer programme has 100% vessel coverage, is for compliance purposes and the costs are borne by vessel operators. ICCAT and IATTC have observer programmes that are funded by the member countries that wish to use observers to manage specific activities of their vessel operators (e.g., observing transhipments to carrier vessels from large scale longline vessels). ICCAT has one programme that recovers the observer costs from the industry – vessel and farm owners' pay fixed and variable costs of observers of transfers from purse seiners to farms.

### Recommendation

54. It is recommended that the Commission:

(a) **Agree** that vessel operators face the costs of data transfer on a per trip basis.

(b) **Agree** that the fixed costs of the ROP be paid out of the General Fund, as members are currently the main beneficiaries of this service.

### Record of Fishing Vessels

#### What is the service?

55. The record serves as a list of vessels that member states advise the Commission are eligible to fish in the Convention Area. A vessel must be on the record in order to be entered onto other registers in the Pacific region (e.g., FFA Vessel Register).

56. The Record of Fishing Vessels (RFV) has links to the Commission VMS because vessels to be monitored by the Commission VMS must first be listed in the RFV. The RFV's data holdings are becoming increasingly complex. Because many of the vessels listed in the RFV will never fish in the WCPFC Convention Area, the RFV database contains a growing body of under-utilised data that places increased demands on the time devoted by the Secretariat to data quality and related issues. As at June 2011, approximately 6250 vessels were on the Commission RFV, whereas only 3100 are on the Commission VMS.

#### Optimising costs of delivery of service

57. The variable costs of this service, which involves entering vessel information and IT usage, are relatively low. However, there is potential to improve the cost effectiveness of all registers in the Pacific region, if the RFV (or some other regional register) became the central vessel register that could be used by all fisheries management agencies, as this would reduce duplication.

58. The RFV's usefulness would be enhanced if it contained an accurate record of fishing vessels likely to be fishing outside their domestic waters at some time during the fishing year, rather than a "wish list" of vessels that might do so at some time. This may be achieved by the imposition of a small charge annual charge. This change also means that RFV would become an annual register.

59. This usefulness would also be enhanced if the link between the RFV and the VMS were made concrete, i.e., a direct electronic link between the two systems, so that they made up an integrated fisheries information system.

#### Efficiency gains

60. The main cost driver for this service is the variable cost of data entry and communications, understood to be approximately $20 per vessel per year. This cost should be borne by the vessel operator, as the operator is the individual requiring the additional service to be provided.

61. Combining the vessel registration fee with other annual fees that vessel operators should pay can reduce administration and compliance costs. Under the recommendations in this report, this would mean including the VMS charge and the RFV charge in one fee (the ROP fee being charged on a per trip basis). Thus an annual vessel based fee would have two components:

(a) A vessel registration fee covering the costs of entering data on to the register and

(b) A VMS fee, which may vary from vessel to vessel, depending on MTU communication type and reporting requirements.

### Managing a risk

62. A register is a core part of ensuring compliance with CMMs. It is not required because of specific risks created by legitimate fishing activity (these risks are addressed by other compliance activities), but forms a core element in an integrated fisheries management information system for tracking vessel activities, linking to all data on a vessel and also identifying IUU activities. There is no case for recovering the fixed costs of the register from vessel owners on these grounds.

### Creating a benefit

63. The main beneficiaries of a RFV are members and (to some extent) other regional agencies that use it as a resource for their own registers or for other purposes. Members should therefore pay any fixed costs (e.g., salaries) associated with the register.

### Other RFMOs

64. IATTC, ICCAT and NAFO cover the costs of their vessel records or registers from their core budget. These RFMOs do not require the costs to be faced by vessel operators.

### Recommendations

65. It is recommended that the Commission:

(a) **Agree** that the RFV be established as the core Pacific vessel register, linked directly to the VMS and other fisheries management systems.

(b) **Agree** that vessel operators face the variable costs of registering a vessel.

(c) **Agree** that the fixed costs of the vessel record be paid out of the General Fund, as members are currently the main beneficiaries of this service.

## Fees and other contributions for Co-operating Non-Members

### What is the service

66. CNMs may receive one or more of the services that member nations receive:

(a) Their vessel operators generate exactly the same services as the vessels of members

(b) They may participate in Commission meetings but, as they do not have voting rights, they not have the same role in determining the nature and volume of the services.

67. WCPFC7 agreed that all CNMs should pay an annual contribution that is 50% of the assessed contribution amount that would be payable if the CNM was a member. Contributions received from CNMs are used to reduce the assessed contributions of members in the year following receipt.

### Optimising costs of delivery of service

68. CNM vessel operators generate exactly the same variable costs as the vessels of members. It is important that they be charged the same as member flagged vessels, so as to not create any incentives for reflagging to CNMs. The above discussion covers possibilities for cost optimization of the Commission VMS, ROP and RFV.

69. CNMs do not generate additional costs for other Commission services. As there is no additional cost, there is no potential to reduce costs by excluding or restricting them from the service. There is no potential to optimise costs of delivery of these services to CNMs.

### Efficiency gains

70. To optimize their use of the services CNM vessel operators should face identical variable charges as member vessel operators.

71. CNMs do not have voting rights or impose additional costs, so they cannot influence the need for an additional service. Hence there is no potential for efficiency gains to be made by charging CNMs a variable charge.

### Managing a risk

72. CNMs do not pose additional risks to the fishery that the services they access are required to manage. Therefore risk management does not provide grounds for recovering any fixed costs from CNMs.

### Creating a benefit

73. CNMs receive benefits from their involvement in the Commission, although the benefits each derives will vary from country to country, ranging from purely information exchange to fishing privileges in the Convention Area.

74. There is a strong case for CNMs to contribute to the costs of services that are not to be recovered from vessel operators. On equity grounds, the level of payment should be commensurate with the level of benefits obtained, but less than that paid by members that obtain similar benefits but have voting rights. The current Commission decision, that CNM pay an annual contribution that is 50% of the assessed contribution amount that would be payable they were a member, is appropriate.

### Other RFMOs

75. IATTC encourages non-members and fishing entities that have vessels fishing for fish covered by the Convention, to make, and request their flag vessels to make, voluntary contributions to the Commission. Such contributions are preferably on the same basis as the contributions of existing members.

### Recommendations

76. It is recommended that the Commission:

    (a) **Agree** that CNM-flagged vessels should face same costs as those faced by vessels from member states.

    (b) **Agree** that CNMs should pay a 50 percent of equivalent member contributions, as they do not have voting rights but they do receive benefits from engagement in the fishery.

## Fees for Observers at Commission meetings

### What is the service?

77. In this context, observers are countries and organizations who are neither CNMs nor members. Observers at Commission meetings require the following services:

    (a) Corresponding with observer representatives regarding their respective applications for observer status and with members regarding these applications,

    (b) Preparing meeting name-plates for each observer delegation,

    (c) Hiring meeting room facilities sufficiently large to accommodate observers,

    (d) Establishing additional space outside the meeting room for observer poster presentations,

    (e) Printing extra copies of meeting documents,

    (f) Purchasing additional refreshments at Commission meetings, and

    (g) Organizing additional transport during Commission meetings.

78. The costs of these services are relatively minor costs and they are not identified separately in the Commission's budget.

### Optimising costs of delivery of service

79. Reducing or altering the service can optimise costs of observers. Limiting access to the above services can do this. This can be done through, for example, limiting the availability of documents or even limiting numbers of individual from each organization able to attend.

### Efficiency gains

80. Individuals attending Commission meetings generate costs. This means that the variable costs of additional observers could be recovered from them.[3] Note that current levels of international registration fees tend to be based on average costs (with a profit margin for privately run conferences) and exceed the additional costs incurred in providing for an additional attendee.

### Manage a risk

81. This service is not provided to manage a risk to the fishery. Fixed costs therefore cannot be recovered on this basis.

### Create a benefit

82. Both the observers and the Commission benefit from the attendance of observers. Observers have the opportunity to observe the Commission, participate in meetings, and to put forward their views. The Commission gains credibility from having transparent processes at its meetings and a chance to receive and respond to observers' view. There is no clear way of allocating benefits across the two groups.

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[3] However, as representatives from members and CNMs generate the same costs, there also could also be a transparent charge for their attendance (e.g., through a separate item identified in the budget and in each state's contribution).

### Other RFMOs

83. Other RFMOs provide for charging of observers at governing council meetings. These charges are normally determined at the discretion of the head of the RFMO executive and cover the additional costs of observers' participation. Since 2001 IATTC has charged $500 for each non-IATTC member and non-governmental organisation participating at a meeting. This $500 covers attendance of two representatives; each additional participant is charged $350. ICCAT observers are required to pay a fee, determined annually by the Executive Secretary, to participate at meetings. A similar situation applies for NAFO, where observers may be required to pay a fee to cover the additional costs of their participation.

### Recommendation

84. It is recommended that the Commission:

(a) **Agree** that the Executive Director be given the power to set a maximum number of individuals from each observing organisation who may attend the Commission meetings without paying a fee.

(b) **Agree** that a sum reflecting the additional costs of providing for each additional individual from an observer organisation be charged to the respective organisation.

## Fees for carriers and bunker vessels

### What is the service?

85. Member states are able to nominate vessels from states, which are neither member states nor CNMs, to provide carrier or bunker services for the member state's vessels. There are currently 21 such vessels. Their flag states do not contribute to management costs, nor do they benefit directly from the management regime, but the vessel operators receive commercial benefits from working in the fishery. They currently pay $2500 annually as a nominal contributory fee "to contribute to the work of the Commission". This practice is to be reviewed by the Commission by 2013.

### Optimising costs of delivery of service

86. Neither the vessels nor their flag states require services to be provided specifically for them. The requirements on carrier and bunker vessels should be the same as for the equivalent vessels from member states and CNMs to remove incentives to reflag. If these services are the same, there are no specific improvements that could be made to costs of services for CNM carrier and bunker vessels. The improvements in cost optimization for these VMS, RVF and ROP services are discussed above.

### Efficiency

87. Monitoring the locations and activities of the vessels within the Convention Area is important, as it forms an integral part of the compliance regime. The vessel operators are identifiable individuals who generate the need for the services and should bear the variable costs. Because the same requirements should apply as apply to vessels from member and CNM states, there is no reason, on efficiency grounds, for applying a different level of charge.

### Manage a risk

88. Vessels from states with no interest in the sustainable management of the fishery may pose a greater risk than from vessels of member or CNM states.

This risk would be reduced if the states were to become members or CNMs. It is not possible to estimate the additional risk, or the cost of managing it, but charging a fee should provide an incentive for states to either join or to leave the fishery. The fee should be ongoing (e.g. annual) to ensure that the decision is regularly revisited, and should be at a level that is high enough to require consideration but not so high as to make uneconomic arrangements that are useful to both parties.

### Create a benefit

89. The argument is similar to the one outlined above. Vessel operators derive a commercial benefit from their activity in the fishery and should contribute to the fixed costs of its management. It is not possible to estimate the benefit they derive, so the fee they pay should be an amount that makes a meaningful contribution to costs but which is unlikely to remove all profitability from the arrangement.

### Other RFMOs

90. No information has been found on whether other RFMOs allow similar practices or, if they do, what fees are payable by carrier or bunker vessel operators.

### Recommendation

91. It is recommended that the Commission:

    (a) **Agree** that the fees charged to carriers and bunkers be the same as those applied to similar classes of vessels from members and CNMs.

    (b) **Agree** that the current annual fee of $2500 be continued until the Commission reviews the practice in 2013.

## Commission Administrative Implications

92. This section describes the implications for the Secretariat if it were to implement the recommendations in this report.

### Current Arrangements

93. Currently, the Secretariat invoices member nations for their contributions, according to the 70:20:10 formula, using common commercially available software. Input data for the catch component is straightforward; the most complex part of the calculation is the “wealth” component, because of the difficulty in obtaining consistent, up-to-date figures. This work requires a fraction of a full time equivalent within the Secretariat.

### Administrative Considerations

94. A cost recovery system can increase the number of calculations, because of an increased number of parties to be invoiced, a large number of component charges to be calculated, and/or complex input data on which to base charges. These requirements would all have the potential to substantially increase both software and personnel costs.

95. The example of the New Zealand cost recovery system illustrates this complexity:

    (a) The Ministry of Fisheries calculates annual cost recovery levies, using a complex model that requires at least one full time equivalent to maintain. Errors in the input data and the allocation formulae have required extensive work and levy-payer consultation to resolve.

    (b) Most fees are charged by Commercial Fisheries Services Ltd, an industry-owned company established primarily to operate the quota share and other registers. Significant capital expenditure was required to establish the system and several staff are required to operate it. The marginal costs of calculating and invoicing fees electronically is low.

### Proposed System

96. The approach proposed here is that a simple fee structure be employed where possible, avoiding a complex levy system. We propose that the Secretariat invoice each government of the member states and CNMs for:

    (a) Contributions payable by the government itself, as calculated by the contributions formula, and

    (b) Charges payable by the operators of its flagged vessels.

    The invoice would provide sufficient information to allow the government to recover the relevant fees from its vessel operators.

97. The Review Team understands that electronic systems already capture information for each vessel relating to VMS, ROP and RFV services, which would form the basis for each of the fees we propose. Calculation of the fees for each vessel could be carried out on an Excel spreadsheet. While the staff time required would depend on how often levies were calculated and invoiced (i.e., monthly, quarterly or annually), this should still amount to less than one full time equivalent.

98. Invoices would be sent to member and CNM governments. Central invoicing of vessel operators would be a more costly exercise for the Secretariat than for governments, with credit control being the main cost driver. The Secretariat would not be in a strong position to ensure the payment of fees from foreign nationals, especially when compared to the governments of the relevant countries.

99. The required vessel-specific information is not currently captured in the Secretariat's invoicing system, and it would need to be imported from other sources[4]. The invoicing system should be able to be expanded to allow it to administer the proposed system without the need for significant investment in new software or an ongoing need for additional staff (i.e., other than any short-term contractors required to modify existing software).

100. The member and CNM contributions would be based on the draft budget for the forthcoming year, as is current practice. These would be invoiced to members and CNMs annually, following approval of the draft budget for the year by the Commission.

101. Individual vessel operator charges would be based on the variable charges for each vessel. Each member and CNM would be charged the variable charge for each vessel, multiplied by the number of vessels each has on the RFV. These would be invoiced to member countries and CNMs quarterly in arrears.

102. It is recommended that the Commission:

(a) **Agree** that, if the above recommendations are agreed to, the Secretariat transmits a composite invoice to each member and co-operating non-member indicating:

i. Payment required based on the costs attributed to each of its flag vessels, and

ii. Payment required based on the contributions formula for the General Fund.

### Commission decisions

103. Article 18(2) of the Convention text appears to provide sufficient flexibility for the Commission to include vessel-based charges in the financial contributions from members. Article 17 (1)(b) provides a mechanism for seeking payment of vessel-based charges and other contributions from CNMs.

104. Amendments to Commission financial regulations would be required to implement the recommendations. Regulation 5 would need to be amended, by a consensus decision of the Commission. Specific decisions would be involve:

(a) Creating a new regulation which separates out the charges for the variable costs to be generated by vessel operators,

[4] The Commission could request that the FFA provide this information with its invoice, or it could recreate the information from its own VMS data.

(b) Creating a new regulation that establishes a mechanism for invoicing these variable costs, quarterly in arrears, to the flag states of the vessels (be they member or CNM),

(c) Amending regulation 5.2 to apply the member contribution formula to the budget excluding the charges in (a) above, and

(d) Creating a new regulation for calculating the CNM contribution to the budget (50% of contribution it would be required to make if it were a member).

## Possible Shift in Fiscal Burden Summarized

105. This section identifies the possible shift in fiscal burden of the costs Commission services if the recommendations for vessel based charges were agreed to. The results should not be a driver of decisions on the recommendations.

106. Because the modelling is based on incomplete information on current vessel numbers and bold assumptions about what may happen in the fishery in the future, the results are indicative only. It is included in this report to give Commission members an idea of possible impacts under different scenarios.

### Modelling

107. Modelling the shift in burden has been done using the following process:

(a) Identify costs of services to be charged for vessel operators from Commission members and non-members.

(b) Deduct these costs from the general budget and calculate revised member contribution using formula in financial regulation 5.2. Also calculate the co-operating non-member contribution according to WCPFC7 decision.

(c) Allocate vessel operator costs amongst member and non-member countries.

(d) Add together members vessel operator portion and member contribution. This figure gives an indication of the total invoice to each member and non-member of the Commission.

108. Three scenarios have been modelled (see table 3). The baseline scenario applies the recommendations to figures in the 2011 Budget. Scenario 2 is the same as the baseline, except lower costs from the WCPFC-FFA VMS SLA are used. Scenario 3 is the same as the baseline scenario, except increased vessel numbers; with the requisite estimated increase in VMS, ROP and RFV costs are used.

**Table 3: Scenarios for Modelling Shift in Fiscal Burden**

| Scenario | Cost calculation and allocation | Cost Data | Results in |
|---|---|---|---|
| **Scenario 1: Baseline costs** | Vessel operator costs allocated using number of active vessels on the Commission's *VMS register* | 2011 Budget presented to WCPFC7[5] | Table 5 |
| **Scenario 2: Reduced service costs** | Vessel operator costs calculated allocated using number of active vessels on the Commission's *VMS register* | 2011 Budget presented to WCPFC7, *with revised lower VMS costs from the WCPFC-FFA SLA* | Table 6 |

[5] Finance and Administration Committee*, Proposed Budget for the Commission's work programme for the financial period 01 January to 31 December 2011 and Indicative Budgets for 2012 and 2013*, WCPFC7-2010-FAC4/12.

| Scenario | Cost calculation and allocation | Cost Data | Results in |
|---|---|---|---|
| **Scenario 3: Increased vessel numbers** | Vessel operator costs calculated and allocated using number of active vessels on the Commission's *record of fishing vessels* | 2011 Budget presented to WCPFC7 | Table 7 |

## Results

109. The results of this modelling are presented in table 4. Conclusions from the modelling include:

(a) Under all scenarios governments pay less (provided costs were vessel operator costs were passed onto the sectors),

(b) If all vessels on the RFV were to become active in the fishery, the WCPFC budget would costs would increase to nearly $8 million, and

(c) An increase in vessel numbers in the fishery would not increase the costs to governments (provided costs were vessel operator costs were passed onto the sectors).

**Table 4: Summary of Scenario Modelling**

| Scenario | Current | 1. Baseline | 2. Lower Costs | 3. Increased Vessel Numbers |
|---|---|---|---|---|
| | | | | |
| **Vessel Operators** | 0% | $1,364,029 | $1,111,859 | $2,953,810 |
| **Percentage** | 0% | 21% | 18% | 36% |
| | | | | |
| **Governments (members and non-members)** | $6,388,083 | $5,024,054 | $5,003,054 | $5,024,054 |
| **Percentage** | 100% | 79% | 82% | 64% |
| | | | | |
| **Totals** | $6,388,083 | $6,388,083 | $6,114,913 | $7,977,864 |
| | | | | |

110. More detailed information on the spread of costs amongst members and non-members is presented in tables 5 to 7.

111. The first three columns of each table provide the variable costs allocated to members based on number of vessels (column A), the member contribution (B) (with these variable costs deducted) and the total (C). Each Commission member, according to their national policies, can pass these vessel variable costs as charges to their industry. The cost optimization gains are greater if these costs are charged to vessel operators who generate the costs.

112. The fourth column gives the current member contributions for 2011 (D). The fifth column gives the percentage difference in total contributions sought from each Commission member under the current and proposed recovery mechanisms [(column C – column D)/column D].

113. Those Commission members with a large number of vessels in the fishery would face an increase in costs. Those members with no or relatively few vessels face a decrease in costs. Note that, *in every situation*, if a member charges the vessel operator costs to industry, member governments pay less (column B is always less than column D). The costs will be transferred to those who generate the need for the services – vessel operators.

## Table 5: Estimates of Shift in Fiscal Burden (US$)

| Member | Proposed | | | Current Total 2011 (D) | % Change in Total (C-D)/D |
|---|---|---|---|---|---|
| | Vessel Operator Portion (A) | Member Contribution Portion (B) | Total (C) | | |
| Australia | 3,972 | 91,869 | 95,841 | 123,490 | -22% |
| Canada | - | 87,613 | 87,613 | 118,110 | -26% |
| China | 124,885 | 252,196 | 377,081 | 330,523 | 14% |
| Cook Islands | 13,239 | 36,079 | 49,318 | 50,488 | -2% |
| European Union | 11,474 | 302,737 | 314,210 | 399,072 | -21% |
| Federated States of Micronesia | 15,445 | 53,685 | 69,131 | 73,017 | -5% |
| Fiji | 28,684 | 38,637 | 67,321 | 53,592 | 26% |
| France | 8,826 | 99,152 | 107,977 | 133,102 | -19% |
| Japan | 379,510 | 1,028,128 | 1,407,638 | 1,335,125 | 5% |
| Kiribati | 15,004 | 39,167 | 54,171 | 54,224 | 0% |
| Korea | 75,461 | 646,893 | 722,353 | 840,878 | -14% |
| Marshall Islands | 12,356 | 108,817 | 121,173 | 144,341 | -16% |
| Nauru | - | 20,459 | 20,459 | 30,048 | -32% |
| New Zealand | 3,089 | 126,067 | 129,156 | 167,279 | -23% |
| Niue | - | 22,107 | 22,107 | 32,206 | -31% |
| Palau | - | 28,712 | 28,712 | 40,871 | -30% |
| Papua New Guinea | 3,089 | 240,307 | 243,396 | 314,355 | -23% |
| Philippines | 22,947 | 167,157 | 190,104 | 219,794 | -14% |
| Samoa | - | 23,570 | 23,570 | 34,076 | -31% |
| Solomon Islands | 441 | 30,622 | 31,063 | 43,154 | -28% |
| Chinese Taipei | 444,380 | 582,141 | 1,026,521 | 756,947 | 36% |
| Tonga | - | 21,254 | 21,254 | 31,081 | -32% |
| Tuvalu | 1,765 | 22,333 | 24,098 | 32,462 | -26% |
| United States of America | 82,521 | 648,698 | 731,220 | 846,435 | -14% |
| Vanuatu | 55,603 | 139,045 | 194,647 | 183,416 | 6% |
| **Totals** | **1,302,690** | **4,857,446** | **6,160,136** | **6,388,083** | **-4%** |
| *Cooperating Non-Members* | | | | | |
| Belize | 3,530 | 11,191 | 14,721 | *16,278* | *-10%* |
| Ecuador | 5,295 | 20,818 | 26,114 | *28,733* | *-9%* |
| El Salvador | 883 | 19,867 | 20,750 | *27,498* | *-25%* |
| Indonesia | 3,972 | 52,064 | 56,036 | *69,164* | *-19%* |
| Senegal | - | 9,210 | 9,210 | *13,686* | *-33%* |
| Mexico | - | 19,558 | 19,558 | *27,257* | *-28%* |
| Panama | 33,979 | 12,464 | 46,444 | *17,955* | *159%* |
| Thailand | 2,206 | 11,960 | 14,167 | *17,294* | *-18%* |
| Vietnam | - | 9,474 | 9,474 | *14,034* | *-32%* |
| *Others* | | | | | |
| Cambodia | 2,648 | - | 2,648 | | |
| Cyprus | 883 | - | 883 | | |
| Honduras | 441 | - | 441 | | |
| Lithuania | 441 | - | 441 | | |
| Malta | 1,324 | - | 1,324 | | |
| Sierra Leone | 2,206 | - | 2,206 | | |
| Singapore | 3,530 | - | 3,530 | | |
| **Grant Total** | **1,364,029** | **5,024,054** | **6,388,083** | **6,388,083** | **0%** |

**Table 6: Estimates of Shift in Fiscal Burden with Lower Service Costs**
Using Revised WCPFC-FFA BMS Service Level Agreement Costs (US$)

| Member | Proposed | | | Current Total 2011 (D) | % Change in Total (C-D)/D |
|---|---|---|---|---|---|
| | Vessel Operator Portion (A) | Member Contribution Portion (B) | Total (C) | | |
| Australia | 3,237 | 91,485 | 94,723 | 123,490 | -23% |
| Canada | - | 87,246 | 87,246 | 118,110 | -26% |
| China | 101,798 | 251,142 | 352,939 | 330,523 | 7% |
| Cook Islands | 10,791 | 35,929 | 46,720 | 50,488 | -7% |
| European Union | 9,352 | 301,471 | 310,824 | 399,072 | -22% |
| Federated States of Micronesia | 12,590 | 53,461 | 66,051 | 73,017 | -10% |
| Fiji | 23,381 | 38,475 | 61,856 | 53,592 | 15% |
| France | 7,194 | 98,737 | 105,931 | 133,102 | -20% |
| Japan | 309,349 | 1,023,830 | 1,333,180 | 1,335,125 | 0% |
| Kiribati | 12,230 | 39,004 | 51,234 | 54,224 | -6% |
| Korea | 61,510 | 644,189 | 705,699 | 840,878 | -16% |
| Marshall Islands | 10,072 | 108,362 | 118,434 | 144,341 | -18% |
| Nauru | - | 20,373 | 20,373 | 30,048 | -32% |
| New Zealand | 2,518 | 125,540 | 128,058 | 167,279 | -23% |
| Niue | - | 22,015 | 22,015 | 32,206 | -32% |
| Palau | - | 28,592 | 28,592 | 40,871 | -30% |
| Papua New Guinea | 2,518 | 239,303 | 241,821 | 314,355 | -23% |
| Philippines | 18,705 | 166,459 | 185,163 | 219,794 | -16% |
| Samoa | - | 23,472 | 23,472 | 34,076 | -31% |
| Solomon Islands | 360 | 30,494 | 30,854 | 43,154 | -29% |
| Chinese Taipei | 362,226 | 579,708 | 941,934 | 756,947 | 24% |
| Tonga | - | 21,165 | 21,165 | 31,081 | -32% |
| Tuvalu | 1,439 | 22,240 | 23,678 | 32,462 | -27% |
| United States of America | 67,265 | 645,987 | 713,252 | 846,435 | -16% |
| Vanuatu | 45,323 | 138,464 | 183,787 | 183,416 | 0% |
| **Totals** | **1,061,860** | **4,837,142** | **5,899,002** | **6,388,083** | **-8%** |
| *Cooperating Non-Members* | | | | | |
| Belize | 2,878 | 11,144 | 14,022 | *16,278* | *-14%* |
| Ecuador | 4,317 | 20,731 | 25,048 | *28,733* | *-13%* |
| El Salvador | 719 | 19,784 | 20,504 | *27,498* | *-25%* |
| Indonesia | 3,237 | 51,847 | 55,084 | *69,164* | *-20%* |
| Senegal | - | 9,171 | 9,171 | *13,686* | *-33%* |
| Mexico | - | 19,476 | 19,476 | *27,257* | *-28%* |
| Panama | 27,698 | 12,412 | 40,110 | *17,955* | *123%* |
| Thailand | 1,799 | 11,910 | 13,709 | *17,294* | *-21%* |
| Vietnam | - | 9,435 | 9,435 | *14,034* | *-33%* |
| *Others* | | | | | |
| Cambodia | 2,158 | - | 2,158 | - | - |
| Cyprus | 719 | - | 719 | - | - |
| Honduras | 360 | - | 360 | - | - |
| Lithuania | 360 | - | 360 | - | - |
| Malta | 1,079 | - | 1,079 | - | - |
| Sierra Leone | 1,799 | - | 1,799 | - | - |
| Singapore | 2,878 | - | 2,878 | - | - |
| **Grant Total** | **1,111,859** | **5,003,054** | **6,114,913** | **6,388,083** | **-4%** |

**Table 7: Estimates of Shift in Fiscal Burden with Increased Vessel Numbers**
Using number of Active Vessels on the WCPFC Record of Vessels (US$)

| Member | Proposed | | | Current Total 2011 (D) | % Change in Total (C-D)/D |
|---|---|---|---|---|---|
| | Vessel Operator Portion (A) | Member Contribution Portion (B) | Total (C) | | |
| Australia | 48,684 | 91,869 | 140,553 | 123,490 | 14% |
| Canada | 994 | 87,613 | 88,606 | 118,110 | -25% |
| China | 181,819 | 252,196 | 434,015 | 330,523 | 31% |
| Cook Islands | 12,916 | 36,079 | 48,996 | 50,488 | -3% |
| European Union | 50,174 | 302,737 | 352,911 | 399,072 | -12% |
| Federated States of Micronesia | 15,400 | 53,685 | 69,085 | 73,017 | -5% |
| Fiji | 46,697 | 38,637 | 85,333 | 53,592 | 59% |
| France | 60,606 | 99,152 | 159,758 | 133,102 | 20% |
| Japan | 660,707 | 1,028,128 | 1,688,835 | 1,335,125 | 26% |
| Kiribati | 18,877 | 39,167 | 58,045 | 54,224 | 7% |
| Korea | 136,612 | 646,893 | 783,505 | 840,878 | -7% |
| Marshall Islands | 13,910 | 108,817 | 122,727 | 144,341 | -15% |
| Nauru | - | 20,459 | 20,459 | 30,048 | -32% |
| New Zealand | 3,477 | 126,067 | 129,545 | 167,279 | -23% |
| Niue | - | 22,107 | 22,107 | 32,206 | -31% |
| Palau | - | 28,712 | 28,712 | 40,871 | -30% |
| Papua New Guinea | 17,387 | 240,307 | 257,694 | 314,355 | -18% |
| Philippines | 304,522 | 167,157 | 471,679 | 219,794 | 115% |
| Samoa | - | 23,570 | 23,570 | 34,076 | -31% |
| Solomon Islands | 2,484 | 30,622 | 33,106 | 43,154 | -23% |
| Chinese Taipei | 968,210 | 582,141 | 1,550,351 | 756,947 | 105% |
| Tonga | 994 | 21,254 | 22,248 | 31,081 | -28% |
| Tuvalu | 4,471 | 22,333 | 26,804 | 32,462 | -17% |
| United States of America | 83,955 | 648,698 | 732,653 | 846,435 | -13% |
| Vanuatu | 57,129 | 139,045 | 196,174 | 183,416 | 7% |
| **Totals** | **2,690,023** | **4,857,446** | **7,547,469** | **6,388,083** | **18%** |
| *Cooperating Non-Members* | | | | | |
| Belize | 3,974 | 11,191 | 15,165 | *16,278* | *-7%* |
| Ecuador | 4,968 | 20,818 | 25,786 | *28,733* | *-10%* |
| El Salvador | 994 | 19,867 | 20,861 | *27,498* | *-24%* |
| Indonesia | 201,690 | 52,064 | 253,754 | *69,164* | *267%* |
| Senegal | - | 9,210 | 9,210 | *13,686* | *-33%* |
| Mexico | - | 19,558 | 19,558 | *27,257* | *-28%* |
| Panama | 32,290 | 12,464 | 44,755 | *17,955* | *149%* |
| Thailand | 2,484 | 11,960 | 14,444 | *17,294* | *-16%* |
| Vietnam | - | 9,474 | 9,474 | *14,034* | *-32%* |
| *Others* | | | | | |
| Cambodia | 2,484 | - | 2,484 | - | - |
| Lithuania | - | - | - | - | - |
| Malta | - | - | - | - | - |
| Sierra Leone | 5,961 | - | 5,961 | - | - |
| Singapore | 994 | - | 994 | - | - |
| St Kitts and Nevis | 2,484 | - | 2,484 | - | - |
| **Grant Total** | **2,953,810** | **5,024,054** | **7,977,864** | **6,388,083** | **25%** |

## Annex I: Terms of Reference

**CONSULTANCY STUDY ON OPTIMIZATION OF WCPFC PROGRAM OPERATIONAL COSTS, INCLUDING THROUGH COST RECOVERY**

**TERMS OF REFERENCE**

1. These terms of reference (TORs) are for an independent consultancy to be competitively and transparently tendered by the Secretariat, and supported by the 2011 budget of the Commission. The Secretariat will advise CCMs of the process to tender the consultancy prior to contacting the consultant(s).

2. Recognizing that the following principles will be among the considerations that guide CCMs regarding the issues covered by this consultancy, the contracted consultant(s) shall also, as appropriate, consider the following when undertaking the work outlined in these TORs:
   - Fairness and equity across those that use and/or benefit from the services;
   - Cost-effectiveness;
   - Divisibility of the goods and services provided/resourced;
   - Achieving, where possible, cost savings on current services provided;
   - Avoiding disproportionate burdens on any CCM, particularly Small Island developing States and territories;
   - Minimizing or avoiding paying for goods and services more than once;
   - Enabling cost-recovery programs and the budget of the Commission to evolve and be responsive over time to changing priorities and needs;
   - Ensuring regional or national programs do not unduly subsidize the programs of the Commission; and
   - Utilizing the capacity of existing regional, or sub-regional or national programs to perform certain technical secretariat functions for cost savings to minimize costs to members of the Commission, to the extent possible.

3. The scope of the consultancy shall include:
   a. the Commission VMS;
   b. the Commission Regional Observer Program;
   c. the WCPFC Record of Fishing Vessels;
   d. fees for carrier and bunker vessels; and
   e. registration fees for observer delegations to Commission meetings.

4. The consultancy shall also analyze overall efficiencies in the Commission programs, with a focus on those items detailed in paragraph 3 above and identify areas where greater efficiencies could be realized. The consultancy shall develop options for such areas that may result in reductions in the overall budget without compromising Commission operations.

5. The consultancy shall also analyze how a cost recovery scheme could result in shifts in contributions among CCMs, taking into account the formula set out Rule 5 of

the Commission's financial regulations. In this regard, the consultancy shall analyze how any cost recovery system, besides contribution formulas, is employed by other international organizations.

6. The tasks of the consultancy shall include:

   a. **General** (to apply to each item identified in paragraph 3)
   b. Identify and break-down the full range of goods and services and associated costs of each program listed in paragraph 3, including services being provided by national programs, other organizations and service providers that are not currently covered by the Commission's budget;
   b. Identify which category of costs (e.g., fixed, variable, indirect and overhead costs) would most appropriate and practical to be fully recovered, partly recovered, or not recovered at all;
   c. Identify users, and the amount of benefits they accrue from the programs identified in paragraph 3 above;
   d. Examine "relative usage" (i.e., not all vessels are "using" the same amount of services) and identify options for recovery of varying amounts based on such usage;
   e. Develop scenarios for optimization of the services currently being provided;
   f. Develop options for the methods of cost recovery (directly at vessel level or through CCMs, or via fees or levies associated with other activities, such as fishing in high seas of the Convention Area), and whether they will require new services, personnel, or infrastructure (such as accounting and invoicing systems) in the Secretariat and at what cost; and
   g. Examine options for pro-rata arrangements to address partial usage of programs on a vessel and CCM basis.

**Vessel Monitoring System**

   h. Identify the costs for vessels already on the FFA Vessel Register and what costs are unique to being part of the WCPFC Pacific VMS;
   i. Examine the application of the VMS to different vessel gear types and ALC types and how costs would vary among them;
   j. Determine how fees are charged to fishing vessels or CCMs by other RFMOs or relevant regional, sub-regional or national intuitions or organizations, and how those fees are calculated and assessed; and
   k. Compare the costs of reporting directly to the Commission VMS versus the FFA system.

**Regional Observer Program (ROP)**

   l. Identify those goods and services that are most appropriate to leave to national or regional programs versus those most appropriately provided by the Commission via the Secretariat;
   m. Identify the potential cost of services of the ROP in the future, and create a funding scheme based on projected higher levels of coverage and the extension of the program to gears or areas of the Convention Area that are not currently covered by the ROP; and.
   n. Determine how fees are charged to fishing vessels or CCMs by other RFMOs or relevant regional, sub-regional or national institutions or organizations, and how those fees are calculated and assessed.

**Carriers and bunker registration fees**

p. Examine the costs of observer deployment on such vessels, and how it may be different than for deployments on purse-seine or longline vessels given possible differences in tasks, trip length, etc, and identify how this can best be serviced (e.g., using existing programs, a service provider, etc.);
q. Examine the costs of participation in the VMS for such vessels; and
r. Identify any other "vessel specific costs" that should be captured.

**Register of Fishing Vessels**

s. Determine what if any fees are charged by other RFMOs or other relevant regional, sub-regional or national institutions or organizations;

**Observer delegations**

t. Determine what if any fee is charged to observer delegations by other RFMOs or other relevant regional, sub-regional or national institutions or organizations, and how those fees are calculated and assessed.

6. With respect to the VMS item, in order to fully understand the impact of VMS costs, the consultants will have full access to all relevant cost information from all WCPFC VMS data providers (e.g., SATCOMS, ARGOS and the FFA) in order to carry out this study.

7. The contracted consultant(s) shall prepare a report in accordance with these TORs that will be provided to Secretariat 75 days prior to TCC7. The Secretariat will review and provide comment on the draft report within 15 days of receipt. The consultant(s) shall provide a revised draft addressing the comments received to the Secretariat within 15 days. The Secretariat shall circulate the report to CCMs at least 30 days in advance of TCC7. TCC7 will provide advice and recommendations to WCPFC8 regarding the report.

8. The Finance and Administration Committee (FAC5) will also review the consultancy report and provide its advice and recommendations to WCPFC8.