

Information Paper 2

Original: English

**SPC Division of Fisheries, Aquaculture
and Marine Ecosystems (FAME)**

2013 Draft Work Plan



DIRECTOR'S OFFICE OBJECTIVES AND OUTPUTS

Objective 1: To develop and sustain effective relationships between the division and its stakeholders.

Results	2013 Activities
<p>1.1 Programme plans and activities that respond to the needs and priorities of members</p>	<ul style="list-style-type: none"> • Revised strategic plan 2013–2016 prepared, reviewed and approved • 2013 work programmes developed by early March, with >80% implementation of activities during the year • Full Heads of Fisheries meeting is held in Noumea in March, with discussion of strategic plan and work programmes; also SciCOFish steering committee • Effective participation by FAME in 4 JCS missions; JCS reports used as basis for activity planning in 2013 • Regular visits to member Fisheries Departments for consultations; meet with all heads of fisheries on fringes of regional meetings; regular email communications • Ad-hoc requests for information and advice from member countries addressed • Support development of Institutional Strengthening projects in at least 1 country (in conjunction with FFA and AusAID) • Contribute to development of Oceanscape initiative, complete gap analysis and funding proposals • FAME annual report for 2012 completed by February • Other Divisional reporting and administrative requirements – to CRGA, donors and others – are met
<p>1.2 Effective working relationships maintained with other regional agencies and development partners</p>	<ul style="list-style-type: none"> • FFA/SPC colloquium successfully completed, with follow-up actions undertaken • Joint SPC/WorldFish/ACIAR project approved and implementation begun • Contribute to MSWG meetings (twice during the year) and submissions to CROP Heads and Forum • Reporting requirements on SciCOFish and other cross-programme projects are met with timely disbursement of funds • Discussions concluded on EDF10 regional top-up funds and continue on possible programmatic approach to EU funding under EDF11 • Improved collaboration with other Divisions and agencies (FAO, CTI) in implementing climate change projects • Improved collaboration with other Divisions and agencies in implementing climate change projects • SPC lead discussions on fisheries/climate change research needs through the PACENET programme • New SPC document management and management information (IRIS) systems are improved and bedded down in FAME • FAME effectively represented in executive management of SPC

Objective 2: To promote informed policy decisions and public awareness of marine resource issues and climate change in the Pacific.

Results	2013 Activities
<p>2.1 Policy-makers and the general public are better informed of marine resource issues, climate change impacts, the importance of fisheries and the need for management action</p>	<ul style="list-style-type: none"> • FAME communication plan for the period is implemented in collaboration with Econnect, with any amendments that may be needed • Information materials on careers for women in fisheries science prepared and disseminated • At least four new SPC ‘policy briefs’ on key fisheries issues written and distributed • 4 countries assisted with the preparation of climate change adaptation plans for the fisheries sector • 4 in-country workshops on climate change and fisheries completed • Awareness materials or policy-related documents are designed and produced for at least three countries or territories • All new FAME-produced documents are made available to the general public on SPC website • FAME and CFP websites are continually updated and improved • Regional media are regularly informed of regional marine resource issues, and FAME activities and outputs, through the provision of press releases, radio interviews and articles for newspapers/magazines • Most country visits by Director include media releases or interviews • Assistance is provided to ACPFish2 Project “Building capacity of ACP member states of SPC in information sharing and communication for fisheries management”
<p>2.2 Stakeholders in PICTs are fully informed of the results of SPC activities, and shared experience and knowledge across the region</p>	<ul style="list-style-type: none"> • 3 issues of the <i>SPC Fisheries Newsletter</i> are published in English and French in colour • 6 issues of SPC's Special Interest Group Information Bulletins, related to important marine resource issues, are published in French and English • An updated version of SPC Fisheries Address Book, which gives access to more than 1700 regional fishery-related contacts, is produced and distributed • 2012 FAME annual report and other documents required during the year are laid out, printed and distributed • An updated fully searchable digital library with all FAME publications available in digital format is produced on a DVD, which is distributed throughout the region, and on SPC's website • Results of SPC activities are documented in various media, such as the SPC website and the SPC Fisheries Newsletter • Continue distribution effort to circulate materials currently held in storage to member countries, including for vocational training. • Further projects implemented to develop materials to introduce fisheries into schools’ curriculum

COASTAL FISHERIES PROGRAMME OBJECTIVES AND OUTPUTS

Objective 1: To assist governments and administrations in the development of scientifically informed and socially achievable coastal fisheries management policies and systems in line with guiding principles of the “Apia Policy”.

Results	2013 planned activities
<p>1.1 Assessment of the status of national coastal living marine resource user groups, impact on resource, existing impact management systems, and the current status of the resources themselves, in order to inform management</p>	<ul style="list-style-type: none"> • Aquarium trade baseline assessments and monitoring report / management arrangements including capacity development and attachment training in Noumea completed for 8 countries • Post larval capture and culture assessment and reporting for invertebrates and finfish in 2 PICTs • SPC represented at sub-regional, regional and international aquarium trade workshops or meetings • Aquarium trade awareness / education / information materials developed and distributed; including organising workshops • Coastal fisheries creel and market survey manual developed and published • Field test market and/or creel surveys manuals with capacity development and attachment training in at least 4 PICTS • Biological sampling work including otolith reading, capacity development and attachment training to SPC for at least 5 PICTs • Finfish UVC survey assessment training completed in Fiji • In water invertebrate resources field assessment, capacity development (including attachments), data entry, analysis and reporting undertaken in 6 countries • An invertebrate survey manual finalised and published • Coastal fisheries awareness / educational / information materials produced and distributed • Regional databases for all coastal fisheries data established, upgraded, maintained • Installation of micro servers, development and maintenance of national coastal fisheries databases (including information and GIS) and provide capacity development / attachment training in a 8 Pacific ACPs • New Caledonia: Installation of micro servers, development and maintenance of national coastal fisheries databases (including information and GIS) and provide capacity development / attachment training • Undertake Ad Hoc requests as requested
<p>1.2 Assistance to members, in partnership with other stakeholders, in developing an appropriate mix of community-based approaches and national management arrangements, incorporation of ecosystem-based principles, and the review of coastal fisheries legislation</p>	<ul style="list-style-type: none"> • Assistance and advice provided in national policy development, regulation / legislation reviews / management arrangement in 6 countries • Advice provided for institutional strengthening studies in 2 countries • CFP/FAME is represented and input provided at sub-regional, regional or international meetings/workshops relating to coastal fisheries management

Results	2013 planned activities
<p>1.3 Assistance to members in assessing impacts of climate change on marine environments and assisting coastal communities to respond effectively to climate change</p>	<ul style="list-style-type: none">• Adaptation activities including capacity development identified and implemented in Kadavu, Fiji• Consultant reports addressing the specific terms of reference for different components of the Kadavu project• Awareness materials produced in Fijian and distributed to communities on the island of Kadavu and elsewhere in Fiji• Project staff hired and the implementation of activities on Kadavu overseen by the project staff• Marine resources, especially sea cucumbers, are sustainably managed and capacity developed in Tokelau• Adaptation opportunities assessed for Tokelau and materials purchased for suitable activities and the activities implemented• Climate Change adaptation pilot sites identified, established, work plans developed and adaptation activities implemented in at least 4 PICTs• SPC represented at sub-regional, regional and international climate change and/or community based management workshops or meetings• 5 PICT Attachments completed on otolith assessment, resources monitoring entry, interpretation (in collaboration with IRD) and other biological sampling• Re-survey completed on pilot sites in 3 PICTs (resource assessment, creel and market surveys) capacity development in survey methods and temperature loggers and data maintained• Reporting completed on Climate Change monitoring including attachment training in Noumea for 3 PICTs• SPC represented at sub-regional, regional and international climate change and/or MPA workshops or meetings

Objective 2: To provide a regional framework for sustainable aquaculture, in the areas of planning, research, development and trade, for Pacific Island governments, private enterprises and other stakeholders.

Results	2013 planned activities
<p>2.1 Improved regional and national capacity for strategic policy, planning and administration to establish clear priorities and enable the aquaculture sector to meet current and future needs, with the guidance of the Regional Aquaculture Strategy 2013</p>	<ul style="list-style-type: none"> • New/updated National Aquaculture Plan completed for 3 countries • Aquaculture programme Needs assessment completed for 4 PICTs • Aquaculture portal up to date with all materials • Presentation and report from SPC at international aquaculture conferences/workshops • Improved several strategies for policy, planning and administration of aquaculture in the region • National aquaculture legislation completed for 2 PICTs • Policy briefs completed on outcome of regional aquaculture assessments studies • New/updated National Aquaculture Plan completed for Fiji
<p>2.2 Increased skills and knowledge base in the SPC region and its member countries and territories, so as to maximise the return on investments in aquaculture through innovative, profitable and sustainable approaches</p>	<ul style="list-style-type: none"> • Outcomes of SPC independent studies, conference and workshop proceedings are published • Fact sheets published on regional aquaculture commodities • Report on recommendations and way forward for trochus reseedling in Palau • Investigate feasibility of Mud Crab (new production area) and export (import substitution) potential in Fiji • Feasibility of aquaponics undertaken in 2 PICTs • Pearl Business Training in Fiji • Demonstration site of aquaculture farmer networks/clusters established in 3 PICTs • Report produced on importation standards and requirements for key export markets for aquaculture products • Increased proportion of PACP aquaculture exporters are HACCP compliant • Assistance provided to 2 new IACT Enterprises • Report completed which reviews current practices and areas for improvement in the New Caledonia shrimp industry • Report completed on training activities and results (year 1 of 3) of JICA funded Part II Grace of the Sea Project in Vanuatu • Report completed on nursery and pen culture trial of sandfish in Kiribati • Improved seaweed culture and production in 3 countries • Mariculture hatchery facilities established in 4 countries • Report completed summarising results of scallop and lobster projects • Sub-regional training workshops conducted in seaweed farming, fish broodstock management, fish-feeds formulation and production, and milkfish capture-based culture • Training attachment completed on mariculture for 2 PICTs • Technical factsheets produced on mariculture aquaculture commodities for New Caledonia • Maintain a watching brief on freshwater fisheries (focus on PNG) and opportunities for culture based fisheries • Sub-regional training workshops conducted for 5 PICTs on fish broodstock management and fish-feeds formulation • Report and workshop to review current status, future potential, and researchable constraints of aquaponics in PICTs • Establishment of a demonstration aquaponics facility in Marshall Islands • Develop national capacity to implement a trial of freshwater prawn M. lar capture based culture in Samoa

Results	2013 planned activities
2.2 (Cont.)	<ul style="list-style-type: none"> • Develop sea cucumber and other mariculture commodities methodologies and improve capacity on mariculture development (3 years) in PNG • Collaboration in Solomon Islands MFMR and WorldFish inland aquaculture research, and supervision of 3 post-graduate students on project, over 3 year period • Aquaculture feasibility report and workshop, based upon hatchery and pond trials of the prawn <i>Macrobrachium spinipes</i> indigenous to PNG • Aquaculture ad hoc requests by 3 PICTs
2.3 Systems established and/or supported, using science-based approaches to manage aquatic biosecurity risks and to facilitate trade	<ul style="list-style-type: none"> • National aquatic biosecurity policy & legislation completed for 3 PICTs • Advice provided on introductions and quarantine requirements on aquaculture. • A Micronesia sub-regional biosecurity framework developed • Provide training attachment to 1 PICT on aquatic biosecurity • Report on the current status of viral pathogens in <i>Macrobrachium</i> prawns in Cook Islands, Fiji, Vanuatu and PNG

Objective 3: To develop sustainable nearshore fisheries in PICTs to provide food security, livelihoods, economic growth and climate change adaptation.

Results	2013 planned activities
<p>3.1 Subsistence, artisanal, sport and industrial fishing activities within the sustainable production level of the available fisheries resources</p>	<ul style="list-style-type: none"> • National technical assistance provided to strengthen FAD programmes in at least 5 PICTs • 2013 practical safety, fishing and financial management course for Fisheries Officers conducted to improve fishing vessel operations and small boat safety practices • Training in mid-water fishing methods and onboard handling of fish completed for CNMI to improve fishing efficiency and vessel operations. • National training in vessel operations and safety at sea completed to enhance fishing vessel operations and safety at sea practices in at least 2 PICTs • National Fisheries diversification projects implemented to transfer fishing effort from reef fish to more resilient marine resources in at least 3 PICTs • Assistance provided to develop national sport fishing tourism to improve livelihoods through introduction of non-destructive fishing operations in at least 4 PICTs • Fisheries education project started in the region to introduce fisheries in school curricula in at least 2 PICTs • National fishing association sustainability strategies and plans developed for at least 2 PICTs • Regional fishing association sustainability strategy and plans developed and implemented • Training provided to fisheries association Executive Officers on sustainability strategies and plans to strengthen the associations • Training in fish handling provided to SMEs, associations and artisanal fishers to meet sanitary requirements of importing countries • University internship program on sanitary requirements for exports expansion developed and implemented • Industrial attachment on sanitary requirements for exports expansion for one SME • PNA purse seine crewing agency supported to address management issues and skills shortage in sub-regional purse-seine fishing • Fishing vessel crew certification review undertaken • At least 4 pilot projects in support of small-scale tuna fisheries in the region • Sub-regional training conducted on OBM repairs for small-scale tuna fishers to improve small boat safety • Nearshore FAD development workshop conducted to strength small-scale tuna fisheries sector in Timor-Leste
<p>3.2 Improved economic viability of fisheries investments through analysis, evaluation and capacity development in financial skills</p>	<ul style="list-style-type: none"> • National economic assessment of fisheries, aquaculture or climate change adaptation projects/ businesses in at least 2 PICTs • National FAD data collection systems established in at least 2 PICTs • Economic sea cucumber project completed - report, policy brief, HoF presentation, implementation plan • Regional training in financial management, economics, project management and governance conducted at NMIT • Training courses in financial management, economics, project management and governance conducted in at least 4 PICTs • National economic tourist surveys are established in at least 2 PICTs • Publication of resource materials on fisheries economics

Results	2013 planned activities
3.3 Optimum benefits from the resource through improved seafood quality standards and value-adding	<ul style="list-style-type: none">• Fish waste utilization promoted and facilitated in the region to improve livelihoods and the environment• National fish waste utilization projects supported to improve livelihoods and the environment in at least 2 PICTs• National training in fish handling and safety for export markets completed in at least 2 PICTs• Technical assistance and advice provided to National Competent Authorities/Fisheries Administrations in at least 4 PICTs• Technical assistance and advice provided to at least 4 fisheries private sector enterprises• Regional Fish Inspectors Training provided to PICTs• Regional thermal Process training provided in 3 stages (Better Process Control, Retort supervisor & Auditing)• National training courses conducted on seafood safety, quality, value adding to meet requirements of export destinations in at least 2 PICTs• Production of resource materials on seafood safety and quality• Technical advice in seafood safety and quality provided

OCEANIC FISHERIES PROGRAMME OBJECTIVES AND OUTPUTS

Objective 1: To provide high-quality scientific information and advice for regional and national fisheries management authorities on the status of, and fishery impacts on, stocks targeted or otherwise impacted by regional oceanic fisheries.

Results	2013 planned activities
<p>1.1 Regional oceanic fisheries management policy and decision-making by WCPFC are informed by the best science-based stock assessment and advice</p>	<ul style="list-style-type: none"> • Technical advice and presentations made to WCPFC meetings • Regional stock assessments and related analyses undertaken for WCPFC • Implementation of the recommendations from the independent review of the bigeye tuna stock assessment • Analyses undertaken to support the adoption of reference points, harvest control rules, and management measures for WCPO fisheries • Internal management of software and tools used to conduct regional stock assessments • Shark Research plan implemented • Annual Tuna Fisheries Assessment Report (TFAR) produced
<p>1.2 FFA and sub-regional oceanic fisheries management initiatives are supported by the best science-based stock assessments and advice</p>	<ul style="list-style-type: none"> • Technical support provided and reports presented to the meetings of the Forum Fisheries Committee (FFC) • Technical support provided and reports presented to the Sub-committee for South Pacific Tuna and Billfish (SC-SPTBF) • Technical support provided and reports presented to the Parties to the Nauru agreement (PNA) • Technical advice provided and reports presented to Te Vaka Moana • Report identifying the nature and extent of the contraction of the range of yellowfin tuna in the WCPO • Bioeconomic analyses of the regional longline and purse seine fisheries in the WCPO
<p>1.3 National tuna oceanic fisheries policy and decision-making by SPC MEMBERS are informed by the best science-based stock assessments and advice</p>	<ul style="list-style-type: none"> • Issue Specific National Report (ISNR) completed on artisanal fisheries interactions for 7 PICTs • Updated country website for six PICTs • Country reports on Fish Aggregation Device (FAD) closure impacts updated • Issue Specific National Report completed on purse seine bycatch and catch retention for 10 PICTs • Issue Specific National Report completed on a topic to be determine by Heads of Fisheries for specific countries • Estimates of potential returns from bioeconomic models developed for national longline fisheries • Attachments from three members complete stock assessment-related analyses • Reports/analyses completed and technical advice provided for meeting on Fiji TBOA MSC certification process • Country-specific technical advice and capacity building delivered through in-country workshops for five countries • Bioeconomic analyses completed for the French Polynesia longline fishery • Bioeconomic analyses completed for the French Polynesia longline fishery
<p>1.4 Enhanced capacity of SPC MEMBERS to interpret stock assessment information and advice</p>	<ul style="list-style-type: none"> • Attachments from x members complete stock assessment-related analyses • Support provided to the current WCPFC Scientific Committee Chair

Objective 2: To provide high-quality fishery monitoring services, analysis services and capacity development to support the management of oceanic fisheries by regional, sub-regional and national fisheries management authorities.

Results	2013 planned activities
2.1 WCPFC is provided with efficient and cost-effective fishery monitoring and analytical services to support regional oceanic fisheries	<ul style="list-style-type: none"> • Estimates provided of purse-seine catch composition by target species and size • Estimates provided of purse-seine catch composition by non-target species • Estimation updated of selectivity bias based on paired spill and grab samples collected by observers on purse seiners • Paired spill and grab sampling experiments conducted on purse seiners
2.2 Enhanced national oceanic fishery monitoring by SPC MEMBERS to meet national and international obligations	<ul style="list-style-type: none"> • Comparison of species compositions determined from observer grab and spill samples, and port sampling of landing categories at Noro, Solomon Islands • Documentation of the standard spill sampling protocol • 9th Meeting of the SPC/FFA Tuna Fishery Data Collection Committee • Competency Based Training (CBT) and other PIRFO standards developed, and other technical support provided to national observer programmes • Data collection forms, sampling manuals, species guides, training videos, newsletters and other information • MOUs developed and updated with members for the provision of technical support and funding of sampling programmes • In-country technical support for tuna and artisanal data systems provided for 4 PICTs • Attachment training in fishery monitoring • Support for national observer and port sampling programme
2.3 Enhanced capacity of SPC MEMBERS in fisheries monitoring, data management and data use	<ul style="list-style-type: none"> • At least ten basic observer training courses, sub-regional or national, including pre-selection of participants and training of trainee trainers • Three debriefer training courses conducted for observers(sub-regional or national) • 13th Regional Observer Coordinators Workshop • 2nd PIRFO Trainer Assessors' Workshop • Annual Regional Tuna Data Workshop • National tuna data workshops conducted in 2 PICTs

Objective 3: To provide high-quality data management services and capacity development to support the management of oceanic fisheries by regional, sub-regional and national fisheries management authorities.

Results	2013 planned activities
<p>3.1 WCPFC is provided with efficient and cost-effective data management services to support regional oceanic fisheries</p>	<ul style="list-style-type: none"> • Complete and accurate WCPFC databases (Annual catch estimates, Aggregated catch and effort data, Operational (logsheet) data, Aggregate Size composition data) • Shark species data incorporated into WCPFC databases • Standard SC9 papers produced and presented • Ad hoc SC9 papers produced and presented as required • Western and Central Pacific Fisheries Commission (WCPFC) Tuna Fishery Yearbook (2012), containing annual catch estimates by gear type, flag and species compiled and published on WCPFC web site • Scientific web pages on the WCPFC website – BMIS, data provision tables, ROP data provisions - are maintained and updated in a timely manner according to requirements • Western and Central Pacific Fisheries Commission (WCPFC) Scientific data are disseminated to members and others according to the WCPFC rules and procedures • Western and Central Pacific Fisheries Commission (WCPFC) public domain data are compiled and published on the WCPFC website before December 2013 • Western and Central Pacific Fisheries Commission (WCPFC) ROP data have been entered, verified (data quality control) and made available for WCPFC work in a timely manner • Advice on ROP data management issues are provided to the Western and Central Pacific Fisheries Commission (WCPFC) Secretariat, including SC and TCC papers, where relevant • Tuna Fisheries Observer Data Management System (TUBs) VIEWER system is made available to the WCPFC Secretariat and staff trained • Ad hoc ROP Data summaries are provided to Western and Central Pacific Fisheries Commission (WCPFC), as required • Advice on data-related procedures of the Commission, are provided to the Western and Central Pacific Fisheries Commission (WCPFC) Secretariat, as required • Data summaries for the evaluation of conservation and management measures (CMMs) have been prepared and made available in WCPFC meeting papers • Catch data summaries to determine Western and Central Pacific Fisheries Commission (WCPFC) member budget contributions have been compiled and provided to the WCPFC Secretariat before 15th September 2013 • Monthly updates of tuna fishery database systems (CES and Observer trip viewer) provided to WCPFC Secretariat • Training provided to Western and Central Pacific Fisheries Commission (WCPFC) Secretariat staff in using CES and TUBS Viewer • National annual catch estimates and data review workshops have been conducted in Indonesia, Philippines and Vietnam • The latest data management software (Tuna Fisheries Database Management System-TUFMAN and NSAP systems) and training provided to Indonesia, Philippines and Vietnam • Annual audits of data collection and management system conducted in Indonesia, Vietnam and Philippines

Results	2013 planned activities
3.1 (Cont.)	<ul style="list-style-type: none"> • WPEA data from Indonesia, Vietnam and Philippines have been imported into Western and Central Pacific Fisheries Commission (WCPFC) databases for use in 2013 stock assessments
<p>3.2 The oceanic fisheries management initiatives of FFA and other sub-regional fisheries organisations are supported by efficient and cost-effective data management services</p>	<ul style="list-style-type: none"> • FFA vessel register data imported and made available in Regional databases • Basic regional licensing data imported and made available in Regional databases • Common standards for Reference tables are established, used and maintained between SPC and FFA • Tuna Fisheries Database Management System- Monitoring Control and Surveillance (TUFMAN MCS) database have been enhanced in national offices in collaboration with FFA and data feed back to FFA for regional MCS work • Technical advice provided at Regional MCS Working Group • Technical advice provided at Regional Licensing Officers Workshop • Tools that assist in Regional MCS work are developed and implemented, as requested by FFA • Technical input provided at regional MCS operations, as required • Analyses to detect extent of IUU fishing are undertaken, presented to the MCS Working Group and documented in a report • Tuna Fisheries Observer Database Viewer (TUBS VIEWER) training provided to FFA and PNA Office staff, as required • US Treaty and FSM Arrangement observer data audited and imported into regional observer database • US Treaty and FSMA PS-4 forms entered into regional observer database • Appropriate technical support provided for the TUBS observer database installation at FFA • The regular exchange of relevant data related to Tuna Fisheries Observer Management systems (OPM/TUBSMAN) has been undertaken between SPC and FFA • An annual on-site audit of the FFA-entered observer data has been conducted • TUBS VIEWER (Tuna Fisheries Observer Trip Viewer) System made available to at least THREE member countries • OFP DM staff have enhanced capacity to better support TUB VIEWER /Observer Trip Viewer Systems during in-country visits • Ongoing support for the TUBS (observer database system) installations -- Four member countries • A master OBSERVER TRIP database table containing basic information on observer ALL trips conducted by sub-regional and national observer programmes is regularly updated and made available for coverage estimates • TUBS (observer database system) is regularly maintained and supported at WCPFC offices including training of WCPFC ROP data entry staff • Site visit to integrate TUBS (observer database system) into national IMS system • Observer Debriefing Database System is regularly updated and data summaries accessible to users • Observer Data Auditing System is developed and operational, according to the Observer data auditing DEVELOPMENT LOG

Results	2013 planned activities
3.2 (Cont.)	<ul style="list-style-type: none"> • OBSERVER DATA ENTRY Helpdesk maintained and operational, with data summaries readily available to users • A new data quality control module post-entry OBSERVER checking system developed and operational within OFP • Regular updates of the CES data system are provided to the FFA Secretariat, PNA Office and the Te Vaka Moana (TVM) Secretariats • Enhanced database holding catch estimates by EEZ incorporating VMS-Logsheets reconciliation coverage rates • Catch and Effort Query System (CES) training provided to FFA, PNA Office and TVM staff, as required • US Treaty and FSMA logsheet, port sampling and unloading data imported/entered into regional databases • SPC/FFA data exchange protocols are enhanced as required and presented at annual SPC/FFA Colloquium • Standard papers for US Treaty Annual Consultation (Overview of PS fishery and review of US MLT observer and port sampling data) • Data summaries and reports are prepared and provided for TVM initiatives • Data summaries a prepared and provided to FFA in their preparation for WCPFC sessions • Catch and Effort Query System training provided to FFA, PNA Office and TVM staff, as required • US Treaty and FSMA logsheet, port sampling and unloading data imported/entered into regional databases • Data summaries and reports are prepared and provided in support of the PNA purse seine and longline vessel days scheme • Ongoing support provided to the PNA Fisheries Management Information System (FMIS) initiative, including the development of a licensing report from national TUFMAN systems • FFA and WCPFC Vessel Monitoring System (VMS) data imported into SPC VMS aggregate databases
3.3 Enhanced national oceanic fishery data management by SPC MEMBER COUNTRIES to meet national requirements and international obligations	<ul style="list-style-type: none"> • MCS capabilities to identify Illegal, Unreported, Unregulated fishing are available in member country database systems • Observer data are registered, entered, verified, quality controlled and provided to member countries on a regular basis • Observer data received in electronic format are imported into the regional databases and provided to member countries on a regular basis • In-country Tuna Fisheries Observer Data Management System (TUBs) Data audit conducted in PNG • E-Reporting initiatives have been identified, funded, then successfully trialled with reports and recommendations available • Logsheets, port sampling and unloading data are registered, entered, verified, quality controlled and provided to member countries on a regular basis • Logsheets, Port sampling and unloading data received in electronic format are imported into the regional databases and provided to member countries on a regular basis • Improvements in the quality and timeliness of scanned data provisions from member countries to SPC • Updated versions of Tuna Fisheries Database Management System (TUFMAN) systems are remotely installed in fisheries offices on a regular basis



Results	2013 planned activities
<p>3.3 (Cont.)</p>	<ul style="list-style-type: none"> • National tuna fishery data management staff are trained and competent in using TUFMAN during in- country visits -- Four member countries • Training resources for TUFMAN and TUF-ART systems have been developed and available to users • Assistance provided to countries to improve national capacity through funded data entry positions in PALAU • New TUF-CES Query system developed and available to internal OFP users • Logsheet, Port sampling and unloading data received in electronic format are imported into the regional databases and provided to member countries on a regular basis • The new Logentry data entry/verification database systems with MS SQL back-end has been developed • Vessel Monitoring System (VMS) data use in Tuna Fisheries Database Management System (TUFMAN) and – Tuna Fisheries Observer Database (TUBs) is enhanced according to requirements in DEVELOPMENT LOG • Tuna Fisheries Database Management System (TUFMAN) Logsheet data Audit System is developed and operational • In-country Tuna Fisheries Database Management System (TUFMAN) Data audit conducted in 4 PICTs • Remote audits of Tuna Fisheries Database Management System (TUFMAN) data conducted at SPC • Port sampling data has been quality controlled on a regular basis • A new data quality control module post-entry LOGSHEET checking system developed and operational within OFP • The tools used to determine the coverage of logsheet data are enhanced • Workbooks, standards and general documentation for data quality control and auditing are developed and available • Data gaps within countries are identified through regular standardised AUDITS. Data gaps are documented, and advice provided to countries regarding submission of missing data • Logsheet, port sampling and unloading data are registered, entered, verified, quality controlled and provided to member countries on a regular basis • Logsheet, Port sampling and unloading data received in electronic format are imported into the regional databases and provided to member countries on a regular basis • Observer data are registered, entered, verified, quality controlled and provided to member countries on a regular basis • Observer data received in electronic format are imported into the regional databases and provided to member countries on a regular basis • SPC/OFP in-country web pages support data summaries for the WCPFC Part 1 Annual Report
<p>3.4 Enhanced capacity of SPC MEMBER COUNTRIES in oceanic fishery data management and data use</p>	<ul style="list-style-type: none"> • Assistance provided to countries to improve their fisheries IT infrastructure – Provision of new network servers and related equipment and Network Auditing • Ad hoc national support through provision of data summaries and advice is provided to member countries during WCPFC meetings • Enhancements incorporated into Tuna Fisheries Database Management System (TUFMAN), as per the TUFMAN DEVELOPMENT LOG, with high priority work listed below

Results	2013 planned activities
3.4 (Cont.)	<ul style="list-style-type: none">• Enhanced Catch and Effort Database (CES) systems provided to member countries, as per the CES DEVELOPMENT LOG, with high priority work listed below• Enhanced Tuna Fisheries Artisanal Database system (TUF-ART) provided to member countries, as per the TUF-ART DEVELOPMENT LOG, with high priority work listed below• OFP DM staff have enhanced capacity to better support Tuna Fisheries Database Management System (TUFMAN) during in-country visits• Formalised and advanced regional IMS (Information Management Systems) and E-Reporting initiatives through planning meetings for the benefit of member countries• Site visit to integrate TUFMAN into national IMS system (Two countries)• An in-country hardware/software minimum standards document is maintained and used for planning support to member countries• National tuna data workshops conducted in PICTs in liaison with Fisheries Monitoring Section -- Two countries• The Seventh Annual Tuna Data Workshop (April 2013) was conducted• Training attachments at SPC in data management principals and database systems for member-country fisheries officers• Assistance provided to countries to improve their fisheries IT infrastructure - Provision of new scanners• Assistance provided to member countries to prepare their Part 1 National Reports for WCPFC SC

Objective 4: To improve understanding of pelagic ecosystems in the western and central Pacific Ocean.

Results	2012 planned activities
<p>4.1 Enhanced data on the biological characteristics of oceanic species and their environment are available to support stock assessment and ecosystem-based fisheries management</p>	<ul style="list-style-type: none"> • Cruise Reports for 2013 campaigns • WCPFC-SC-IP detailing implementation of PTTP, updated database including data validation, scientific papers on mixing rates, horizontal and vertical movements and PTTP overview • Annual report detailing implementation of logbook, observer and port sampling systems and research cruises to collect biological information • Three country specific web portals for accessing DWS fishery Information • 5 peer reviewed scientific papers on tuna biology parameters for stock and ecosystem models • Updated Trophic Ecology database to support marine spatial planning, ecosystem, biodiversity and CC reporting
<p>4.2 Appropriate ecosystem models and analyses are available to inform ecosystem-based fisheries management</p>	<ul style="list-style-type: none"> • Scientific papers on (1) the use of Seapodym in fisheries management and (2) applications of the model to albacore • 22 country specific web portals for accessing Seapodym Information • 22 country specific web portals for accessing CC Information
<p>4.3 Improved knowledge of the impacts of climate change on oceanic ecosystems to inform adaptation</p>	<ul style="list-style-type: none"> • Scientific Paper on Primary research on the impacts of increasing atmospheric CO₂ • WCPFC-SC_IP on using alternative oceanographic climate forcing • Technical training of attachments • Scientific paper on projected effects of CC on south Pacific albacore • Technical support for CC adaptation provided to 11 PICTs and 2 subregional organisations
<p>4.4 Regional oceanic fisheries policy and decision-making by WCPFC is informed by science-based information and advice on ecosystem issues</p>	<ul style="list-style-type: none"> • Database updated & Annual report • Annual report to Tuna Regional Fisheries Management Organisations
<p>4.5 FFA's ecosystem-based fisheries management initiatives are supported by the best scientific information and advice</p>	<ul style="list-style-type: none"> • Advice to FFA as requested
<p>4.6 Ecosystem-based management of oceanic fisheries by SPC members is supported by the best scientific information and advice</p>	<ul style="list-style-type: none"> • TufART data management system used in 4 PICTs • Web-based outreach • 3 Pacific Island scientists in post-graduate programs