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Background Paper 3

Policy on the governance of fisheries, aquaculture and marine ecosystems (FAME) data provided to SPC by its members [draft]

FAME Secretariat

Policy on the governance of fisheries, aquaculture and marine ecosystems data provided to SPC by its members

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Contents

1. Background

1.1 Fisheries, aquaculture and marine ecosystems related data underpins the effective monitoring and assessment of regional and national fisheries resources. It is a fundamental requirement for scientific analyses, with the subsequent advice contributing to informed decisions to ensure the conservation and sustainable use of the relevant stocks.

1.2 SPC through its Fisheries, Aquaculture and Marine Ecosystems Division (FAME) provides data management services to its members. These data management services include:

a. ensuring members' fisheries, aquaculture and marine ecosystems data are secure and safe, by adopting appropriate data security solutions and protocols;

b. developing data warehouses, databases, database management and reporting systems to facilitate management and integration of members' data, and the authorised access of members' data to legitimate users of that data;

c. providing capacity assistance, audits and general feedback on quality control processes to ensure continual improvement in data collection and management processes in members;

d. responding to standing requests and where possible, *ad hoc* and formal requests for data extracts, summaries and/or analyses of members' data.

2. Purpose

2.1 This policy provides an overarching data governance framework for the handling of this data, covering data ownership, security, data sharing, integration and dissemination. It also helps implement other relevant regional and sub-regional data governance policies and formal arrangements relevant to the member data managed by FAME.

2.2 The purpose of this policy is to ensure that:

a. the rights of members are addressed with respect to the handling of their fisheries, aquaculture and marine ecosystems data;

b. there is a clear understanding of ownership of the data and knowledge products;

c. there is clear classification of the data and knowledge products as either public domain or non-public domain;

d. there is reference to existing data sharing arrangements agreed by members and used by FAME to disseminate data to authorised users;

e. there is an agreed formal process for the provision of data to third parties;

f. the expectations of members regarding SPC's role in facilitating the security, management, curation and authorised dissemination of their data are clear.

3. Definitions

3.1 The following definitions are taken to apply for the purposes of this policy.

Term	Definition
Data	All fisheries, aquaculture and marine ecosystems data provided to FAME. The types of data covered are listed in at **Appendix A**. Each data type is categorised as either 'public' or 'non-public' data.
Data governance	The people, processes, and information technology required to ensure that data and knowledge products are appropriately handled. It encompasses the following areas: a. data consistency, including standards in acquiring data, how data are stored and used; b. data integrity, including the quality, accuracy and validity of data; c. data security, including the use of tools and technology to ensure the protection of data from unauthorized access, loss, corruption, or theft, and; d. data availability, including the methods and processes by which data are accessible and may be disseminated.
Knowledge products	Journal reports, technical reports, conference papers, internal reports, Issue-specific national reports (ISNRs), or any other product where analysis has added value to the raw data
Member/SPC Member	A country or territory that is a member of the Pacific Community. Each member may have one or more government departments or agencies that handles fisheries, aquaculture and marine ecosystems data.
Non-public domain data	Data that carries an obligation of confidentially. The data may be only be shared with other parties on certain conditions.
Public domain data	Data that may be made publicly available with no restrictions.

4. Scope

4.1 This policy provides guidance on the handling of:

    a. data collected, acquired or compiled by or for an SPC member that have been provided to and curated by FAME;

    b. data collected, acquired or compiled directly by FAME in partnership with an SPC member;

    c. data provided to FAME by an inter-governmental organisation, including the Pacific Islands Forum Fisheries Agency (FFA), the Office of the Parties to the Nauru Agreement (PNAO) and the Western and Central Pacific Fisheries Commission (WCPFC), on behalf of an SPC member;

    d. knowledge products generated by SPC using any such data.

4.2 This policy does not cover:

    a. data collected and provided to SPC directly by non-government partners such as NGOs, academic institutions, civil society or consultants;

    b. license-protected data available to SPC (e.g. satellite imagery data).

4.3   SPC will endeavour to facilitate access by members to data collected by third-party entities through other mechanisms (for example, other policies or through MOUs).

5. Roles and responsibilities

5.1   Members, SPC and third-party recipients all have separate responsibilities under this policy.

Members

5.2   Members will:

   a.   advise FAME on the status of the member's data, including the risk level, rules of access, changes to data-related national legislation and policies, changes to data collection and database systems;

   b.   implement data acquisition (collection) systems that align to national requirements and regional standards (where established and relevant, for example the SPC/FFA/PNAO Data Collection Committee regional tuna fisheries data collection requirements). The protocols for national data acquisition (collection) systems will include mechanisms to ensure unbiased and high-quality data are acquired and adhere to regional standards for data quality control (where established and relevant);

   c.   implement data management (database) systems (with or without assistance from regional/sub-regional fisheries agencies) that align to national requirements and regional standards (where established and relevant). Data management (database) systems will include mechanisms to manage and check the quality of data acquired and adhere to regional standards for data quality control (where established and relevant). Data management (database) systems should also include mechanisms that facilitate the extraction of detailed and summarised data according to national requirements.

SPC

5.3   SPC, and in particular FAME, will:

   a.   serve as regional curator (repository) of national and regional data, for the long-term protection and security of that data. Responsibilities as regional curator include the maintenance of records of data receipts and data releases through the data request process. Designated FAME Data Management staff will be responsible for the curation of national and regional data within SPC;

   b.   implement appropriate measures to ensure the security of national and regional data held at SPC in line with any relevant SPC information security policies or guidelines, which would include the need for data security audits;

   c.   provide technical advice and capacity development in establishing, maintaining and reviewing national data acquisition (collection) and data management (database) systems;

   d.   provide technical advice and capacity development in data quality control and auditing national data acquisition (collection) and data management (database) systems;

   e.   implement systems to resolve issues in erroneous and incomplete data on behalf of members, where possible;

f.   conduct analyses of national data for the benefit of members and/or the region, with applicable authorisations;

g.   facilitate third-party access to national data on behalf of the members according to data type and the dissemination rules established in this policy. A list of a member's data provisions to third parties will be available to the member;

h.   engage with members to facilitate and enhance the access of data to *bona fide* third-party users while ensuring the interests of the members are not compromised;

i.   ensure FAME staff handling data are familiar with this policy, and are aware of their obligations under SPC's Code of Conduct to maintain confidentiality;

j.   ensure FAME consultants requiring access to data are vetted and cleared for access, and are required to sign a data non-disclosure/confidentiality agreement. Consultant contracts will include clauses obliging them to comply with this policy;

k.   take measures to act on breaches of the non-disclosure/confidentiality agreements which would include in the first instance, the immediate cessation of provisions of data and prohibiting data access;

l.   store any raw/hard-copy/original data provided to SPC (which may be in scanned format for efficiency purposes) and facilitate access of these archived data back to members, as and when required.

Third party data recipients

5.4   Third-party data recipients are required to:

a.   actively engage with FAME and members, to ensure there is no misinterpretation of the data by the third party;

b.   in the case of non-public domain data, ensure there is adherence to the requirements set out in the Data Request and Data Non-disclosure / Confidentiality Forms, including that:

    i.   the data will not be used for any reasons other than those outlined in the 'purpose' section of the data request form;

    ii.   the data are properly protected, and are only accessed by authorised parties;

    iii.   they do not disseminate data without proper authorisation;

    iv.   Data are deleted/destroyed upon completion of the usage for which the data are being requested.

c.   when using member data in a knowledge product, invite the relevant fisheries officers from that member to be recognised as co-contributors/co-authors of the knowledge product that uses member data that product, and acknowledge the relevant member in the product.

6. Ownership of data

6.1   Data collected by a member or by FAME on behalf of the member are, by default, owned by the member unless otherwise agreed.

6.2 A member and SPC may enter into a mutually agreed written arrangement providing data ownership rights to SPC.

6.3 Data provided to FAME by a member are, by default, considered to be 'non-public data', unless otherwise advised by the member, or identified in Appendix A as 'public' data.

6.4 Unless otherwise agreed, SPC will own data that have been collected directly by FAME staff through regional and sub-regional projects, and in some cases, national projects, where that data are fishery-independent data relevant to scientific work conducted by SPC staff, for example tagging and in-situ field survey data.

7. Management of data

SPC staff obligations

7.1 All SPC staff are bound by the SPC Code of Conduct and are obliged to maintain the confidentiality of any information that they receive in the course of their duties (Chapter II, *Manual of Staff Policies*). A breach of the code of conduct is a disciplinary action.

7.2 Data will be held in line with any existing SPC information security policies, guidelines and processes (see **Appendix B**) relevant to data stored on SPC's premise. The relevant areas include but are not restricted to:

  a. privacy and confidentiality;
  b. backups;
  c. offsite backups;
  d. penetration testing;
  e. business continuity planning;
  f. emergency response and recovery plan details;
  g. cloud data storage.

7.3 FAME will liaise with members with respect to the data they provide to SPC, will maintain a record of each member's data, and will provide formal acknowledgement of receipt of data.

7.4 SPC will confirm with members, when data are first provided, of any additional or specific data access or restrictions on use that they wish to impose.

7.5 Members will be informed of a breach in data security involving their data.

Data risk rating

7.6 The data provided to FAME by members are given a default 'risk' classification and a dissemination category (**Appendix A**), based on the resolution and typical confidentiality level of the data type.

7.7 Data will by default be considered "high" risk where it contains confidential information about legal entities (e.g. persons, companies or vessels), where there are national laws that forbid the dissemination of this type of data, or where certain data provided in 'real-time' or 'near real-time' are of a highly sensitive nature. Data will by default be considered "medium" risk where it is deemed by the owner of the data to be non-public domain data. Public domain data will be considered "low" risk by default.

7.8 Data with a risk classification of "medium" or "high" may be:

  a. used by FAME;

  b. provided by FAME to FAME consultants, with appropriate authorisation and confidentiality requirements;

  c. shared under existing data access or sharing agreements (**Appendix C**).

7.9 In all other circumstances for data with risk classification of "medium" or "high" or data types not listed in **Appendix A**, SPC is required to seek authorisation from the relevant member/s and require the third party to sign a non-disclosure/confidentiality agreement, if the authorisation is granted by the relevant member/s.

7.10 Any types of data not included in **Appendix A** should be considered as 'high risk' with a 'non-public' dissemination category until such time as FAME and relevant members agree on its status and it is added to this table.

7.11 Data that is low risk has no restrictions on its use.

8. Use of data

8.1   Members authorise FAME to use member data according to agreed work and consistent with the technical assistance services provided to members. FAME will comply with any additional restrictions that members impose on the use of data. These restrictions may be imposed unilaterally or through an existing regional, sub-regional or bilateral data dissemination and data sharing arrangements (**Appendix C**).

8.2   FAME will facilitate and manage access to member's data by other SPC Divisions, according to agreed work and consistent with the technical assistance services provided to members.

8.3   Use of member data by FAME does not require additional authorisation, unless the data are intended to be shared with third parties without further authorisation to do so.

8.4   FAME may hire consultants to assist with its work. These consultants will be subject to confidentiality clauses (see paragraph 5.3(j))

8.5   FAME will ensure that any knowledge product it prepares using member data will adhere to the rules established for the dissemination of data. Non-public domain data owned by a member can be used by SPC to produce knowledge products with the authorisation of that member (or members).

8.6   When SPC prepares knowledge products that use member data, SPC will invite the relevant staff/fisheries officers from that member to be recognised as co-contributors/co-authors to that product and will acknowledge the relevant member in the product.

8.7   Public domain data and data owned by SPC can be used by SPC to prepare knowledge products without any authorisation. SPC will facilitate member's access to public domain data and data owned by SPC which is relevant to that member.

8.8   FAME staff are to use the checklist at **Appendix D** before using any data.

9. Data sharing and request for access to data

9.1   SPC will encourage members to allow data to be made available in the public domain after an agreed period and after the data have been desensitized to ensure the protection of individuals (personal data), national and economic interests (see **Appendix C**).

Member requests for non-public domain data

9.2   Member requests for data will adhere to the data request process described in this policy and often be communicated using email and should require a formal response by email from FAME, even in the case of requests for public domain data. FAME will make all efforts to understand the members' needs in requesting the data.

9.3   When an agency or government department requests data from FAME that was supplied by a different agency or government department from the same member, FAME will direct the requesting agency to the providing agency.

9.4   FAME staff are to use the checklist at **Appendix E** when receiving a member request for non-public domain data.

Requests from third parties for non-public domain data

9.5   If a third-party requests 'non-public domain' data, then FAME will check if there are any relevant data sharing arrangements that allow the data to be provided to the requesting entity, and where necessary, notify the relevant members (so they are aware of the potential data use, possible publication, etc.).

9.6   If there are not any relevant data sharing arrangements, then FAME will follow the Data Request Process at **Appendix F**.

9.7   FAME will seek the member/s authorisation before releasing any non-public domain data.

9.8   The third party will be required to fill in a request for non-public domain data (**Appendix G**) and will be required to sign a non-disclosure and confidentiality agreement (**Appendix H**).

Public domain data dissemination

9.9   Public domain data can be requested by members or third parties.

9.10 Once the data being requested has been identified as 'public domain', FAME may provide it. SPC will record the basic details of the request and the basic details of the data provided (including when/who/what data were provided).

9.11 Members may formally advise FAME what they deem to be in the public domain and authorise SPC to facilitate access to public domain. FAME will manage the notifications by members for any of their data that should be considered 'public domain', including any licensing or other relevant information attached to the data set.

9.12 SPC may publish public domain data using the Pacific Data Hub and other relevant websites. FAME will ensure relevant information is published with the public domain data including the sources of data and metadata.

10. Data retention

10.1 SPC provides a secure service for curating and protecting member's historical data. SPC will retain all historical digital files and data provided by members, by default. SPC will only dispose of member data held at SPC when advised by the member. Members may impose a condition to dispose of the data when those data are provided to SPC.

10.2 In the event SPC no longer has the capacity to retain the data provided by members, a decision to either return the full historical data to the members or provide the data to another authorised entity will be made in consultation with members.

11. Monitoring and review

11.1 This policy will be reviewed, updated and adopted as required.

11.2 The annual monitoring of data disseminated by SPC according to the requirements of this policy may be reported to Head of Fisheries each year, on request.

APPENDICES

A. Types of data, indicative risk classification and dissemination categories

Data type		Indicative Risk classification	Indicative Dissemination category
Operational level catch/effort data		High	Non-public
Annual catch estimates stratified by gear/flag and species for the WCPFC Statistical Area.		Low	Public (WCPFC)
Annual catch estimates stratified by gear/flag, EEZ and species.		Low	Public (WCPFC)
Aggregated catch and effort data stratified by gear/year/month, 5x5 (LL) or 1x1 (surface), and flag, NOT FILTERED and members data only.		Medium	Non-public
Aggregated catch and effort data stratified by gear/year/month, 5x5 (LL) or 1x1 (surface), and flag, filtered to remove the cells representing the activities of less than three vessels.		Low	Public (WCPFC)
Biological sampling data		Low	Public (WCPFC)
Tagging data		Low	Public (WCPFC)
FAD Tracking data		High	Non-public
FAD Beaching data		Medium	Non-public
Vessel Monitoring data		High	Non-public
Observer data		High	Non-public
Port Sampling data		Medium	Non-public
Field resource survey data (fishes, invertebrates)		Medium	Non-public
Market & landing surveys data		High	Non-public
Marine habitat and coral survey data		Medium	Non-public
Exports & other economic data		High	Non-public
Socio-economic survey data		High	Non-public
Coastal Monitoring, Control & Surveillance data		High	Non-public
Licensing data		High	Non-public
Hatchery and farm production data		Low	Non-public
Aquatic animal health data		High	Non-public
Knowledge product	Journal reports, Technical Reports, Conference/Meeting papers, fisheries newsletters and articles, etc.	Low	Public
	Internal reports, Issue-specific national reports (ISNRs), secure country web pages, etc.	High	Non-public

B. Relevant Data Security Policies/Guidelines

Policy	Applies to	Impact
Chapter II 'Code of Conduct, duties and obligations', Manual of Staff Policies	SPC staff	Imposes obligations of confidentiality and privacy on SPC staff (http://purl.org/spc/digilib/doc/ezww2)
Acceptable use of ICT resources guidelines	SPC staff	Describes security and other requirements SPC staff are to uphold when using SPC's ICT resources.
Privacy Policy	SPC staff	Imposes obligations on handling of personal information (http://purl.org/spc/digilib/doc/fbire)
WCPFC Information Security Policy	SPC-OFP staff under WCPFC contractual arrangements	Secures SPC member data stored at SPC (https://www.wcpfc.int/doc/data-03/information-security-policy)
FFA Information Security Management System Policy	SPC staff	Secures FFA member data stored at SPC (https://www.ffa.int/isms-policy)

C. Existing data dissemination/sharing arrangements

Regional and sub-regional data dissemination/sharing arrangements

Arrangement	Applies to	Reference
Niue Treaty Subsidiary Arrangement (NTSA)	All FFA members	
WCPFC rules for access and dissemination of data	All SPC members	https://www.wcpfc.int/doc/data-02/rules-and-procedures-protection-access-and-dissemination-data-compiled-commission
US Multilateral Treaty	All FFA members	
PNA members data sharing MOU	All PNA members	
Ninth Meeting of the Heads of Fisheries (HoF-9) Decisions	All SPC Members	Outcome 9 or the HoF-9 Report https://fame1.spc.int/meetings/228-9th-spc-heads-of-fisheries-meeting *Validated raw data from resource surveys (e.g. in-water fisheries independent surveys) and socio-economic surveys (e.g. household and fisher interviews) conducted by FAME with an SPC member are to be considered open access 5 years after the survey, subject to data desensitization.*

National data dissemination/sharing MOUs/arrangements

Arrangement	Applies to	Reference
Kiribati-SPC MOU for data sharing to other FFA and PNA members	All PNA members	
<Bilateral authorisations and conditions provided through MOUs, an official communication or other instruments … >		

D. Checklist for use of data by FAME

Before using data, FAME should consider the following questions:

1. Where did the data originate from? Who are the owners? What are the owners' conditions?

2. Have you received advice from the relevant FAME data manager to use the data?

3. Does this data use adhere to requirements in the *Policy on the governance of fisheries, aquaculture and marine ecosystems data provided to SPC by its members*?

4. What is the data categorisation and risk classification of the data to be used?

5. Does SPC need additional permission from the respective members to use the data?

6. Who is the anticipated audience for the outputs?

7. Has there been an internal peer review of the analyses/outputs using the data to check for any misinterpretation of the data?

8. Does the output produced from the data use need referral to the respective members before it is disseminated?

9. What are the restrictions on the dissemination of the output produced from the internal data?

E. Checklist when receiving a member request for non-public domain data

1. Before providing the data to an interested entity, FAME should consider the following questions:

   a. Where did the data originate from? Who are the owners? Is the member requesting its own data, or already have access to these data through a data sharing arrangement?

   b. Is one agency or government department requesting data that was provided by another agency or government department from the same member?

   c. What is the data categorisation and risk classification of the data to be used?

   d. If the data are non-public domain, are these data are available through existing regional, sub-regional, bilateral and national data dissemination and data sharing arrangements formally agreed by members?

2. If the data are in the public domain, they can be provided without further checks.

3. If there are no data sharing arrangements applicable to non-public domain being requested, then the FAME Data Request process is required. Please note that the data request process will be necessary in cases when one agency is requesting data from another agency through SPC.

4. FAME will record the basic details of the request and the basic details of the data provided (including when/who/what data were provided), particularly if this is a standing request for the annual provision of data.

F. FAME Data Request Process

The FAME Data Request Process includes the following steps:

1. Request or contact made by interested entity to Designated FAME Data Management staff or other FAME staff.
2. Data identified as non-public domain.
3. Are there any concerns or conflicts of interest in who is requesting the data and what for?
4. The FAME data request form is to be sent to the entity requesting the data. This might require a few communications if the purpose and details of data requested is not clear.
5. FAME will seek authorisation from member(s) (through the relevant agency) for the release of their non-public domain data using the completed SPC data request forms. This step might require several follow-ups and could also be approached through relevant regional meetings.
6. If the request for the release of non-public domain data is authorised by the member, then the FAME Non-Disclosure Agreement (NDA) form is to be signed and the data prepared and sent to the requesting entity with explanatory notes, where relevant.
7. FAME will record the basic details of the request and the basic details of the data provided (including when/who/what data were provided) and attach this information to the relevant NDA.
8. The entity requesting the data will be required to submit draft knowledge products (reports, publication, data summaries, etc.) that they produced from the non-public domain data for review by FAME and the relevant members to ensure the requirements for data confidentiality and the protection of members interests are assured.
9. FAME will follow-up to ensure the data provided are deleted by the entity requesting the data at the end date of its nominated use, which will include a signed communication that data have been deleted.

G. FAME Non-Public Domain Data Request Form

REQUEST FOR NON-PUBLIC DOMAIN FISHERIES, AQUACULTURE AND MARINE ECOSYSTEMS DATA

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1.   Data Requested

The specification of data being requested should refer to the type of data and any parameters relevant to the type of data, which may include, the gear types, time periods, geographic areas and fishing nations covered, and the level of stratification of each parameter.

[Insert the list of requested data sets here]

2.   Purpose

The purposes for which non-public domain will be used are to be listed. If approved, the data will only be authorised for the purpose described below.

[Insert the description of the purpose here]

3.   Persons for Whom Access to the Data is Requested

The name(s), job title(s) and affiliation(s) of the person(s) for whom access to the data is being requested are to be listed. Only those people will be authorised to use the non-public domain data.

[Insert the list of persons here]

4.   Confidentiality Agreement for the Receipt of Non-Public Domain Data

I/we agree to the following:

• *The data shall be used only for the purpose for which the data are being requested, be accessed only by the individuals listed in (3) above and be destroyed upon completion of the usage for which the data are being requested.*

• *Prior to the publication of any report of an analysis for which the requested data will be used, the report shall be provided to and cleared by the SPC FAME Division, which shall ensure that no non-public domain data will be published.*

[Insert the name(s) and signature(s) of all persons listed in (3) above, and the date, here]

H. FAME Data Non-disclosure / Confidentiality Form

FISHERIES, AQUACULTURE AND MARINE ECOSYSTEMS,
DATA DISSEMINATION
NON-DISCLOSURE / CONFIDENTIALITY AGREEMENT

Confidentiality Agreement for the Receipt of Non-Public Domain Data

Name of requestors	
Institution, address and contact details	
FAME contact officer	
FAME Deputy Director	
SPC Reference Number	

Attach the relevant and completed FAME Non-Public Domain Data Request Form to this Non-Disclosure/Confidentiality form.

I/we agree:

1. That the data shall be used only for the purpose for which the data are being requested, be accessed only by the individuals listed in Item 3 of the Data Request Form, and be destroyed upon completion of the usage for which the data are being requested. A signed communication shall be sent to FAME stating that the data have been destroyed;

2. To make no unauthorised copies of the data. If a copy of all, or part, of the data requested is made by the applicant, all copies, or part thereof, will be registered with FAME and will be destroyed upon completion of purpose for which the data was requested;

3. To abide by the data security standards as specified in the Policy on the governance of fisheries, aquaculture and marine ecosystems data provided to SPC by its members;

4. That prior to the publication of any report or presentation of an analysis for which the requested data will be used, the report shall be provided to, and cleared by, the relevant FAME Deputy Director, who shall ensure that no non-public domain data will be published;

5. To provide copies of all published reports of the results of the work undertaken using the data released shall be provided to FAME;

6. To not disclose, divulge, or transfer, either directly or indirectly, the confidential information to any third party without the written consent of the relevant FAME Deputy Director;

7. To promptly notify the FAME, in writing, of any unauthorized, negligent or inadvertent disclosure of confidential information provided through this arrangement;

8. To assume all liability, if any, in respect of a breach of this Confidentiality Agreement, once the data requested is released to the applicant(s);

9. That permission to use the data may be unilaterally terminated by FAME giving written notice at any time;

10. To abide by the following specific conditions attached to use of the data imposed by the relevant Deputy Director FAME:

    a. [insert condition 1]

    b. [insert condition 2]

Applicants' name(s) and full contact details and signatures:

Full name	Signature	Date