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y la
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COORDINATING WORKING PARTY ON FISHERY STATISTICS

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CCAMLR REPORT

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SUMMARY

CCAMLR has undertaken further developments in fishery statistics and related information since CWP-21 in 2005. This work has included:

- Enhancement of a resolution seeking further collaboration with RFMOs to reduce the incidental mortality of seabirds arising from fishing;
- The further development of the Catch Documentation Scheme for *Dissostichus* spp. (CDS);
- The further development of the centralized Vessel Monitoring System (VMS); and

In 2004, CCAMLR adopted Resolution 22 seeking further collaboration with RFMOs to reduce the incidental mortality of seabirds arising from fishing. CCAMLR seeks standard information on incidental catches of seabirds and other species taken from fishing on grounds within the geographic range of species found in CCAMLR's Convention Area (i.e. the Southern Ocean, Statistical Areas 48, 58 or 88). Specific RFMOs, including some CWP Members, are encouraged to develop or establish mechanisms to collect, report and disseminate data on incidental mortality of seabirds. In addition, in areas where such mechanisms are currently unavailable or where systematic data reporting has not commenced, Flag States fishing outside CCAMLR's Convention Area are encouraged to provide CCAMLR with summary data on the incidental take of seabirds of species which breed in the Southern Ocean.

The CDS has been extended through the introduction of an electronic, web-based catch and export documentation system and the publication of landing and trade statistics derived from the Scheme in the CCAMLR *Statistical Bulletin*.

A centralised VMS was established in the CCAMLR Secretariat in 2004 and Contracting Parties are required to report the positions of their vessels operating in fisheries targeting finfish, crab or squid in the Convention Area on a four-hourly basis. Position reports are required to be forwarded to the Secretariat in real-time for those vessels participating in new and exploratory fisheries, and on departure from the Convention Area for other fisheries.

AGENCY REPORT

Main purpose and usage of statistics

Fishery statistics are used primarily to monitor, assess and manage fisheries in the CCAMLR Convention Area (Southern Ocean, Statistical Areas 48, 58 and 88). Summary statistics are published annually in the CCAMLR *Statistical Bulletin* (http://www.ccamlr.org/pu/e/e_pubs/intro.htm). This annual summary includes landing and trade statistics derived from CCAMLR's Catch Documentation Scheme for toothfish (*Dissostichus* spp.).

Catch and effort data structure, geographical and temporal resolution and length of time series

Catch and effort data reported to CCAMLR include: date, position, depth, fishing duration, gear characteristics and catch by species, including by-catch and incidental catches. The data are submitted on a haul-by-haul basis. Some historical data are aggregated by fine-scale rectangle (e.g. by 0.5 x 1.0 degree rectangle) and 10-day period.

Catch and effort data held by CCAMLR include:

- Fishery catch and effort reports (quasi real-time reports every 5-days, 10-days or monthly depending on the fishery);
- Haul-by-haul catch and effort data;
- Haul-by-haul scientific observer data; and
- STATLANT data (form 08B aggregated by statistical region and month).

The length of the time series varies, from 2-5 years in the case of some new or exploratory fisheries, to greater than 20 years in established fisheries. Some series extend to prior to the ratification of CCAMLR's Convention in 1982.

Area catch data available by EEZ?

Yes. Catches reported in some fishery catch and effort reports and haul-by-haul datasets provide information on fishing in EEZs. STATLANT data may also provide this level of spatial resolution.

Data source

(e.g. official report, scientists' estimates, agency observer program, agency port sampling program)

Data submitted to CCAMLR are reported by Member Countries and other Contracting Parties, and include data collected on board fishing vessels and research vessels, by scientific observers, and through established programs such as CCAMLR's Catch Documentation Scheme and CCAMLR's Ecosystem Monitoring Program.

Availability of retained fish by-catch (non-target) species data

CCAMLR catch data on by-catch species are submitted by Flag States and scientific observers. These data are assessed by CCAMLR's Scientific Committee and Working Groups, and the quality of these datasets is under continual review. The assessment of data quality includes the reconciliation of by-catch data reported in STATLANT data, haul-by-haul data and scientific observer data.

Availability of discard data (including birds and mammals)

CCAMLR data on by-catch rates and composition, including incidental catches of seabirds and marine mammals, are submitted by Flag States and scientific observers. These data are assessed by CCAMLR's Scientific Committee and Working Groups.

CCAMLR encourages CWP Members to further consider ways to improve and standardise the reporting of by-catch species and incidental catches. Specifically, CCAMLR seeks standard information on incidental catches of seabirds and other species taken from fishing on grounds within the geographic range of species found in CCAMLR's Convention Area.

In 2004, CCAMLR adopted a resolution seeking further collaboration with RFMOs to reduce the incidental mortality of seabirds arising from fishing (Resolution 22). This Resolution was revised in 2006 (Attached). CCAMLR invites specific RFMOs (listed below) to implement or develop, as appropriate, mechanisms to collect, report and disseminate data on incidental mortality of seabirds, particularly:

1. Rates of incidental mortality of seabirds associated with each fishery, details of the seabird species involved, and estimates of total seabird mortality (at least at the scale of FAO statistical areas);
2. Measures to reduce or eliminate incidental mortality of seabirds that are in use in each fishery and the extent to which any of these measures are voluntary or mandatory, together with an assessment of their effectiveness;
3. Scientific observer programs that provide comprehensive spatial and temporal coverage of fisheries to allow statistically robust estimation of incidental mortality associated with each fishery.

For areas where such mechanisms are currently unavailable or where systematic data reporting has not commenced, Flag States fishing outside CCAMLR's Convention Area, which incidentally take seabirds of species breeding in CCAMLR's Convention Area (i.e. the Southern Ocean), are requested to provide the CCAMLR Secretariat with summary data.

The RFMOs identified for contact with respect to collaboration on the mitigation of by-catch of southern ocean seabirds are:

- Inter-American Tropical Tuna Commission (IATTC)
- International Commission for the Conservation of Atlantic Tunas (ICCAT)
- South East Atlantic Fisheries Organisation (SEAFO)
- Indian Ocean Tuna Commission (IOTC)
- Commission for the Conservation of Southern Bluefin Tuna (CCSBT)
- Agreement on the Organization of the Permanent Commission on the Exploitation and Conservation of the Marine Resources of the South Pacific, 1952 (CPPS)
- Southwest Indian Ocean Fisheries Commission (SWIOFC)
- Commission for Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific (WCPFC)
- Western Indian Ocean Tuna Organization Convention (WIOTO)
- Southern Indian Ocean Fisheries Agreement (SIOFA)

CWP Members listed above are urged to implement the recommendations of Resolution 22.

Availability of biological data (including size)

Biological data are collected by international and national scientific observers on board all fishing vessels targeting finfish in the Convention Area (100% coverage). Observers are also deployed on board some vessels targeting krill, and fishing crews may also report biological data. Biological data held by CCAMLR include:

- Length and weight;
- Sex, maturity stage and gonad weight;
- Age (from otolith and/or scale);
- Mark-recapture data for toothfish and some by-catch species;
- Feeding intensity (krill); and
- Presence of parasites.

Availability of economic data

Economic data are submitted to CCAMLR on request. In recent years the Scientific Committee has requested that Member Countries submit economic and other data which may be used to determine technological and economic trends in the krill fisheries.

Availability of environmental data

Environmental data are collected as part of CCAMLR Ecosystem Monitoring Program (CEMP) and through surveys of marine debris. Environmental data are also collected during research surveys. Environmental data held by CCAMLR include:

- Extent of sea-ice cover;
- Sea surface temperatures;
- Conductivity-Temperature-Depth profiles; and
- Composition of marine debris.

Catch data verification methods (e.g. trade data)

CCAMLR has implemented a number of measures in recent years to combat illegal, unreported and unregulated (IUU) fishing for toothfish (*Dissostichus* spp.). These measures include:

- Catch Documentation Scheme (CDS);
- Flag State licensing requirement for all vessels in the fisheries;
- Conservation Measures setting catch limits all toothfish fisheries in the Convention Area;
- Mandatory Vessel Monitoring System (VMS);
- Port inspections of vessels carrying toothfish;
- Promotion of compliance by both Contracting and non-Contracting Parties; and
- Marking of vessels and fishing gear.

The CDS aims to:

- Identify the origins of toothfish imported into or exported from the territories of Contracting Parties;
- Monitor the international trade in toothfish;
- Determine whether toothfish imported into or exported from the territories of Contracting Parties, if caught in the Convention Area, was caught in a manner consistent with CCAMLR conservation measures; and
- Gather additional catch data for the evaluation of total removals.

To meet this objective, all landings, transshipments and importations of toothfish into the territories of Contracting Parties and participating non-Contracting Parties must be accompanied by completed Catch or Export Documents specifying a range of information including the name and Flag State of the vessel and the volume and location of the catch and subsequent trade.

The CDS is open to all States involved in the harvest or trade of toothfish and non-Contracting Parties to CCAMLR are encouraged to participate in this Scheme.

An important element of the Scheme is a central database where participating countries can access Catch Documents and related information through a secure Internet connection. CCAMLR has also recently developed an electronic, web-based catch and export documentation system (E-CDS).

Standard summaries of CDS data are published annually in CCAMLR's *Statistical Bulletin*. These summaries include landed weights of *Dissostichus* spp. by year, Flag State of harvesting vessel, area/subarea/division caught (including whether inside an EEZ) and exported and re-exported weights of *Dissostichus* spp. by year, Export State and Import State.

Usage of fishery-independent data

Fishery-independent data are used routinely to assess stocks of finfish and krill in CCAMLR's Convention Area. The data held by CCAMLR are analysed by the Scientific Committee and Working Groups, and the fishery-independent data include:

- fishery survey data (e.g. trawl and acoustic surveys);
- composition and distribution of marine debris; and
- long-term biological and environmental data collected under CEMP.

Reporting policy in relation to nationality of catch

(i)

(ii) *CCAMLR has agreed that, whilst acknowledging that joint ventures may occur, joint ventures should not allow non-CCAMLR flagged vessels to fish inside the Convention Area. Any sort of devolution of the responsibilities of Flag States should be avoided and only vessels under the jurisdiction of CCAMLR Flag States should be issued with licences to fish in the Convention Area (Conservation Measure 10-02). This requirement clarifies the responsibilities attached to CCAMLR Members in respect of any joint ventures to fish in the Convention Area.*

Are countries obliged to report data?

Yes. Requirements for reporting fisheries data are outlined in the Conservation Measures which are reviewed annually and adopted by the Commission by consensus. These measures are published in the Schedule of Conservation Measures in Force (http://www.ccamlr.org/pu/e/e_pubs/intro.htm), and may be incorporated in Members' national legislation.

Do all member countries report data?

Yes. All Member countries involved in research or fishing activities in CCAMLR's Convention Area report data to CCAMLR.

What is included in catch statistics?

(e.g. discards, recreational, fish on-grown in pens, experimental fishing)

Catches of all species taken in the Convention Area are reported, including species caught as by-catch and incidentally, species caught in new and exploratory fisheries, or species taken during the course of research (e.g. trawl survey). Traditional and recreational fishing, and aquaculture, do not occur in CCAMLR's Convention Area.

Observer program

CCAMLR's Scheme of International Scientific Observation was adopted in 1992 under Article XXIV of CCAMLR's Convention. This Scheme is designed to gather and validate scientific information essential for assessing the status of populations of Antarctic marine living resources, and the impact of fishing on populations of harvested, related and dependent species. The conditions of the Scheme are equally applicable to fishing vessels and research vessels. Conservation measures require that at least one international scientific observer, and in some cases two observers, appointed under the Scheme are deployed on each fishing vessel operating in new or exploratory fisheries, or established fisheries targeting finfish, crab or squid. The placement of scientific observers in krill fisheries and other fisheries is encouraged.

Vessel monitoring system

CCAMLR maintains a centralised VMS which is based in the CCAMLR Secretariat (Conservation Measure 10-04). Contracting Parties are required to report the positions of their vessels operating in fisheries targeting finfish, crab or squid in the Convention Area on a four-hourly basis. Position reports are forwarded to the CCAMLR Secretariat in real-time for those vessels participating in new and exploratory fisheries, and on departure from the Convention Area for other fisheries.

Restrictions on access to data

Rules for the access and use of CCAMLR data were established in 1992 so ensure that:

- All data submitted to the CCAMLR Secretariat are freely available to Members for analysis and preparation of papers for use within the Commission, the Scientific Committee and their subsidiary bodies; and
- The originators/owners of the data retain control over any use of their unpublished data outside of CCAMLR.

In 2003, the Commission revised the rules (see http://www.ccamlr.org/pu/e/e_pubs/bd/toc.htm). The underlying principles were retained and the conditions under which data may be exchanged within CCAMLR or used outside of CCAMLR were clarified. Access and use of CDS and VMS data were also considered; these data may be released to CCAMLR Members only under restricted circumstances.

CCAMLR data may be accessed and used in respect of:

- work specifically outlined and endorsed by the Commission or Scientific Committee; or
- work not specifically endorsed by the Commission or the Scientific Committee.

Inclusion of data, analyses or results from data held in the CCAMLR Secretariat into documents tabled at meetings of the Commission, Scientific Committee or one of their subsidiary bodies does not constitute publication and therefore is not a release into the public domain.

Inclusion of data held in the CCAMLR Secretariat into the published reports of the Commission, Scientific Committee, Working Groups, CCAMLR Science, the Statistical Bulletin or any other CCAMLR publication constitutes release into the public domain.

Inclusion of data held in the CCAMLR Secretariat in any publication outside CCAMLR constitutes release into the public domain.

Originators/owners of data have the right to:

- be consulted (including assignation of authorship) on the preparation, if necessary including publication, of documents describing analyses and interpretation of their data;
- approve the level of detail revealed in documents using their data; and
- stipulate terms and/or levels of data security if necessary.

RESOLUTION 22/XXV**International actions to reduce the incidental mortality of seabirds arising from fishing**

Species	seabirds
Area	all
Season	all
Gear	all

The Commission,

Recollecting that the greatest current threats to species and populations of Southern Ocean seabirds breeding in the Convention Area are fishery-related incidental mortality and the potential impact of illegal, unreported and unregulated (IUU) fishing,

Noting the substantial reduction of incidental mortality of seabirds in the Convention Area as a result of conservation measures implemented by the Commission,

Concerned that, despite such measures, many populations of albatross and petrel species breeding in the Convention Area continue to decline and that such reductions in their populations are unsustainable,

Concerned at increasing evidence of fishery-related incidental mortality of seabirds that breed and forage in the Convention Area,

Noting that the seabirds caught are almost entirely albatross and petrel species which are threatened with global extinction,

Recognising that some populations of albatrosses and petrels will not stabilise until total incidental mortality levels are significantly reduced,

Recalling CCAMLR's collaborations with the Agreement on the Conservation of Albatrosses and Petrels (ACAP), a multilateral agreement that provides a focus for international cooperation and exchange of information and expertise towards the conservation of the declining populations of these seabirds,

Recalling repeated attempts to communicate these concerns to RFMOs,

1. Invites listed RFMOs (Appendix 1), consistent with the FAO's Code of Conduct for Responsible Fisheries and the IPOA-Seabirds, to implement or develop, as appropriate, mechanisms to require the collection, reporting and dissemination of annual data on seabird incidental mortality, particularly:
 - (i) rates of incidental mortality of seabirds associated with each fishery, details of the seabird species involved, and estimates of total seabird mortality (at least at the scale of FAO area);
 - (ii) measures to reduce or eliminate incidental mortality of seabirds that are in use in each fishery and the extent to which any of these are voluntary or mandatory, together with an assessment of their effectiveness;
 - (iii) scientific observer programs that can provide comprehensive spatial and temporal coverage of fisheries to allow statistically robust estimation of incidental mortality associated with each fishery.
2. For high-seas areas within the range of seabirds that breed and forage in the Convention Area, where unregulated fishing takes place or where systematic data reporting has not yet

been introduced by listed RFMOs, the Executive Secretary should contact Flag States which have vessels in these areas to:

- (i) express CCAMLR's interest in such seabird species,
 - (ii) indicate the need to require such fishing vessels to collect and report the data specified in paragraph 1 above, and
 - (iii) forward these data to the CCAMLR Secretariat to be made available to ad hoc WG-IMAF.
3. Encourages Contracting Parties to:
- (i) request that the topic of seabird incidental mortality be included on the agenda of meetings of pertinent RFMOs and, where possible and appropriate, to send relevant experts to these meetings;
 - (ii) identify those areas and circumstances where incidental mortality of seabirds that breed and forage in the Convention Area occurs;
 - (iii) identify and continue to develop those mitigation measures which would be most effective at reducing or eliminating such mortality and to require such measures to be implemented in the relevant fisheries.
4. Encourages Contracting Parties involved with new and developing RFMOs to request that incidental mortality of seabirds is adequately addressed and mitigated. Appropriate initiatives might include:
- (i) establishment or expansion of existing observer programs and adoption of appropriate data collection protocols on seabird incidental mortality;
 - (ii) establishment of by-catch working groups that will address incidental mortality issues and make recommendations for practicable and effective mitigation measures, including evaluation of established and innovative technologies and techniques;
 - (iii) evaluations of fishery impacts on the affected seabird populations;
 - (iv) collaborations (e.g. on data exchange) with listed RFMOs.
5. Encourages Contracting Parties to:
- (i) implement, as appropriate, measures to reduce or eliminate seabird incidental mortality;
 - (ii) require their flagged vessels to collect and report the data specified in paragraph 1 above;
 - (iii) report to the CCAMLR Secretariat annually on the implementation of such measures, including their effectiveness in reducing seabird incidental mortality.
6. Requests ad hoc WG-IMAF, at its annual meeting, to collate and analyse reports relating to paragraphs 1, 2 and 5 above and advise the Commission, through the Scientific Committee, on the implementation and effectiveness of this resolution.
7. Further requests the Secretariat to bring this resolution to the attention of the RFMOs listed in Appendix 1 and seek their cooperation on its implementation.

**REGIONAL FISHERIES MANAGEMENT ORGANISATIONS IDENTIFIED
FOR CONTACT WITH RESPECT TO COLLABORATIONS ON THE MITIGATION
OF BY-CATCH OF SOUTHERN OCEAN SEABIRDS**

Inter-American Tropical Tuna Commission (IATTC)

International Commission for the Conservation of Atlantic Tunas (ICCAT)

South East Atlantic Fisheries Organisation (SEAFO)

Indian Ocean Tuna Commission (IOTC)

Commission for the Conservation of Southern Bluefin Tuna (CCSBT)

Agreement on the Organization of the Permanent Commission on the Exploitation and Conservation of the Marine Resources of the South Pacific, 1952 (CPPS)

Southwest Indian Ocean Fisheries Commission (SWIOFC)

Commission for Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific (WCPFC)

Western Indian Ocean Tuna Organization Convention (WIOTO)

The organization does not have regulatory power.

Southern Indian Ocean Fisheries Agreement (SIOFA)