



CCAMLR

Commission for the Conservation of Antarctic Marine Living Resources
Commission pour la conservation de la faune et la flore marines de l'Antarctique
Комиссия по сохранению морских живых ресурсов Антарктики
Comisión para la Conservación de los Recursos Vivos Marinos Antárticos

Proactive Data Analysis to Monitor Compliance and Detect IUU Fishing in CCAMLR

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Training Workshop
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Members of the Commission, Acceding States and cooperating non-contracting parties

26 Members

and

11 Acceding States

and

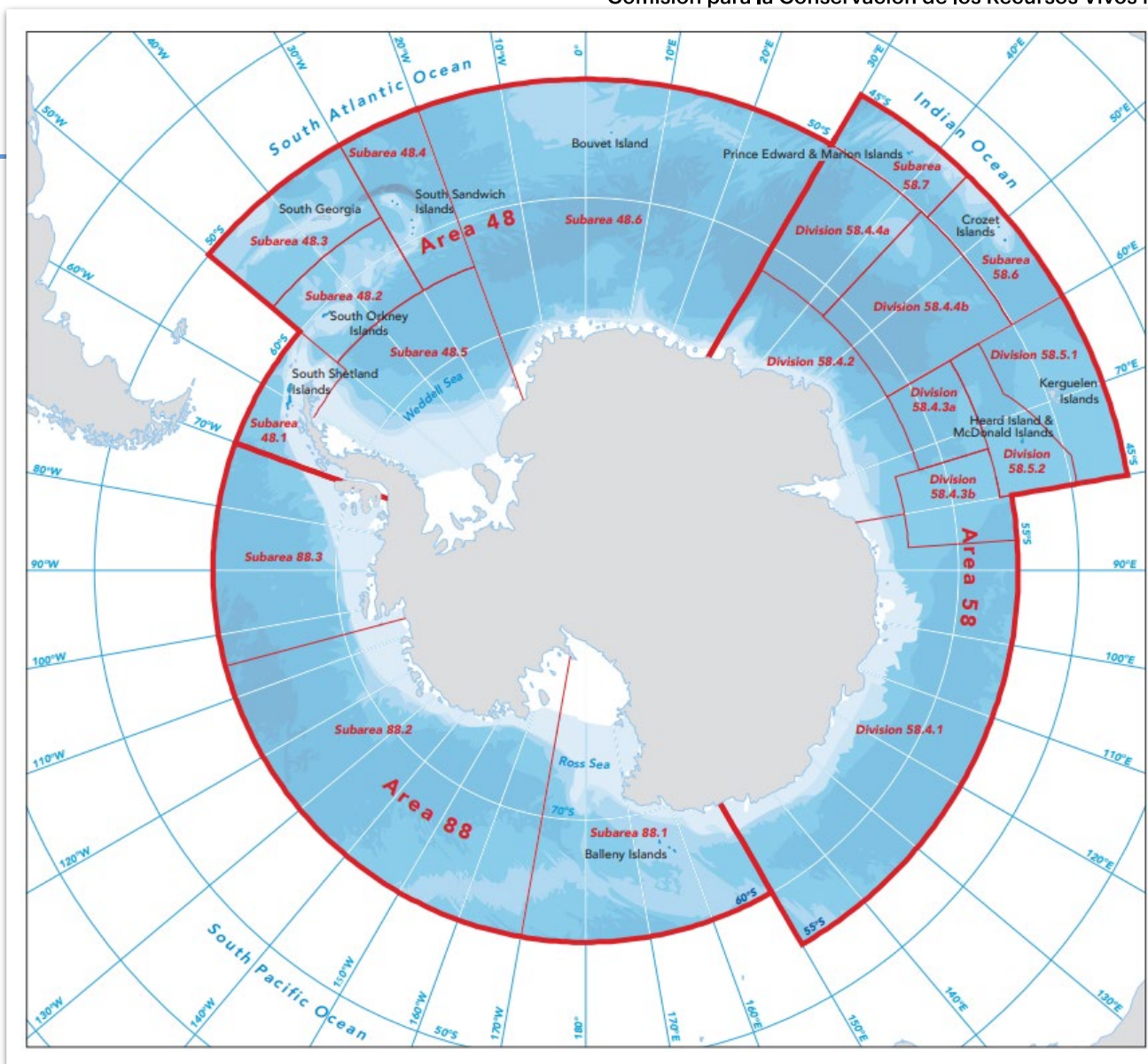
3 cooperating non-contracting parties

	Argentina		Namibia
	Australia		Netherlands
	Belgium		New Zealand
	Brazil		Norway
	Chile		Poland
	China		Russia
	EU		South Africa
	France		Spain
	Germany		Sweden
	India		Ukraine
	Italy		United Kingdom
	Japan		USA
	South Korea		Uruguay



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CCAMLR management of Antarctic fisheries



There are four species currently fished in Antarctica:

- Patagonian toothfish (*Dissostichus eleginoides*)
- Antarctic toothfish (*Dissostichus mawsoni*)
- Mackerel icefish (*Champsocephalus gunnari*),
- Antarctic krill (*Euphausia superba*)

Crab (*Lithodidae spp.*) – is occasionally fished and an exploratory crab fishery was agreed on in 2018.



Fisheries Monitoring and Compliance (FMC) Section

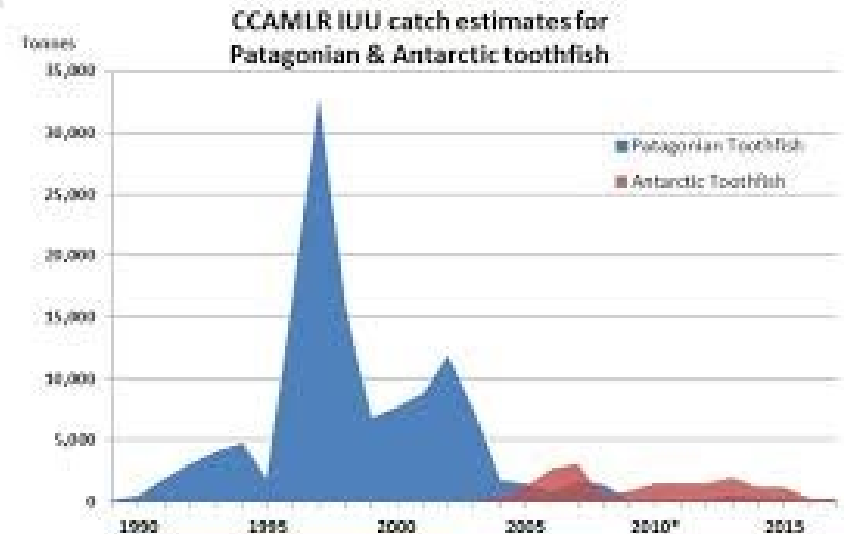
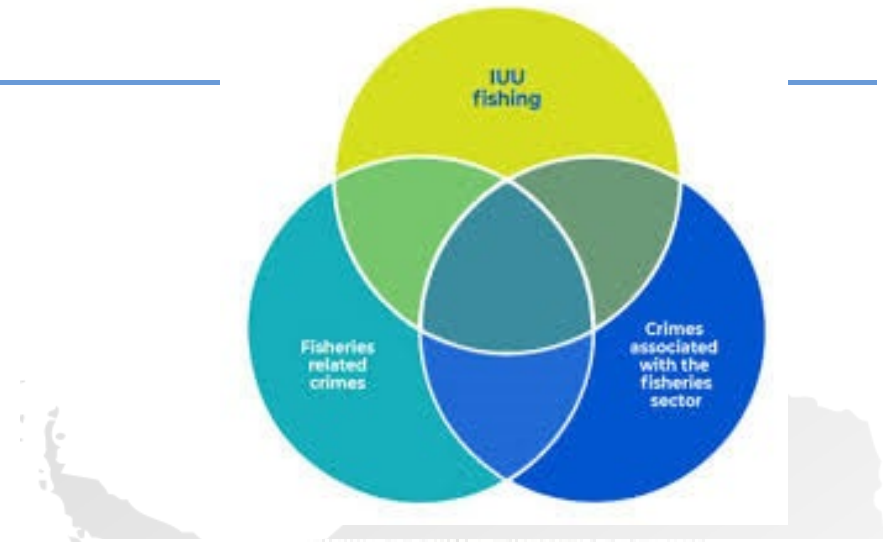
- FMC provides technical support to the Commission in respect of implementation of [conservation measures](#) (CM) affecting fisheries and supporting Members in their application of CMs
- Undertake research and analysis using data from CCAMLR systems and other data sources to assist Commission in improving compliance with CMs and contribute to elimination of IUU fishing
- Improve electronic useability, functionality and effectiveness of compliance tools





Challenges

- Distance of fisheries
- Costs of operating over distance
 - Fuel
 - Labour
 - Vessels
 - Weather
- Complexity of monitoring control and surveillance
- Advances in technology and natural predators





CCAMLR – IUU fishing (CM 10-06 and 10-07)

A combination of surveillance, enforcement and market controls have significantly reduced illegal, unreported and unregulated fishing that undermines the CCAMLR's conservation measures.

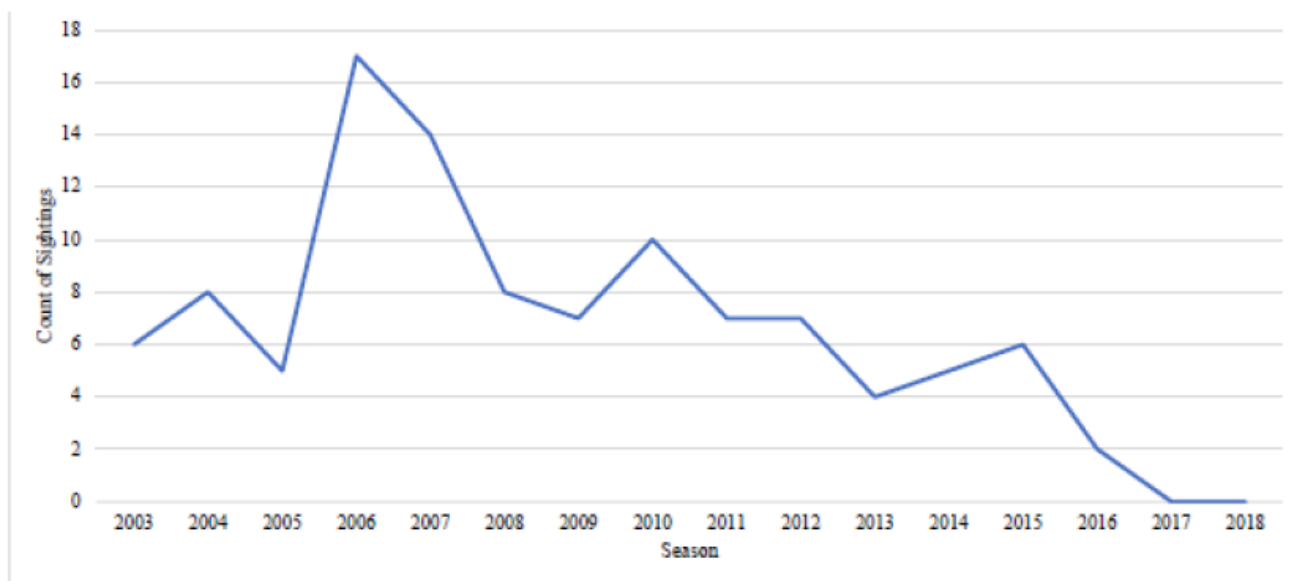


Figure 1: Reported sightings of IUU or unidentified vessels within the Convention Area. The figure does not include reports of unidentified fishing gear sighted or retrieved in the Convention Area which may be indicative of IUU activity and is not corrected for changes in surveillance effort.



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CCAMLR FMC – Assist Our Members with...

Uncovering the Unknowns



Image from <https://kumparan.com/kumparanbisnis/perkara-kapal-jumbo-maling-ikan-mv-nika-diserahkan-ke-kejaksanaan-1rerOGMHSXh/full> 22-Feb-2021



Primary Compliance Monitoring Tools



Vessel Monitoring Systems (CM 10-04)

- Reports on the location of vessels operating in the Convention Area.

Inspections (CM 10-03 and CCAMLR SOI)

- Port and at-sea inspections of vessels fishing in the Convention Area under [CCAMLR's System of Inspections \(SOI\)](#).



Catch Documentation Scheme (CDS) (CM-10-05)

- Tracks toothfish from landing through the trade cycle.
- Distinguish between legal and illegal harvesting.
- Electronic system



Additional Sources of Data

Vessel Catch Reporting (23 Series of CMs)

- Reports on fishing activity and catch data for vessels operating in the Convention Area.

Transshipment Reports (CM 10-09)

- Advance notice and post reporting on transshipments that occur in the Convention Area.

Vessel Movement Reports (21 Series of CMs)

- Notice of vessels entering/exiting management areas and MPAs

Scientific Observer Reports (SISO)

- Observations and reports related to fishing activities of vessels with deployed scientific observers

Open Source and/or Subscription Sources





Comparison and Analysis of Available Data

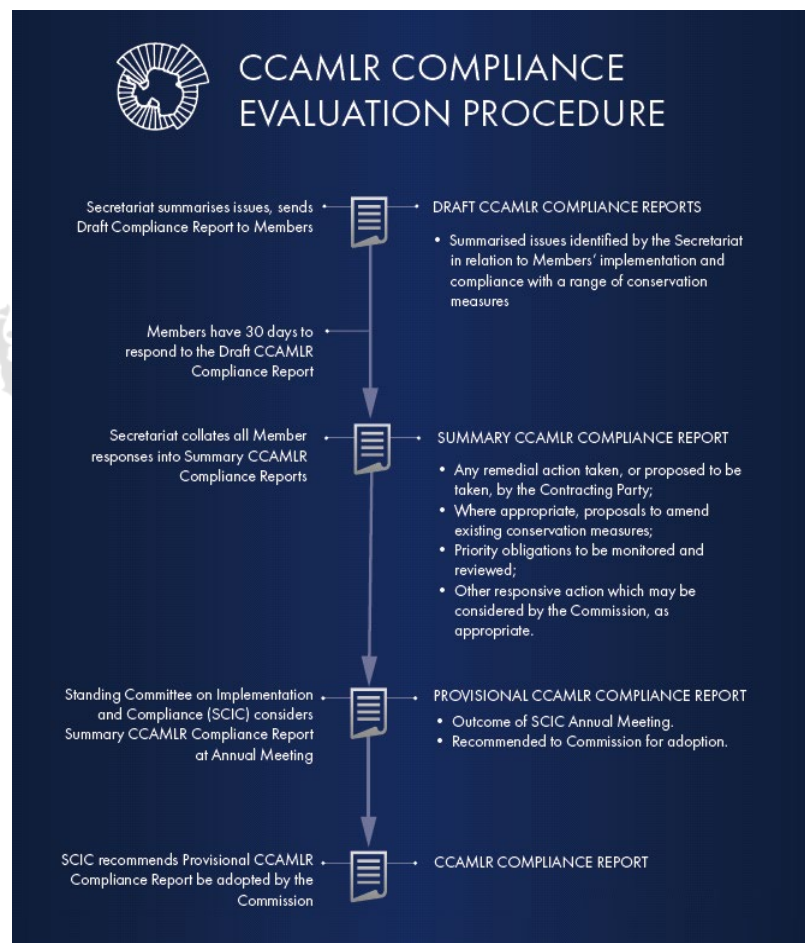
- Consolidation of Fishery Monitoring and Compliance Monitoring functions in FMC
- Automation of comparison and analysis functions of data resources continually expanding
- Comparing various data sources (e.g., verified catch data, trade data and fine scale catch/effort data)
- CCAMLR Compliance Evaluation Procedure (CCEP) (CM 10-10)
- Development of “FMC Dashboard” which incorporates automated database queries for specific compliance monitoring functions





CCAMLR Compliance Evaluation Procedure

- FMC monitors compliance with conservation measures
- FMC Develops Draft Compliance Reports for each Member
- Secretariat provides SCIC and the Commission with a **Summary Compliance Report and supporting analysis** of all identified non-compliance within past year
- SCIC adopts a Provisional Compliance Report by consensus
- Commission adopts Annual CCAMLR Compliance Report





Continually Evolving “FMC Dashboard” and Data Analysis



Photo: Karl-Hermann Kock

- Routine queries utilizing the “R” programming language
- Utilizes numerous systems/databases within CCAMLR
- Supports fisheries monitoring (e.g. closure forecasting, authorized vessels present, etc.)
- Supports day to day compliance monitoring (e.g. VMS transmission gaps, closed area, missing reports)
- Supports CCEP analysis and reporting



Engagement and cooperation to address IUU

- CCAMLR is committed to working with non-contracting parties engaged in the harvest and trade of toothfish
- Cooperation with CCAMLR CDS (CM 10-05 Annex C)
- Non contracting Party Engagement Strategy (including Flag States, Port States, Trading States and Harvesting States)
- INTERPOL
- IMCS Network
- Other Regional Fisheries Bodies (e.g. SIOFA, WCPFC, SFRFMO etc.)





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