



CWP

Coordinating Working Party on Fishery Statistics

5.2 Progress report of the CWP ad-hoc Task Group Catch concepts (TG-catch)

James Geehan

Fisheries Statistician (Capture Fisheries)

FAO Fisheries Statistics Division

✉ james.geehan@fao.org

TG-catch concept Terms of Reference

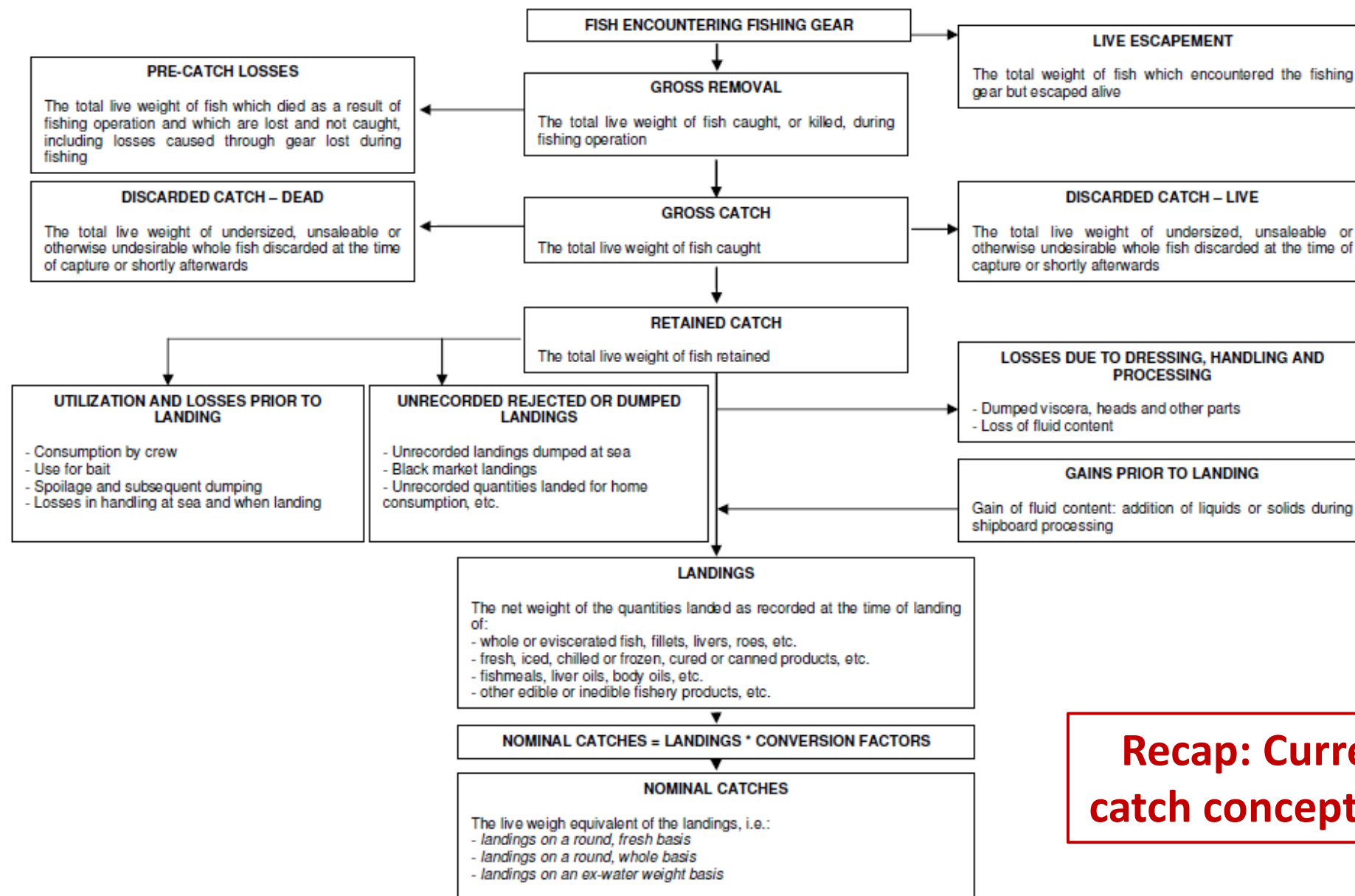
1. Review and develop the catch concepts diagram, including consideration of revisions proposed by the 2018 tuna technical workshop.
2. Review and propose amendments, as necessary, to the catch concepts (including the components 'retained catch', 'discarded catch', 'bycatch' and 'fish').
3. Discussion on the broader application of the concepts to recreational, small-scale, artisanal, commercial, semi-industrial and industrial fisheries.
 - *May be partly addressed during the general discussions of (1.) and (2.)*

TG-catch concept Terms of Reference

- TG are open to all CWP parties and those interested in this work are encouraged to actively contribute.
- At CWP-26, the following parties indicated initial interest in participating in the TG: ICES, NAFO, IOTC, ICCAT, SEAFDEC, GFCM, WECAFC and FAO.
 - *Other CWP members will be kept informed and consulted on the main discussion points, as necessary.*
 - *July joint CWP meeting between the TG-catch and TG-fishing effort also attended by IATTC and OECD.*



Catch Concepts: Diagrammatic Presentation



**Recap: Current CWP
catch concepts diagram**

Summary of feedback on current CWP diagram

- Broad agreement by CWP partners that the current diagram captures the main CWP catch concepts (e.g., gross catches, nominal catches, discards, etc.) reasonably well
- Allows for the simple formulation (i.e., positive/negative contributions) at different stages of the fishing operation.
- However the current diagram is relatively old – there is a need to assess the relevance and possible revision of the diagram in line with the status of datasets and concepts used by CWP parties.

Summary of feedback on current diagram

Suggested amendments to the diagram, as proposed during FAO *Technical Workshop of Global Harmonization of the Tuna fisheries statistics* in 2018:

1. The addition of “Discarded dead – post-release mortality”

- The category was originally proposed by ICCAT, and represents the proportion of the discards from catch released live (for instance, the post-release mortality of small tuna individuals caught for tuna fattening/aquaculture).

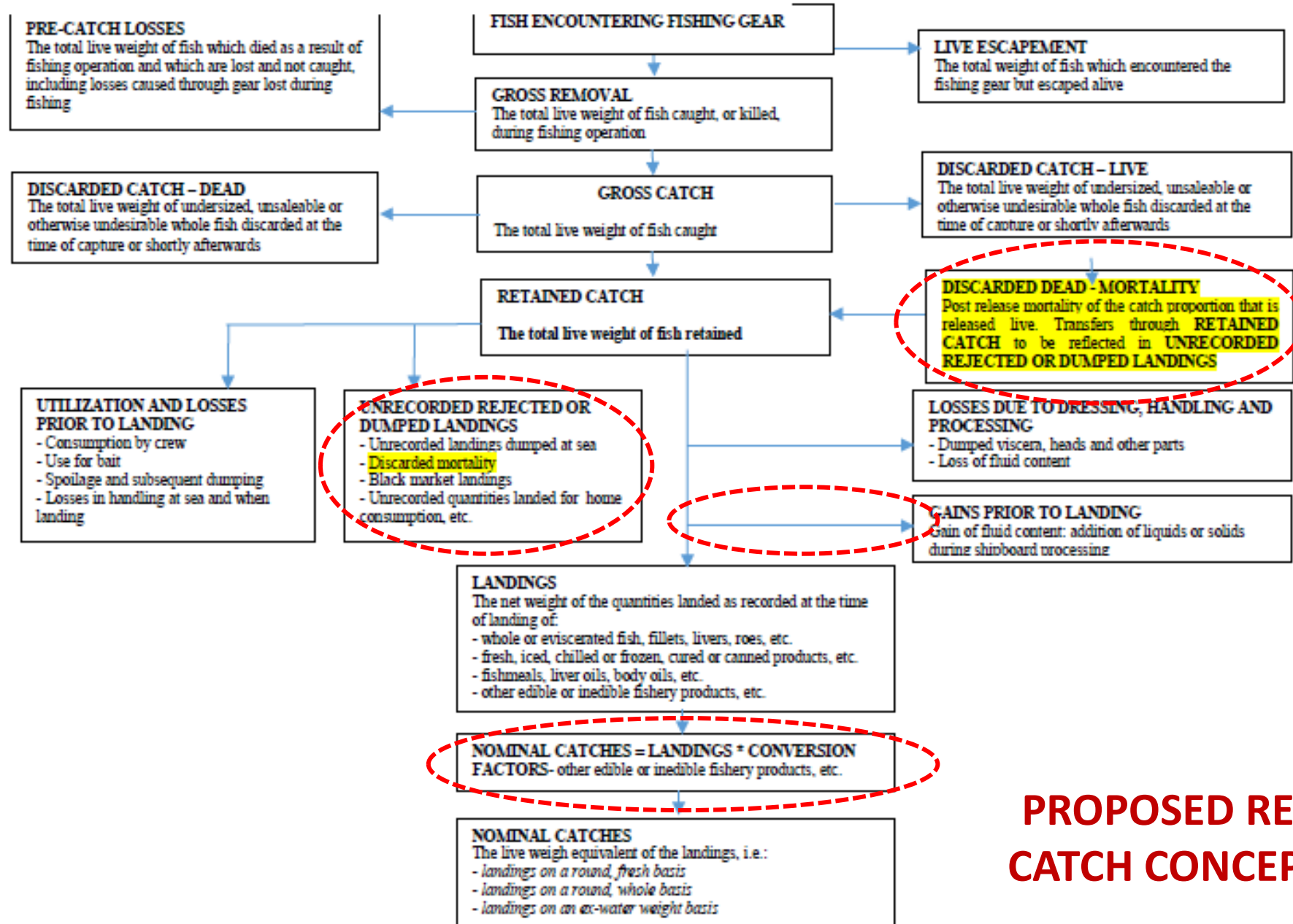
2. The addition of “- other edible or inedible fishery products, etc.” to the box “Nominal Catches =Landings * Conversion Factors”.

- Unclear whether this change was intended to represent the addition of quantities from “Gains prior to landing” (such as fluid or solids during the shipboard procedure), or the deduction (denoted by “ - ” symbol) of the same quantities from the landings converted to live weight equivalent.
- This issue requires further clarification/consideration.

3. Changes to the connecting line to/from “Gains prior to landing” (amended from a positive to negative contribution in the revised diagram).

- Possibly an accidental error during the drafting of the revised diagram (as gains prior to landing should represent a positive contribution in terms of quantities).

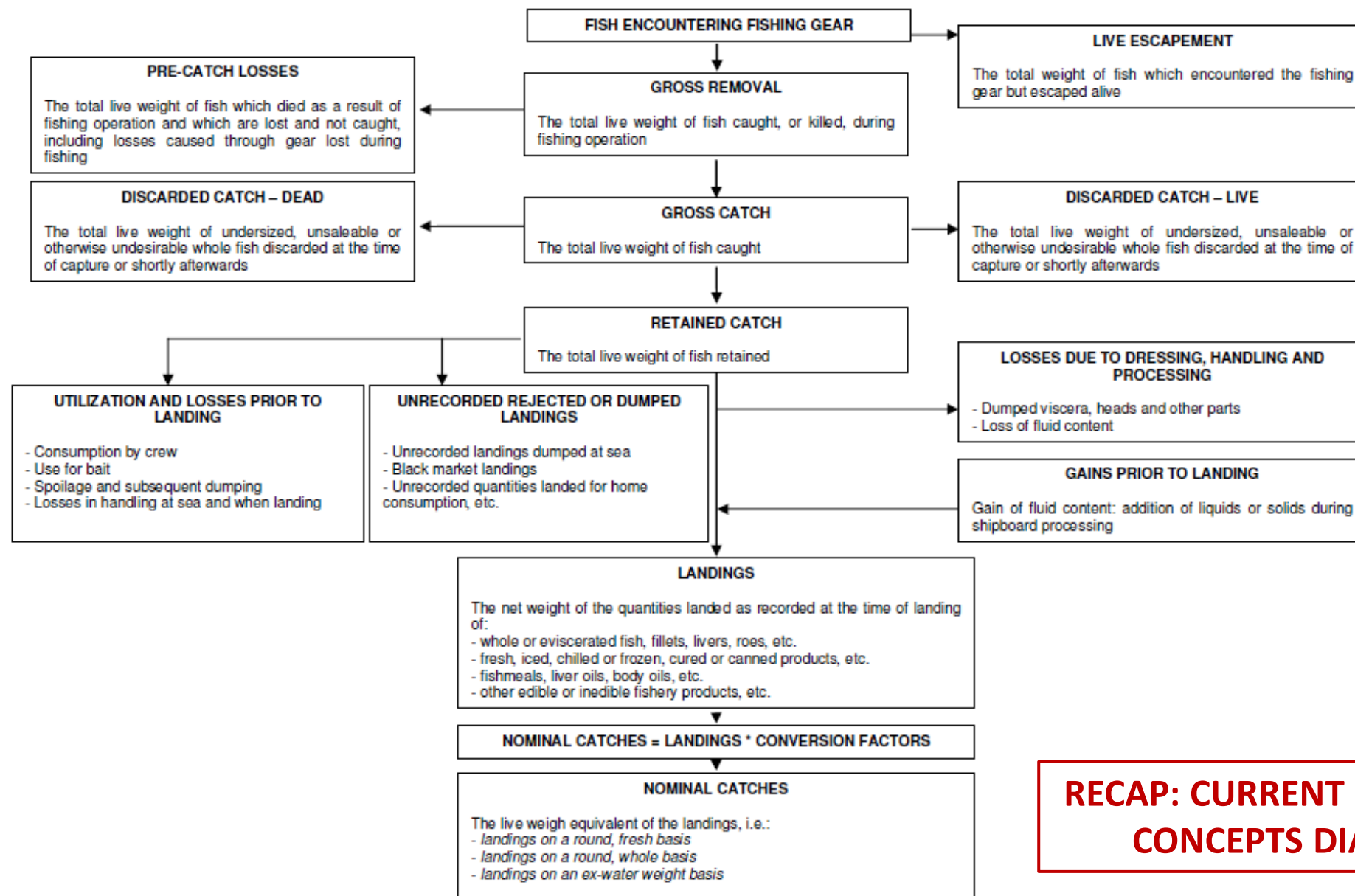
APPENDIX 7: PROPOSALS FOR REVISION OF CATCH CONCEPT DIAGRAM. Proposed changes are highlighted in yellow.



**PROPOSED REVISIONS TO
CATCH CONCEPT DIAGRAM**

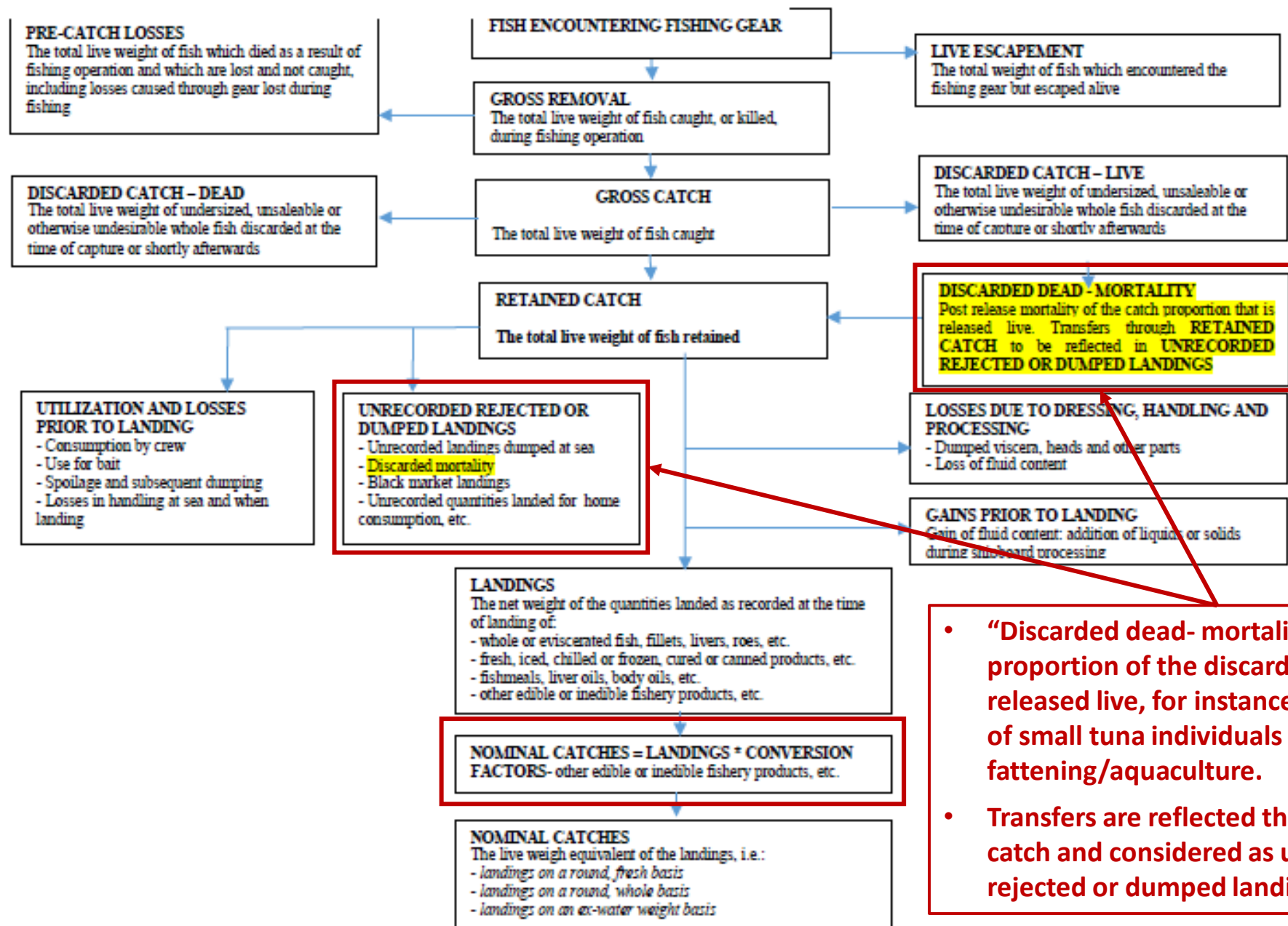


Catch Concepts: Diagrammatic Presentation

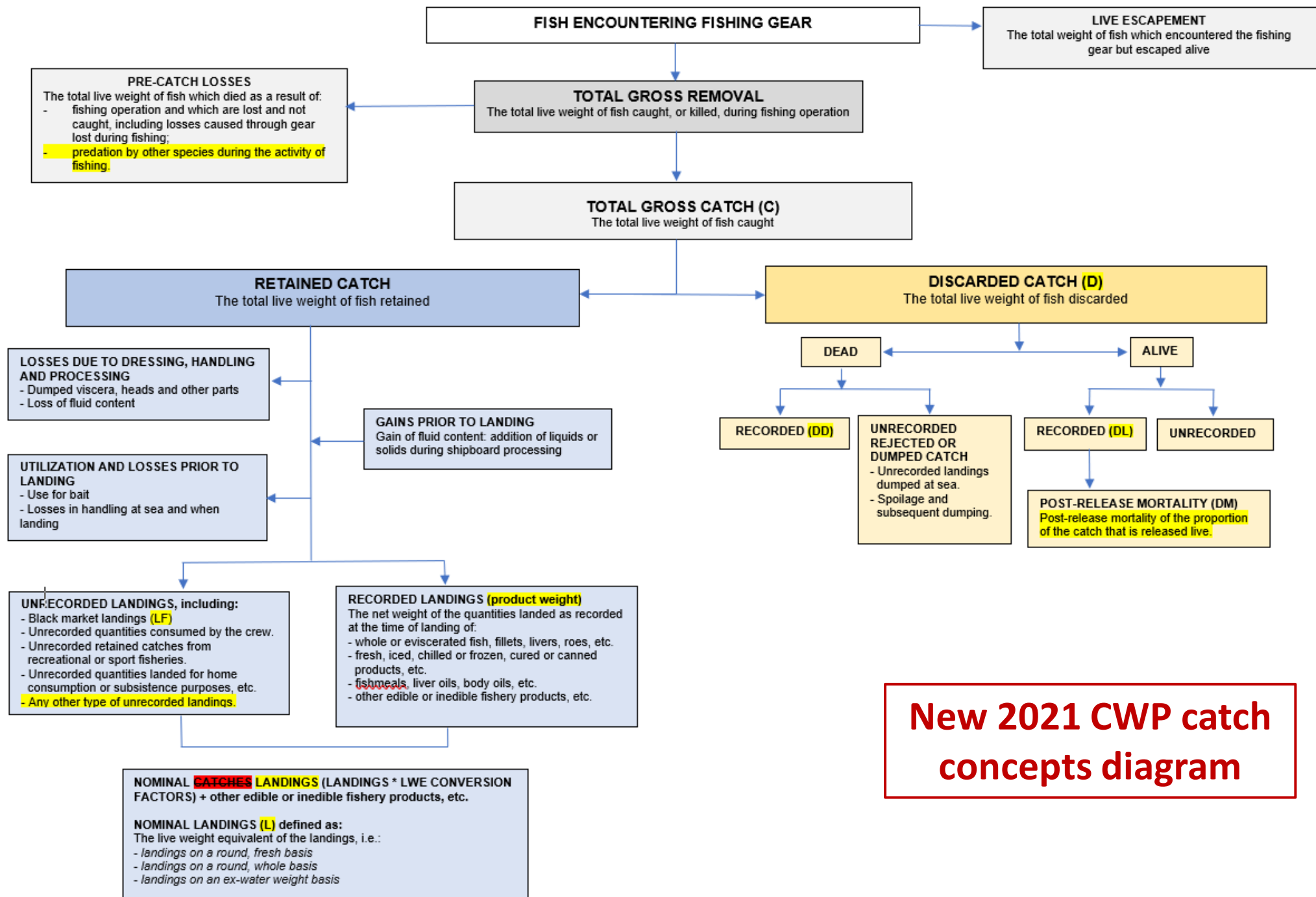


**RECAP: CURRENT CWP CATCH
CONCEPTS DIAGRAM**

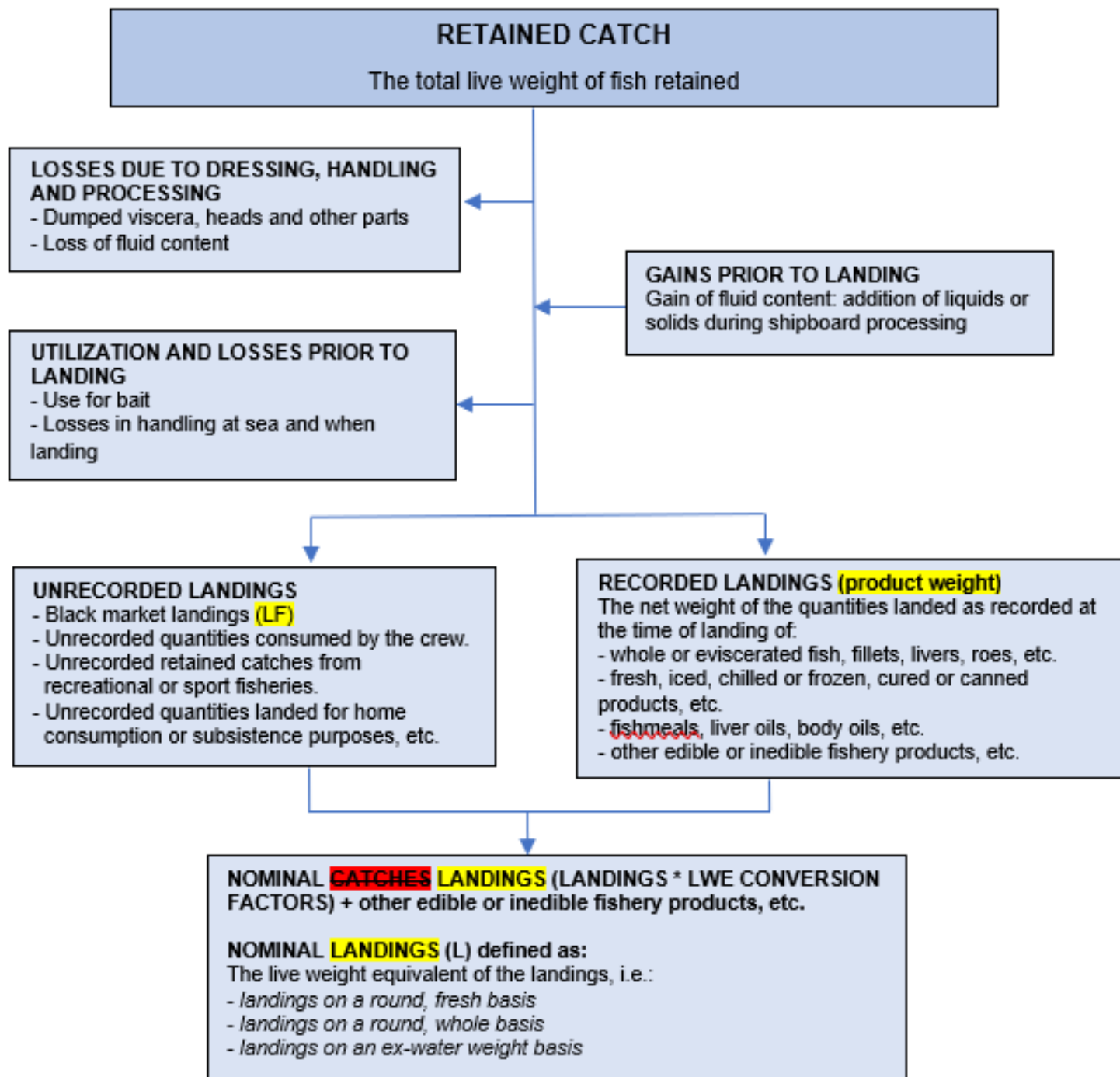
APPENDIX 7: PROPOSALS FOR REVISION OF CATCH CONCEPT DIAGRAM. Proposed changes are highlighted in yellow.



- “Discarded dead- mortality” is the proportion of the discards from catch released live, for instance post-mortality of small tuna individuals caught for Tuna fattening/aquaculture.
- Transfers are reflected through retained catch and considered as unrecorded, rejected or dumped landings.



**New 2021 CWP catch
concepts diagram**



Retained catches component:

(1.) Consideration of all potential forms of unrecorded landings, including:

- Black market landings.
- (Unrecorded) landed catches from recreational/sports fisheries.
- Quantities land for home consumption of other forms of subsistence.

(2.) Nominal catches ≠ nominal landings
(catches = retained + discarded catches)

(3.) Clearer distinction between recorded landings (in both round/live and processed weights) and nominal landings.

Nominal catch: current CWP definition

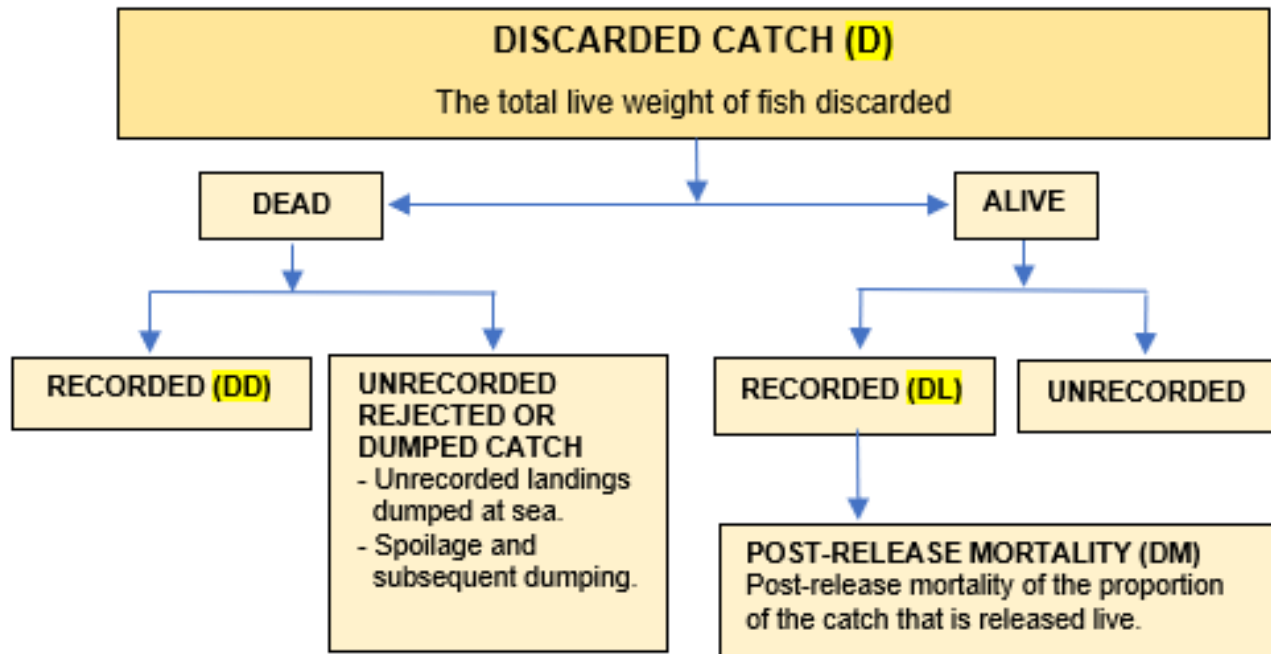
Nominal catch (also referred to **as nominal landings**):

- Landed weight converted to a live weight basis often by use of a conversion factor.
- Nominal catch is often referred to as the live weight equivalent of the landed weight or shortened to the "Live weight", and in some national publications it is also referred to as "Landings on a round, fresh basis", "Landings on a round, whole basis" or "Landings on an ex-water basis".
- **Care should be taken when referring to the nominal catch as the 'catch' since in many situations the catch includes discarded components which are not landed.**
- Often, in further processing the data, conversion factors are applied to the individual products (i.e. landed weight) which express the weight in a more homogenous way.
- **Once verified, nominal catch is also in many cases the definitive declaration of what was caught and the amount which is applied against quotas or reported by a country.**

Nominal catches:

- ICCAT Nominal catch =
 - Nominal landings + black market landings (*faux poisson*) + Discarded Dead + Discarded live post-release mortality

- IOTC Nominal catch =
 - Nominal landings (from artisanal, industrial fisheries, + retained catches from sports/recreational fisheries).
 - Excludes discards (which are collected separately).

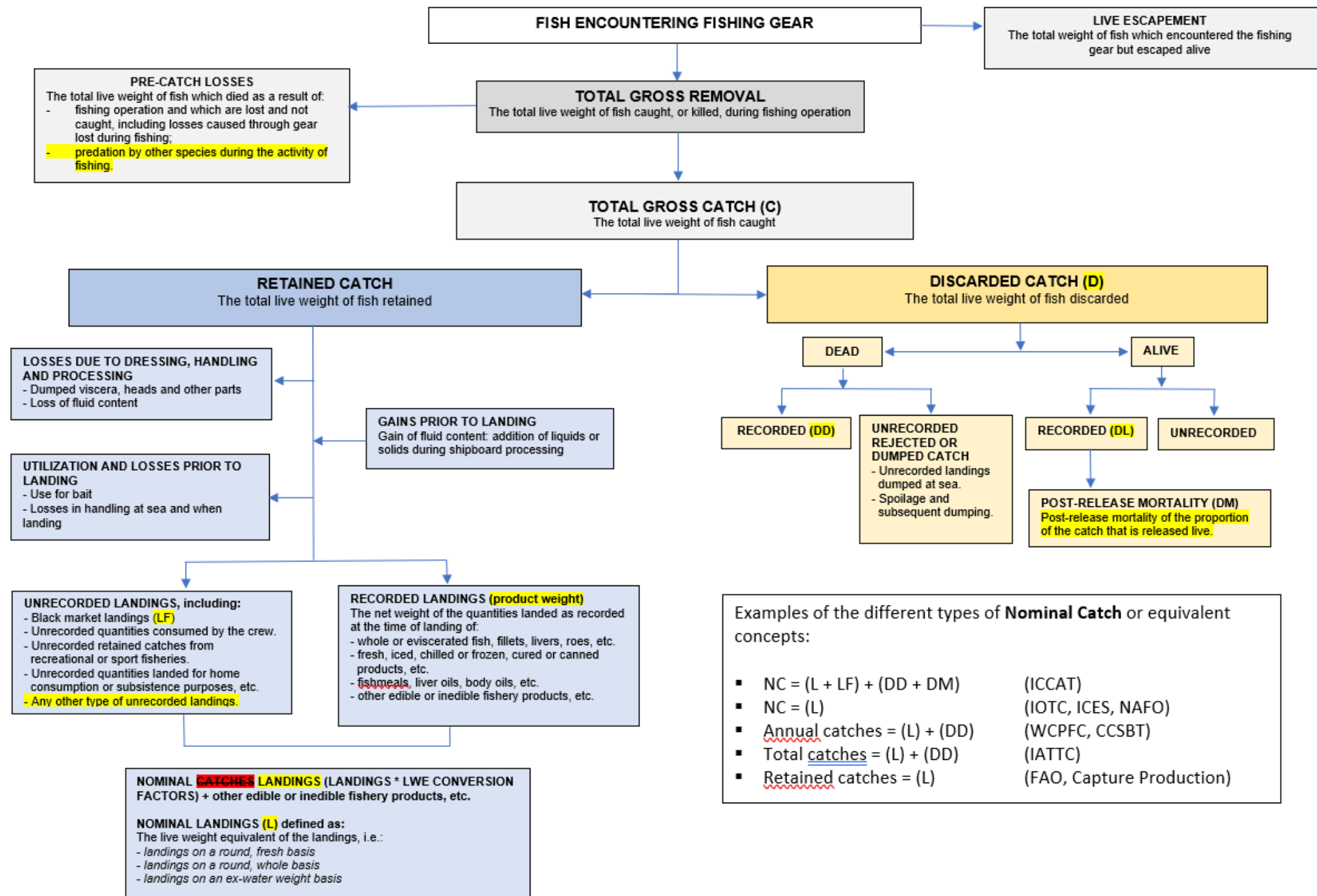


Discarded catches:

- (1.) The addition of recorded discards and unrecorded LIVE and DEAD discards.
- (2.) Avoids confusion between discards alive/dead and Unrecorded, Rejected or Dumped Catches in the current diagram.

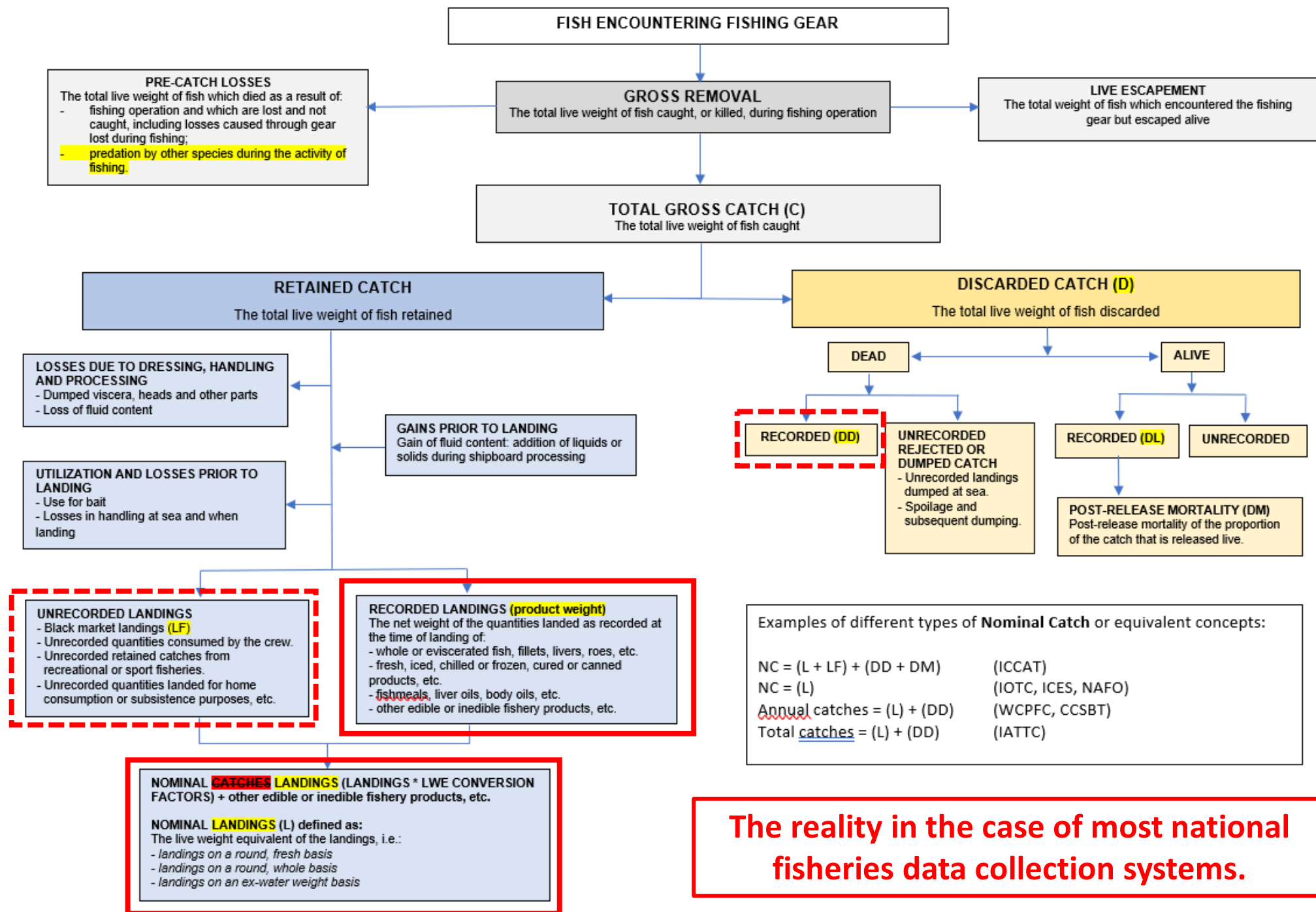
General comments: proposed changes

- Ensure the catch concepts diagram is relevant and easy to interpret.
- That the diagram comprehensively captures the main catch concepts – that can be equally applied to all capture fisheries (e.g., commercial, artisanal, recreational, subsistence fisheries).
- Provides greater emphasis to the concepts of total gross catch and/or total gross removal of biomass – in terms of the requirements for stock assessment.
- Ensure the concepts used in the diagram are well defined and easily understood to minimise ambiguity (e.g., ‘Nominal catches’ vs. ‘Nominal landings’)
- The diagram is in line with the concepts and definitions used by different international organizations -> improve alignment with the status and evolution of data disseminated by international organizations.



General comments: proposed changes

- The catch concept diagram is intended to represent a clear and comprehensive description of the different components related to capture fisheries in terms of the total removals, total catches, etc., at a conceptual level.
- In reality, many elements will be difficult or impractical to collect measure on a routine basis:
 - ❖ *Black market landings (ICCAT)*
 - ❖ *Predation by other species (ICCAT, IOTC Regional Observer Scheme)*
 - ❖ *Total catches associated with subsistence fisheries*
 - ❖ *Allocation of retained catches to crew*
 - ❖ *Gains prior to landing (e.g., the addition of processing fluids or solids)*



The reality in the case of most national fisheries data collection systems.

Catch-related concepts: Bycatch

Bycatch:

- Component of the catch which represents non-targeted fish associated with the catch of the target species or group towards which fishing effort is directed, or other aquatic organisms taken incidentally during the course of fishing (e.g. birds, mammals, reptiles, invertebrates).
- Some or all of the bycatch may be returned to the sea as discarded catch, either dead or alive. The catch taken incidentally is also referred to as incidental catch.

Comments:

- The issue of which species are considered as bycatch was raised, which – in some cases – can be open to interpretation.
- In the case of IOTC for example, bycatch is considered to be any species reported not directly under the mandate of IOTC, as opposed to the CPCs themselves which may be targeting a much greater number of species than just tuna and tuna-like species.

Catch-related concepts: Discards

Discards:

- Estimated component of the catch which is the total live weight ~~of undersized, unsaleable or otherwise undesirable~~ whole fish and other aquatic organisms which are discarded at the time of the capture or shortly afterwards (refer catch concept diagram).

Comments:

- It was suggested that the current wording (i.e., proposed during CWP-26) describing the reasons for discarding, i.e., “undersized, unsaleable, or otherwise undesirable”, may be too restrictive and exclude other reasons for the release of catch (e.g., species for which there may be retention bans) – noting that there is always a reason why catches are discarded.
- Possible solutions are (i.) include additional categories to ensure the full range of reasons for discarding are sufficiently captured in the description, or, (ii.) alternatively, abbreviate the current wording in order that the wording is sufficiently generic to capture all possible reasons for discarding.

Catch-related concepts: Fish

Fish:

- A species or group of species of living aquatic (i.e., marine, freshwater or brackish) resources which are targeted during fishing or associated with the catch of the target species or group, subsequently processed or not, many of which are recorded in the ASFIS List of Species for Fishery Statistical Purposes.

Comments:

- Most of the catch concepts presented (including “retained catch”, “bycatch” and “discards”) include specific reference to “fish” which, understandably, may be interpreted as applying to fin-fish only – rather than all aquatic species (e.g., crustaceans, cephalopods, molluscs, etc.).
- Nevertheless, the case was made that the current working definition of “fish”, and use of the terminology in the context of the other catch concepts, requires further review and consideration.
- For example: PSMA definition *“In the general context of fishery statistics, the term ‘fish’ may be interpreted as meaning all species of living marine resources, whether processed or not.”*

TG-Catch Concepts: Progress to date

- ❖ TG-Catch Concept TORs finalized in March 2021.
- ❖ Joint CWP TG-Catch Concepts and TG-Fishing Effort meeting held in July 2021 to agree the plan of work and initiate the TG activities.
- ❖ Post-meeting, request for feedback from TG members on the current diagram and related definitions (including proposed changes)
 - *Additional follow-up and consultation required.*
- ❖ Draft revisions to the Catch Concept diagram in October; to be circulated to TG members for feedback shortly.

	Task	Timeframe
0	Develop draft ToRs and work plan in consultation with TG Convener and circulate to members for validation. Call for TG participations and their contact details.	Feb-21
1	Finalise ToRs and establish TG membership	Mar-21
2	Review and develop the catch concepts and diagram, including consideration of revisions proposed by the tuna technical workshop and broader application of the concepts to recreational, small-scale, artisanal, commercial, semi-industrial and industrial fisheries	Jun-21/Jul-21
3	Concurrently with 2, review, revise and where necessary further develop the catch concepts definitions	Jun-21/Jul-21
4	Circulate first draft of the revised catch concepts, diagram and definitions	Jul-21/Aug-21
5	Consider further development to the catch concepts, diagram and definitions	Prior to Intersessional meeting (IS)
6	Concurrently with 5, consider implications of the revised catch concepts and definitions in the work of TG-effort and TG-RH2	Prior to IS meeting
7	Present advanced version of revised catch concepts, diagram and definitions at the intersessional meeting (IS)	IS meeting Sept/Oct 2021
8	Consider further developments including intersessional meeting feedback and enlarging the scope of contributions to other CWP parties	Post IS meeting
9	Incorporate relevant outputs of TG-effort and TG-RH2	Post IS meeting
10	Present final version of the revised catch concepts, diagram and definitions to CWP-27 for consideration and, if appropriate, adoption	First half of 2022



Food and Agriculture
Organization of the
United Nations

Thank you ▪ Merci
Благодарю ▪ ¡Muchas gracias!
謝謝 ▪ شكرا

James Geehan, TG-Catch Concepts Lead

✉ james.geehan@fao.org