IFFO RS Limited

T: +44 (0) 2030 539 195
E: Standards@iffors.com
W: www.iffors.com

Unit C, Printworks | 22 Amelia Street
London, SE17 3BZ | United Kingdom

Global Standard for Responsible Supply of Marine Ingredients

Fishery Assessment Methodology and Template Report V2.0

Fishery Under Assessment	**Longfin/Albacore Tuna (*Thunnus alalunga)* FAO 27, 34, 47**
Date	**May 2019**
Assessor	**Jim Daly**

Application details and summary of the assessment outcome				
Name: Sarval				
Address:				
Country: Spain & Portugal		**Zip:**		
Tel. No.:		**Fax. No.:**		
Email address:		**Applicant Code**		
Key Contact:		**Title:**		
Certification Body Details				
Name of Certification Body:		**SAI Global (Ireland) Ltd**		
Assessor Name	**Peer Reviewer**	**Assessment Days**	**Initial/Surveillance/Re-approval**	**Whole fish/ By-product**
Jim Daly	Virginia Polonio	0.5	SURV 1	Byproduct
Assessment Period	2018			

Scope Details	
Management Authority (Country/State)	Spain & Portugal
Main Species	Longfin Tuna (*Thunnus alalunga)*
Fishery Location	FAO 27, 34, 47 Eastern & South East Atlantic Ocean
Gear Type(s)	All gears
Outcome of Assessment	
Overall Outcome	Pass
Clauses Failed	None
Peer Review Evaluation	Approve
Recommendation	Pass

Assessment Determination
Legal and administrative frameworks exist at the national and international level. Sufficient research is conducted on the species to allow informed management of Longfin (Albacore) tuna. There are 3 stocks of Longfin Tuna in the Atlantic; North, South and Mediterranean. This assessment only evaluates the stocks in the North and South Atlantic – the Mediterranean stock is assessed separately. Stock assessments are carried out on these by the International Commission for the Conservation of Atlantic Tunas (ICCAT). This species is categorised as Near Threatened by the IUCN Red List from its Global assessment in 2011. Regional assessments for Europe and the Mediterranean categorise the species as of least concern (IUCN website accessed 20.05.19.). **North Atlantic Stock:** The most recent assessment indicates the recovery plan is likely to be successful if catches are maintained at the current TAC. Overfishing is not occurring and the population is no longer overfished. The current management recommendation allows for potential overages in the total allowable catch (TAC). Although work has continued with regard to developing limit reference points and a harvest control rule, none have been formally adopted. Observer coverage is low (5%) in longline fisheries and interactions with ETP and other non-target species continue to occur. The Secretariat noted that the ongoing work on Management Strategy Evaluation (MSE), Reference Points (RP) and Harvest Control Rules (HCR) aim to contribute not only to potential decisions that the Commission may take with regards to a candidate HCR for North Atlantic Albacore but also to the decisions to be taken during the Working Group (2016 assessment **R1**) in order to ensure that stock assessment advice is robust to uncertainty. The biomass of albacore in the North Atlantic dropped between the 1930's and 1980's. Recovery of the population has occurred since then and is now above maximum sustainable levels (MSY). Fishing mortality rates increased from the 1950's through the 1990's and have since declined to levels below MSY (ICCAT 2016 **R1**.)
Peer Review Comments
Agree
Notes for On-site Auditor

Species-Specific Results

Category	Species	% landings	Outcome (Pass/Fail)	
Category A			A1	
			A2	
			A3	
			A4	
Category B				
Category C	Longfin tuna *Thunnus alalunga*	N/A	Pass	
Category D				

[List all Category A and B species. List approximate total %age of landings which are Category C and D species; these do not need to be individually named here]

HOW TO COMPLETE THIS ASSESSMENT REPORT

This assessment template uses a modular approach to assessing fisheries against the IFFO RS standard.

Whole Fish

The process for completing the template for a **whole fish** assessment is as follows:

1. ALL ASSESSMENTS: Complete the Species Characterisation table, to determine which categories of species are present in the fishery.
2. ALL ASSESSMENTS: Complete clauses M1, M2, M3: Management.
3. IF THERE ARE CATEGORY A SPECIES IN THE FISHERY: Complete clauses A1, A2, A3, A4 for **each** Category A species.
4. IF THERE ARE CATEGORY B SPECIES IN THE FISHERY: Complete the Section B risk assessment for **each** Category B species.
5. IF THERE ARE CATEGORY C SPECIES IN THE FISHERY: Complete clause C1 for **each** Category C species.
6. IF THERE ARE CATEGORY D SPECIES IN THE FISHERY: Complete Section D.
7. ALL ASSESSMENTS: Complete clauses F1, F2, F3: Further Impacts.

A fishery must score a pass in **all applicable clauses** before approval may be recommended. To achieve a pass in a clause, the fishery/species must meet **all** of the minimum requirements.

By-products

The process for completing the template for **by-product raw material** is as follows:

1. ALL ASSESSMENTS: Complete the Species Characterisation table with the names of the by-product species and stocks under assessment. The '% landings' column can be left empty; all by-products are considered as Category C and D.
2. IF THERE ARE CATEGORY C BYPRODUCTS UNDER ASSESSMENT: Complete clause C1 for **each** Category C by-product.
3. IF THERE ARE CATEGORY D BYPRODUCTS UNDER ASSESSMENT: Complete Section D.
4. ALL OTHER SECTIONS CAN BE DELETED. Clauses M1 - M3, F1 - F3, and Sections A and B do not need to be completed for a by-product assessment.

By-product approval is awarded on a species-by-species basis. Each by-product species scoring a pass under the appropriate section may be approved against the IFFO RS Standard.

SPECIES CATEGORISATION

The following table should be completed as fully as the available information permits. Any species representing more than 0.1% of the annual catch should be listed, along with an estimate of the proportion of the catch each species represents. The species should then be divided into Type 1 and Type 2 as follows:

- **Type 1 Species** can be considered the 'target' or 'main' species in the fishery. They make up the bulk of annual landings and are subjected to a detailed assessment.
- **Type 2 Species** can be considered the 'bycatch' or 'minor' species in the fishery. They make up a small proportion of the annual landings and are subjected to relatively high-level assessment.

Type 1 Species must represent 95% of the total annual catch. Type 2 Species may represent a maximum of 5% of the annual catch (see Appendix B).

Species which make up less than 0.1% of landings do not need to be listed (NOTE: ETP species are considered separately). The table should be extended if more space is needed. Discarded species should be included when known.

The 'stock' column should be used to differentiate when there are multiple biological or management stocks of one species captured by the fishery. The 'management' column should be used to indicate whether there is an adequate management regime specifically aimed at the individual species/stock. In some cases it will be immediately clear whether there is a species-specific management regime in place (for example, if there is an annual TAC). In less clear circumstances, the rule of thumb should be that if the species meets the minimum requirements of clauses A1-A4, an adequate species-specific management regime is in place.

NOTE: If any species is categorised as Endangered or Critically Endangered on the IUCN Red List, or if it appears in the CITES appendices, it **cannot** be approved for use as an IFFO RS raw material. This applied to whole fish as well as by-products.

TYPE 1 SPECIES (Representing 95% of the catch or more)
Category A: Species-specific management regime in place.
Category B: No species-specific management regime in place.

TYPE 2 SPECIES (Representing 5% OF THE CATCH OR LESS)
Category C: Species-specific management regime in place.
Category D: No species-specific management regime in place.

Common name	Latin name	Stock	% of landings	Management	Category
Longfin/ Albacore tuna	*Thunnus alalunga*	FAO 27, 34, 47	N/A	ICCAT	C

CATEGORY C SPECIES

In a whole fish assessment, Category C species are those which make up less than 5% of landings, but which are subject to a species-specific management regime. In most cases this will be because they are a commercial target in a fishery other than the one under assessment. In a by-product assessment, Category C species are those which are subject to a species-specific management regime, and are usually targeted species in fisheries for human consumption.

Clause C1 should be completed for **each** Category C species. If there are no Category C species in the fishery under assessment, this section can be deleted. A Category C species does not meet the minimum requirements of clause C1 should be re-assessed as a Category D species.

Species Name		**Longfin/Albacore tuna (*Thunnus alalunga)***	
C1	**Category C Stock Status - Minimum Requirements**		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Yes
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Yes
		Clause outcome:	**Pass**

Evidence

C1.1: North and South Atlantic Stocks.

The 2016 assessment included catch and effort information from both fishery dependent and fishery independent sources along with biological information and other data sets. The next assessment is due in 2020.

Two documents on fishery data were presented during the 2016 meeting (**R1**). An update was provided on the tuna statistics of the EU-Portugal (Madeira) bait boat fishery between 1999 and 2015, including total catch, fleet composition and size frequencies for the main tuna species including Albacore. A second document analysed the spatial and temporal size distribution of the Venezuelan Long Line fleet fishing for Northern albacore.

The Secretariat also presented to the group the most up-to-date albacore (ALB) fisheries information: Nominal catch; Catch & Effort; Size samples and Catch-at-size for the Northern (ALB-N) and Southern (ALB-S) stocks, covering the period 1950 to 2014. Albacore conventional tagging estimations, were also made available to the group but not discussed in detail since not many changes were incorporated to these datasets that were more thoroughly scrutinized in 2013.

A report of the 2017 ICCAT albacore species group intersessional meeting (Madrid 2017 45pp) included an assessment of Mediterranean albacore. During this meeting the statistics of the two Atlantic stocks were only marginally revisited by the Group as the Secretariat was informed that, with the exception of 2016 new data, no major updates were made since October 2016.

Fishery removals of the species in the fishery under assessment are included in the stock assessment process, the stocks pass Clause C1.1.

C1.2 North Atlantic Stock:

The Commission has followed advice and set the TAC for albacore tuna (2017 fishery) in the North Atlantic at 28,000 t. Previously advice had not been fully followed and management measures allowed for the potential that catches could have exceeded TAC levels.

The Secretariat noted that the ongoing work on Management Strategy Evaluation (MSE), Reference Points (RP) and Harvest Control Rules (HCR) aim to contribute not only to the potential decisions that the Commission may take with regards to a candidate HCR for the North Atlantic Albacore but also to the decisions to be taken during the Working Group (2016 assessment) in order to ensure that stock assessment advice is robust to uncertainty.

The Working Group (2016 assessment) recognized that different fleets operating in different parts of the North Atlantic could jointly provide a better signal of the stock trend compared to the individual fleet CPUEs. On this basis, the group agreed to consider to 5 CPUEs jointly in the base case scenario, and to weight them equally.

Figure 1 shows the trends of biomass and fishing mortality over time. Results suggest a biomass drop between the 1930s and the 1990s and a recovery since then. Relative to MSY benchmarks the Working Group estimate that the stock has recovered to levels above BMSY. The Kobe phase plot shows a typical pattern of development, overexploitation and recovery of this stock (**Figure 2**):

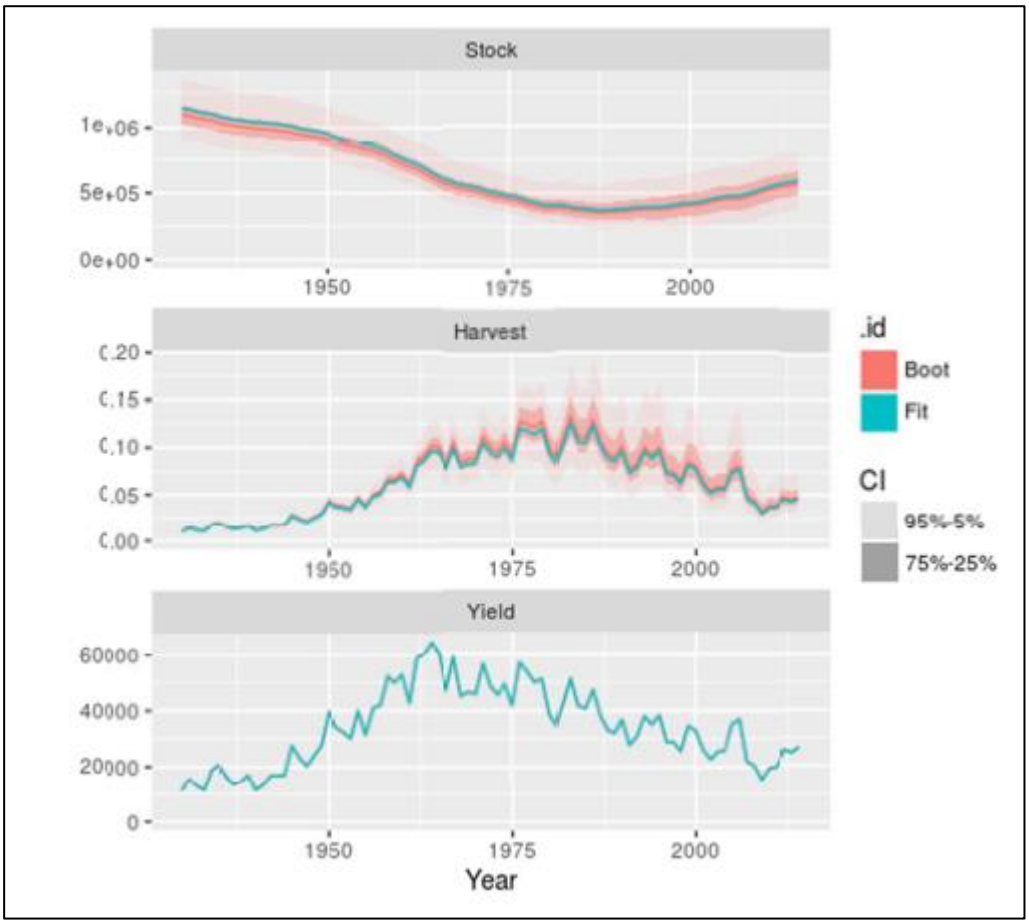


Figure 1: North Atlantic biomass stock assessment with confidence intervals (**R1**)

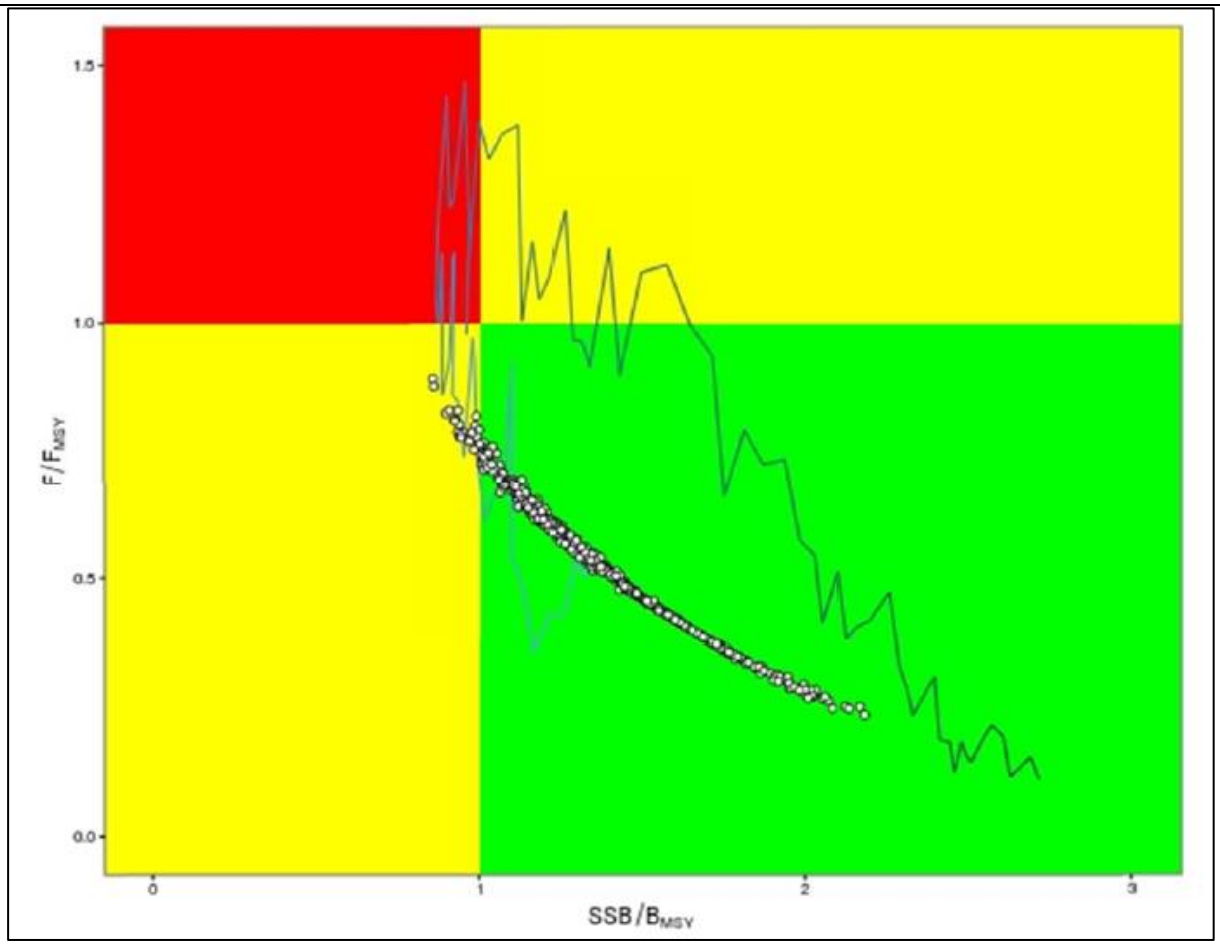


Figure 2: Estimated trends in B/B_{MSY} and F/F_{MSY} for the North Atlantic stock assessment (**R1**)

SSB_{2015}/SSB_{MSY} was >1; F_{2015}/F_{MSY} was <1. A MSY of 37,081mt was advised. Albacore tuna populations in the North Atlantic have improved since 2013 and are likely not overfished or undergoing overfishing (ICCAT 2016) the stock passes Clause C1.2.

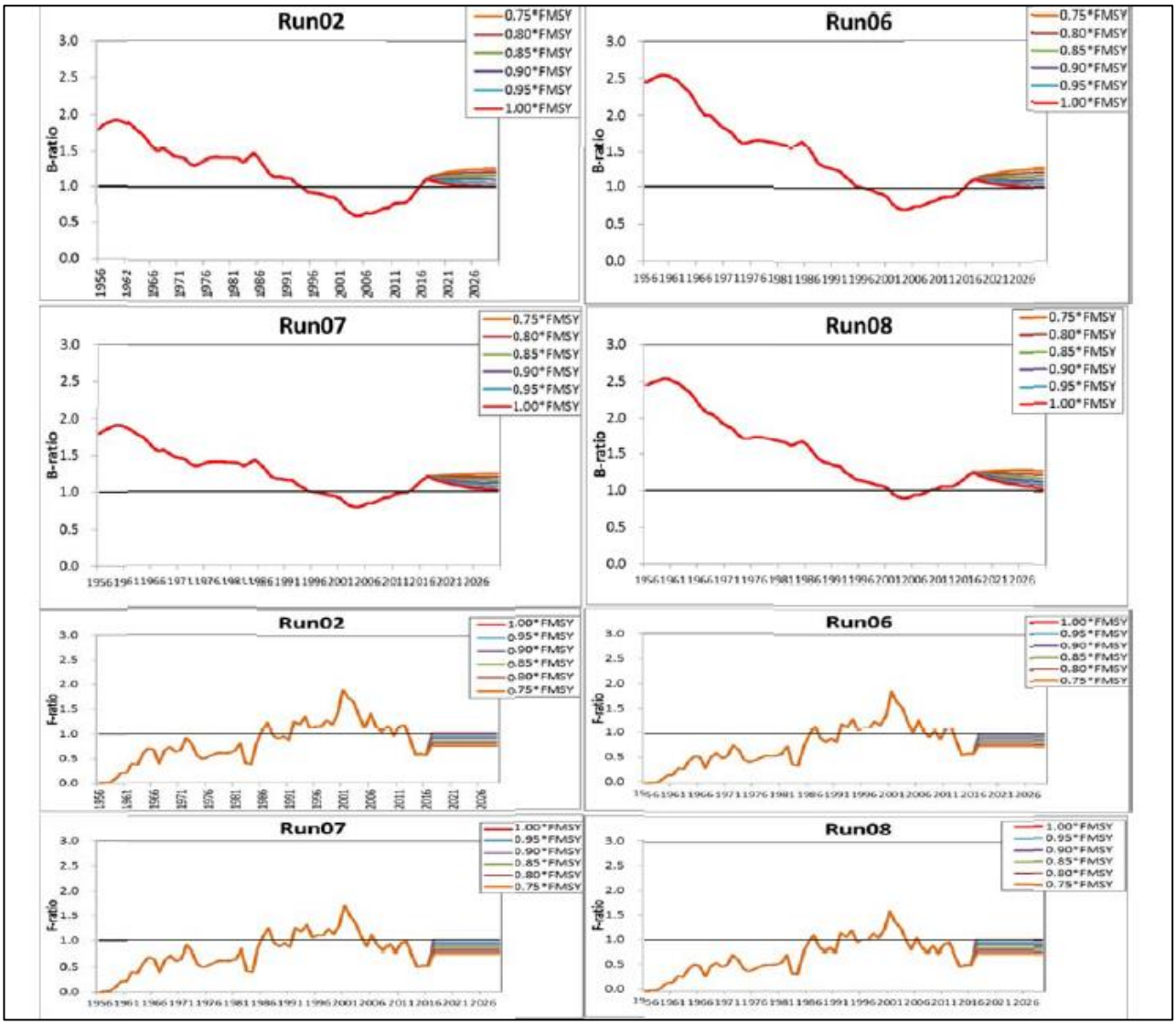
C1.2 South Atlantic:

According to the most recent assessment, six of eight scenarios indicated the population is not overfished or undergoing overfishing. All of the ASPIC and 2 of the BSP model scenarios indicated the biomass ratio was higher than in the 2013 assessment and all ASPIC and 3 BSP model scenarios indicate the fishing mortality (F) ratio is lower than the 2013 ratio. Results suggest an improvement in the stock since the 2013 assessment and that the current status has a high probability of being not overfished and not undergoing overfishing. The stock is in the green quadrant of the Kobe plot with a high probability **(Figure 3**):

Under a constant catch, the median biomass is expected to be in the Kobe green zone in 2020 with at least 60% probability for a TAC of 26,000 t. For constant F projections, 90–95 % or less of FMSY level attained Kobe green zone in medium and long term in the probability higher than 60%.

SB_{2012}/SB_{MSY} was calculated in the range 0.508-1.181; F_{2009}/F_{MSY} between 0.316-0.851 and MSY advised between 14,854-29,598 mt. (**Table 1**). The stock passes Clause C1.2

Table 1: Future projections (16 years) of B ratio B/B_{msy} and F Ratio F/F_{msy} for four ASPIC runs for South Atlantic Albacore under constant F (**R1**).



References

R1 ICCAT. 2016. Report of the 2016 ICCAT north and south Atlantic albacore stock assessment meeting. Madeira, Portugal, April 28-May 6, 2016.
https://iccat.int/Documents/Meetings/Docs/2016_ALB_REPORT_ENG.pdf

R2 ICCAT (2017) Albacore species group intersessional meeting (Madrid 2017 45pp)
https://iccat.int/Documents/Meetings/Docs/2017_ALB_REP_ENG.pdf

R3 Albacore tuna Atlantic Stocks https://www.fishsource.org/stock_page/638;

Standard clauses 1.3.2.2

SOCIAL CRITERION

In addition to the scored criteria listed above, applicants must commit to ensuring that vessels operating in the fishery adhere to internationally recognised guidance on human rights. They must also commit to ensuring there is no use of enforced or unpaid labour in the fleet(s) operating upon the resource.

Appendix A - Determining Resilience Ratings

The assessment of Category B species described in this assessment report template utilises a resilience rating system suggested by the American Fisheries Society. This approach was chosen because it is also used by FishBase, and so the resilience ratings for many thousands of species are freely available online. As described by FishBase, the following is the process used to arrive at the resilience ratings:

"*The American Fisheries Society (AFS) has suggested values for several biological parameters that allow classification of a fish population or species into categories of high, medium, low and very low resilience or productivity (Musick 1999). If no reliable estimate of r_m (see below) is available, the assignment is to the lowest category for which any of the available parameters fits. For each of these categories, AFS has suggested thresholds for decline over the longer of 10 years or three generations. If an observed decline measured in biomass or numbers of mature individuals exceeds the indicated threshold value, the population or species is considered vulnerable to extinction unless explicitly shown otherwise. If one sex strongly limits the reproductive capacity of the species or population, then only the decline in the limiting sex should be considered. We decided to restrict the automatic assignment of resilience categories in the Key Facts page to values of K, t_m and t_{max} and those records of fecundity estimates that referred to minimum number of eggs or pups per female per year, assuming that these were equivalent to average fecundity at first maturity (Musick 1999). Note that many small fishes may spawn several times per year (we exclude these for the time being) and large live bearers such as the coelacanth may have gestation periods of more than one year (we corrected fecundity estimates for those cases reported in the literature). Also, we excluded resilience estimates based on r_m (see below) as we are not yet confident with the reliability of the current method for estimating rm. If users have independent r_m or fecundity estimates, they can refer to Table 1 for using this information.*"

Parameter	**High**	**Medium**	**Low**	**Very low**
Threshold	0.99	0.95	0.85	0.70
r_{max} (1/year)	> 0.5	0.16 – 0.50	0.05 – 0.15	< 0.05
K (1/year)	> 0.3	0.16 – 0.30	0.05 – 0.15	< 0.05
Fecundity (1/year)	> 10,000	100 – 1000	10 – 100	< 10
t_m (years)	< 1	2 – 4	5 – 10	> 10
t_{max} (years)	1 - 3	4 – 10	11 – 30	> 30

Taken from the FishBase manual, "Estimation of Life-History Key Facts": http://www.fishbase.us/manual/English/key%20facts.htm#resilience]

Appendix B – Background on the 5% catch rule

The proposed fishery assessment methodology uses a species categorisation approach to divide the catch in the assessment fishery into groups. These groups are:

- **Category A:** "Target" species with a species-specific management regime in place.
- **Category B:** "Target" species with no species-specific management regime in place.
- **Category C:** "Non-target" species with a species-specific management regime in place.
- **Category D:** "Non-target" species with no species-specific management regime in place

The distinction between 'target' and 'non-target' species is made to enable the assessment to consider the impact of the fishery on all the species caught regularly, without requiring a full assessment be conducted for each. Thus 'target' species are subjected to a more detailed assessment, while 'non-target' species are considered more briefly. For the purposes of the IFFO RS fishery assessment, 'target' and 'non-target' species are defined by their prevalence in the catch, by weight. Applicants must declare which species are considered 'target' species in the fishery, and the combined weight of these must be at least 95% of the annual catch. The remaining 5% can be made up of 'non-target' species. Note also that ETP species are considered separately, irrespective of their frequency of occurrence in the catch.

The proposed use of 5% as a limit for 'non-target' species is one area in which feedback is being sought via the public consultation. The decision to propose a value of 5% ensures consistency with other fishery assessment programmes, such as the MSC which uses 5% to distinguish between 'main' and 'minor' species (see MSC Standard, SA3.4 and GSA3.4.2); and Seafood Watch, which uses 5% when defining the 'main' species for the assessment (see Seafood Watch Standard, Criterion 2). The value is also consistent with the approached used in Version 1 of the IFFO RS Standard, in which up to 5% of the raw material could be comprised of 'unassessed' species.

Comments on this proposition are welcomed along with any other feedback on the proposed approach.