*This is a Joint Statement that has been prepared and endorsed by the Federation of Malta Aquaculture Producers (FMAP) and Asociación de Pesca, Comercio y Consumo Responsable de Atún Rojo (APCCR), collectively referred to as the "**BFT Farms in the EU**".*

Following discussions at the **International Commission for the Conservation of Atlantic Tunas** (ICCAT) on the ***Growth Rate Observed in Bluefin Tuna Farmed in Eastern Atlantic and the Mediterranean***, Bluefin tuna (BFT) Farms in the EU, whilst commending the Standing Committee on Research and Statistics (SCRS) for the scientific work to determine the new growth table, is of the firm opinion that this should not be used as a control measure and, therefore, pending further investigations including but not limited to additional control measures supporting this growth table, it should not be made part of any legislative process controlling the farming and fattening of Bluefin Tuna in cages.

BFT Farms in the EU collectively represent more than 120 years of experience in BFT Farms and firmly believe that the average growth figures for similarly sized fish, presented by the SCRS to ICCAT when compared to the previous SCRS table in 2009, are consistently higher.

The new growth values, especially the proposed 95th percentile growth value (i.e. the maximum growth value), are too high. If one assumes that, on average, fish are fattened for 4 to 5 months, a 140kg fish at caging will now grow on average to 253kg (a growth of 79.4%) in 4 months, with a maximum growth value of 334kg (a growth of 136.9%).

We believe that we have to be careful to not create loopholes that can potentially be abused to the detriment of having a level playing field in the market.

To this effect, we believe that the growth of the BFT should be based on average growth rates, and any indicated maximum growth rates should be used for reference purposes only, and definitely not for control purposes.

Pending further investigations, the proposed table should not be made part of the legislative process, this notwithstanding and commending the good work made by the SCRS as part of their scientific research. BFT Farms in the EU recommends that more work is done to resolve a number of discrepancies, as

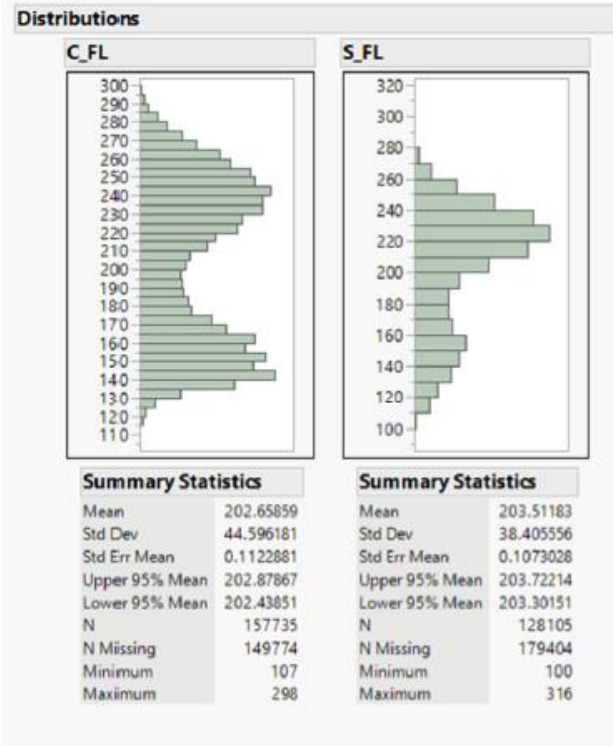
described below.

There is a notable discrepancy, of almost 266%, for the Large fish (≥180cm) between the results obtained by the MPA data (i.e. method to determine growth rate of a particular size class) generated by the GBYP Growth in Farms trials and the data generated by the tagging experiments in Croatia and Portugal (Ortiz et al., SCRS/2022/178). We also believe that even though it was remarked that any geographical differences were considered as not being relevant, we believe that for the sake of transparency any geographical differences in growth rates, should be presented more clearly.

Had the MPA values been used, would this imply that growth would be even greater than that indicated in the updated table? Is the data from the tagging experiments truly representative of other geographical areas?

Fish size class (SFL cm)	Wild fish (Cort et al 1991)	MPA 12-month studies	Tagging experiments
Small (< 100)	1.97	3.05	3.51
Medium (100 - 180)	1.37	2.21	2.18
Large (≥ 180)	0.49	1.83	0.66

The new growth table used the ROP harvested fish length and weight measurements. It is unclear how the Av. SFL values and Av. CFL values are practically equal when the known ratio SFL:CFL for harvested farmed fish is closer to ca. 0.93 (Farrugia-Drakard V. and Gatt M. 2018). How is this explained and how does this discrepancy affect the outcome of the new growth table?



There are very big differences between the previous table and the new table for the first few months of growth even considering the averages, let alone the 95% values. This does not agree with data coming from the GBYP growth in farm trials for the first few months of growth (Alemany et al., 2021; SCRS/2021/145) or other papers published looking at farm growth (e.g. Deguara et al., 2019). BFT Farms in the EU firmly believe in the sustainability of the stock and thereby the industry and, following years of hard work to achieve sustainable levels of this species, objects to the use of any model which, in the long term, may jeopardise this achievement.

It is therefore recommended that the discrepancies noted here be investigated to obtain an improved growth table/s which more realistically reflects the real growth seen in farms. Furthermore, should the updated growth table be accepted for use in its current form, the growth of the BFT should be based on average growth rates, and any indicated maximum growth rates should be used for reference purposes only, and definitely not for control purposes.

We are also attaching an endorsement of the above mentioned concerns by Dr Simeon Deguara.

Federation of Maltese Aquaculture Producers

Asociación de Pesca, Comercio y Consumo Responsable de Atún Rojo

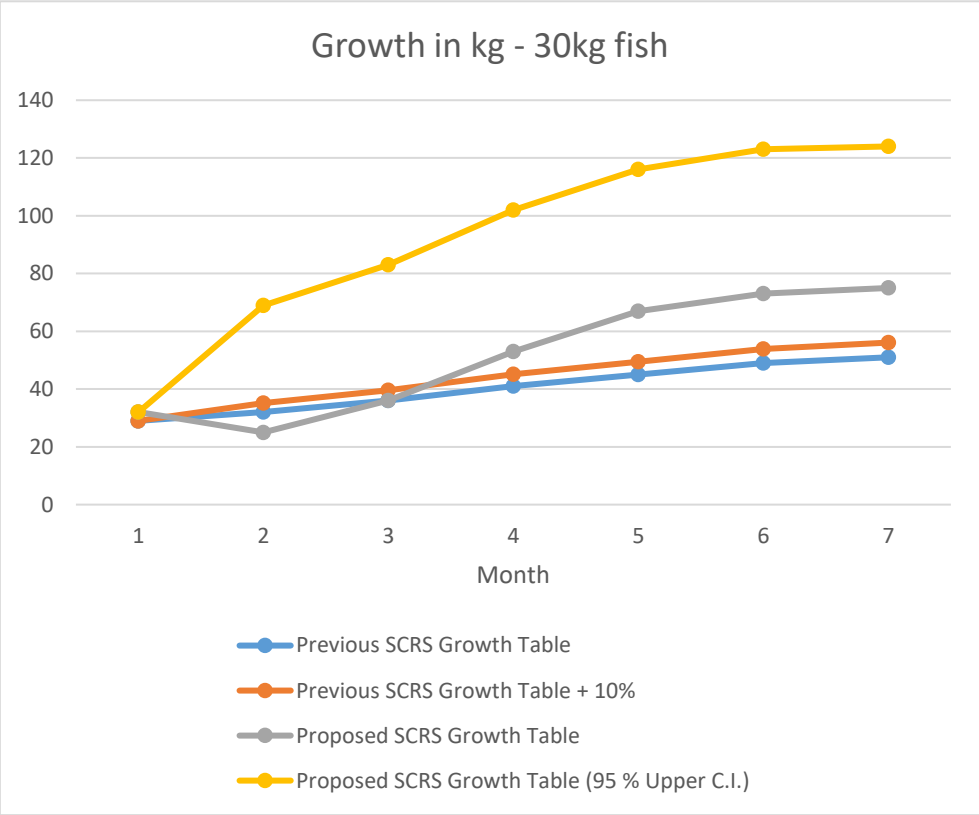
Background:

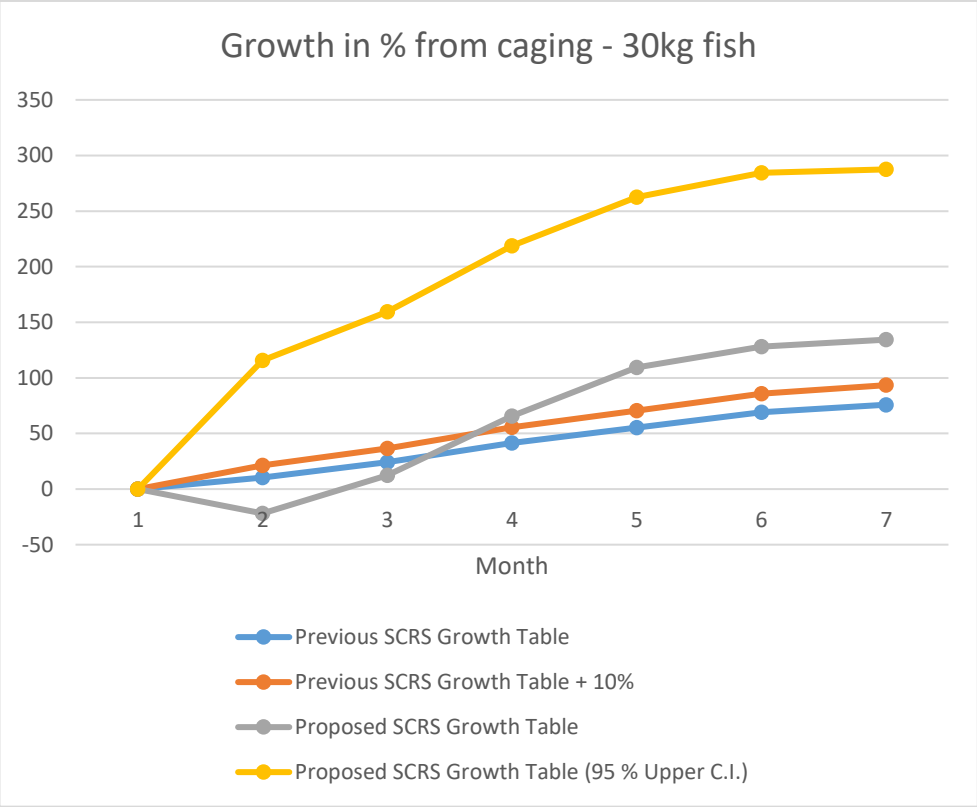
The Standing Committee on Research and Statistics (SCRS) is the forum within ICCAT for the discussion of scientific studies related to assessing the status of tuna fisheries, as well as related topics. The Commission requested SCRS to update the growth table published in 2009 (Rec. 21-08, para 27). This update was to be based on the monitoring of tagged individual fish and other scientific data.

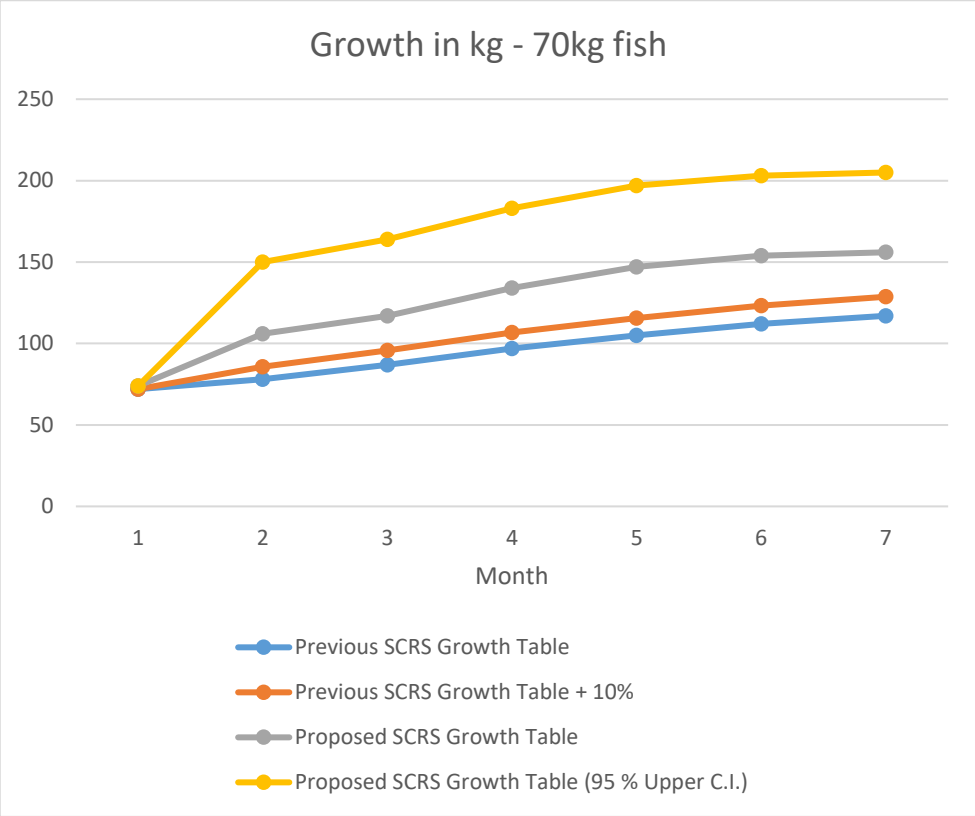
In 2009 a paper describing monthly growth rates for farmed fish was published and this was used as a measure of acceptable average growth that might be expected in a farm monthly. Whilst noting that this table had its limitations, it was the accepted benchmark to assess the growth of fish in cages.

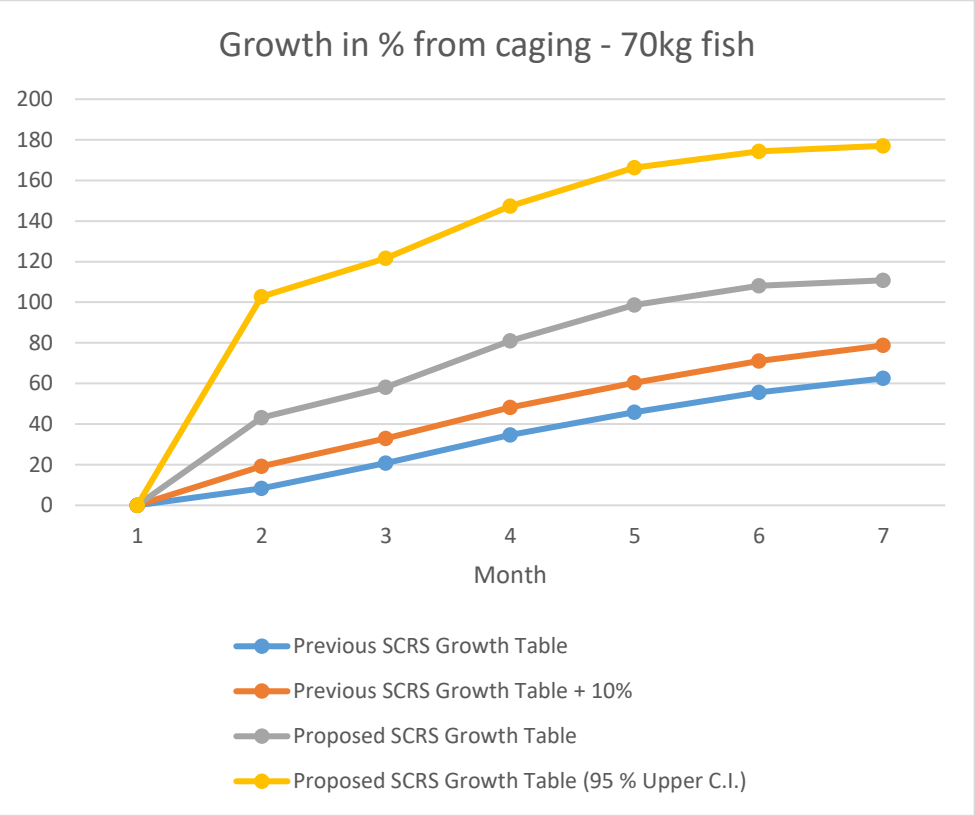
A paper was presented at the SCRS September 2022 Species Group meeting (SCRS/2022/178) in which the methodology used to determine the new growth table was described. The new growth table was developed using the data coming from individual fish tagging experiments carried out in Croatia and Portugal and Regional Observer (ROP) cage harvesting data (length and weights of individual fish taken during the harvesting operations, all farms, all farming flags); the results were compared to the results of stereocamera footage data in farm growth trials carried out in Spain, Malta, Turkey and Croatia.

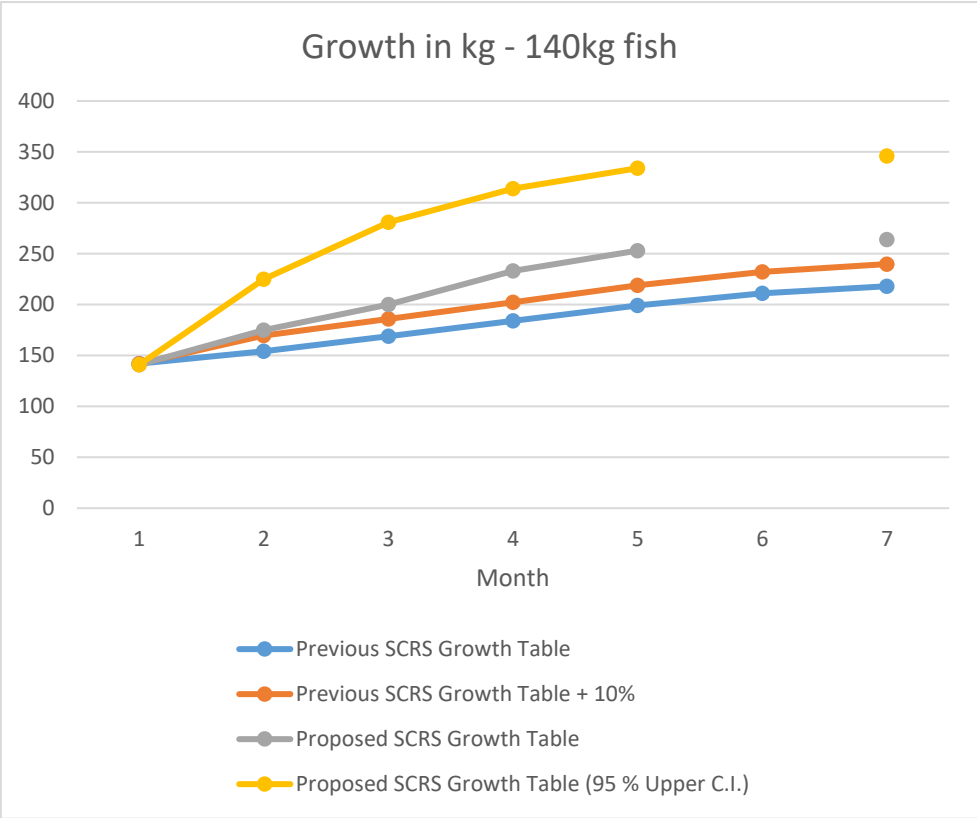
We have plotted the new growth rates (average and 95^{th} percentile) against the values of the 2009 growth table, as well as the growth values with the additional 10%, for four size classes. These plots are presented in the following pages.

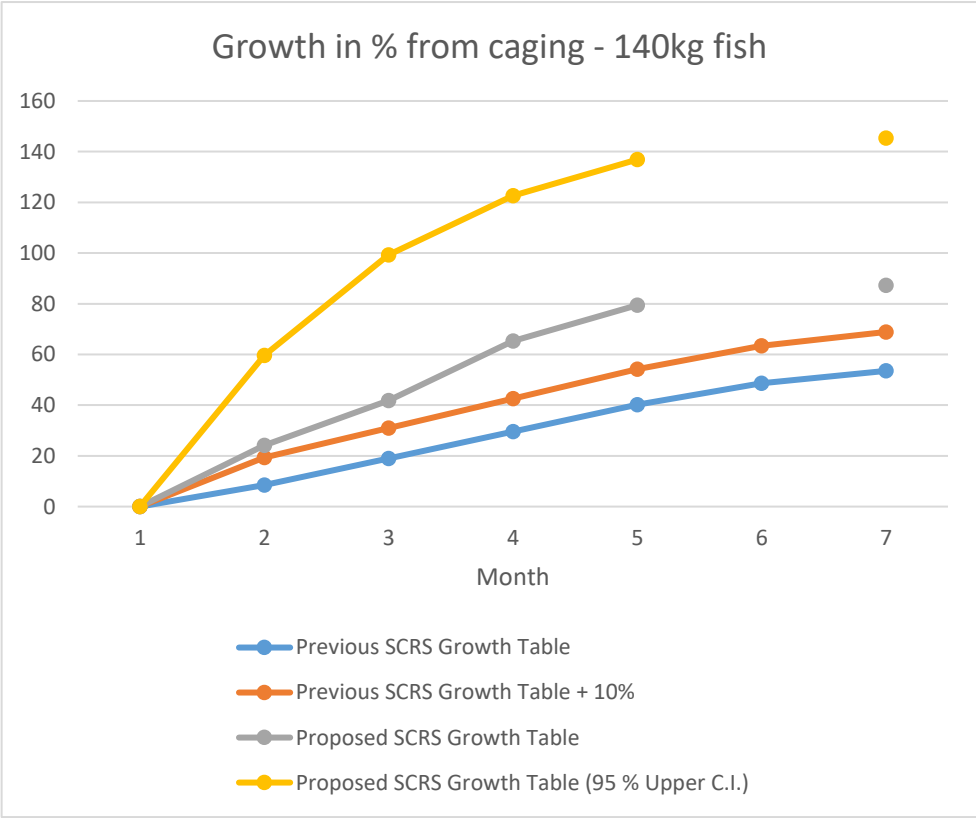

Growth in kg - 30kg fish
140
120
100
80
60
40
20
0
1
2
3
4
5
6
7
Month
Previous SCRS Growth Table
Previous SCRS Growth Table + 10%
Proposed SCRS Growth Table
Proposed SCRS Growth Table (95 % Upper C.I.)

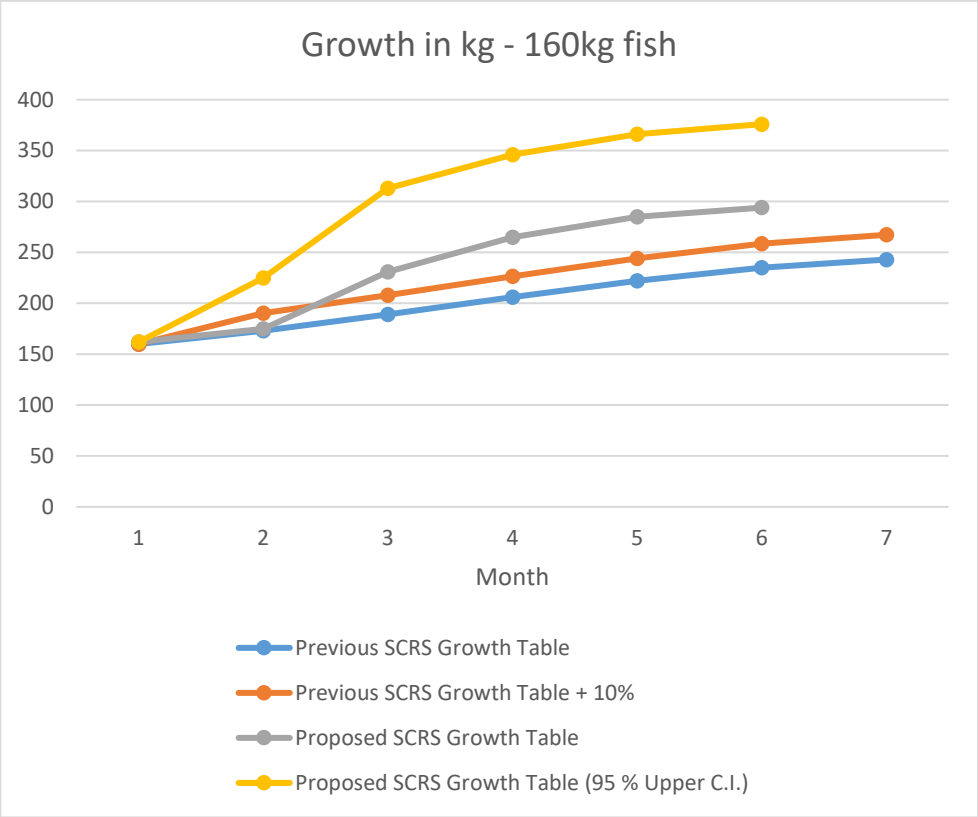

Growth in % from caging - 30kg fish
350
300
250
200
150
100
50
0
-50
1
2
3
4
5
6
7
Month
Previous SCRS Growth Table
Previous SCRS Growth Table + 10%
Proposed SCRS Growth Table
Proposed SCRS Growth Table (95 % Upper C.I.)

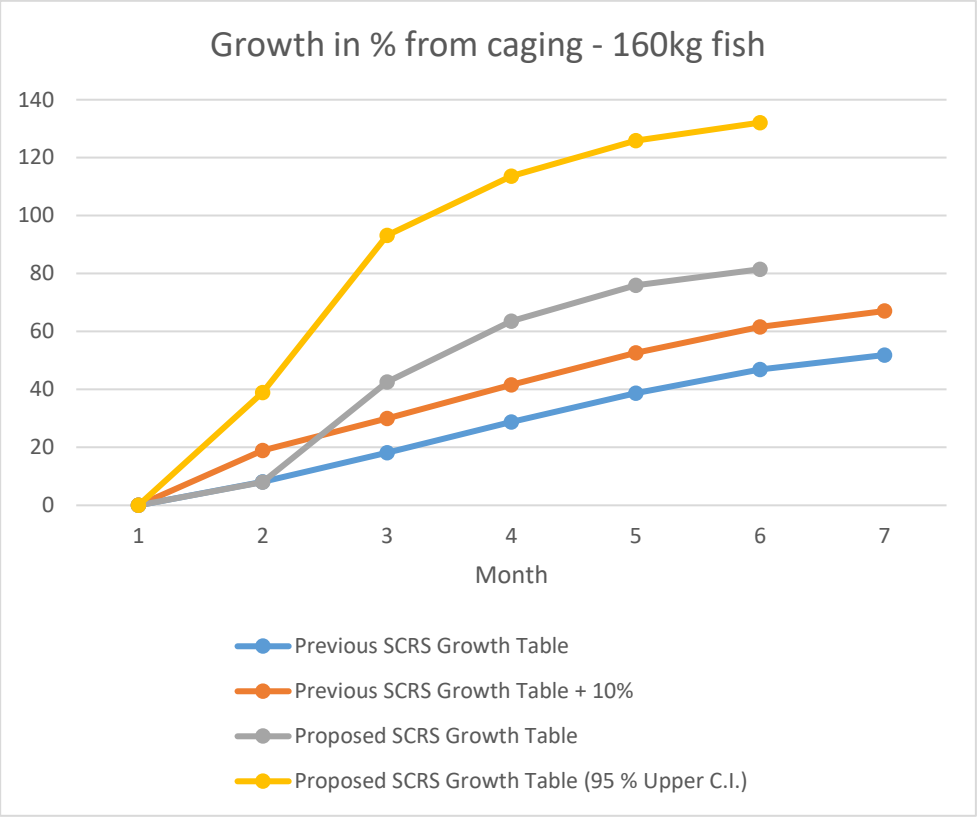

Growth in kg - 70kg fish
250
200
150
100
50
0
1
2
3
4
5
6
7
Month
Previous SCRS Growth Table
Previous SCRS Growth Table + 10%
Proposed SCRS Growth Table
Proposed SCRS Growth Table (95 % Upper C.I.)


Growth in % from caging - 70kg fish
200
180
160
140
120
100
80
60
40
20
0
1
2
3
4
5
6
7
Month
Previous SCRS Growth Table
Previous SCRS Growth Table + 10%
Proposed SCRS Growth Table
Proposed SCRS Growth Table (95 % Upper C.I.)


Growth in kg - 140kg fish
400
350
300
250
200
150
100
50
0
1
2
3
4
5
6
7
Month
Previous SCRS Growth Table
Previous SCRS Growth Table + 10%
Proposed SCRS Growth Table
Proposed SCRS Growth Table (95 % Upper C.I.)


Growth in % from caging - 140kg fish
160
140
120
100
80
60
40
20
0
1
2
3
4
5
6
7
Month
Previous SCRS Growth Table
Previous SCRS Growth Table + 10%
Proposed SCRS Growth Table
Proposed SCRS Growth Table (95 % Upper C.I.)


Growth in kg - 160kg fish
400
350
300
250
200
150
100
50
0
1
2
3
4
5
6
7
Month
Previous SCRS Growth Table
Previous SCRS Growth Table + 10%
Proposed SCRS Growth Table
Proposed SCRS Growth Table (95 % Upper C.I.)


Growth in % from caging - 160kg fish
140
120
100
80
60
40
20
0
1
2
3
4
5
6
7
Month
Previous SCRS Growth Table
Previous SCRS Growth Table + 10%
Proposed SCRS Growth Table
Proposed SCRS Growth Table (95 % Upper C.I.)

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To Whom it May Concern

Concerns regarding updated Farmed BFT Growth Table

I have been requested by the Federation of Malta Aquaculture Producers (FMAP), and the following Bluefin Tuna Farms, AJD Tuna Ltd., Balfegó Tuna, Fish and Fish Ltd. and MFF Ltd., to comment on a Joint Statement they have presented to Panel 2 at the current ICCAT Commission meeting being held at Vale do Lobo, Portugal.

On my personal capacity as a scientist, and as an active participant within the SCRS, with over 15 years involvement in the bluefin tuna farming industry, and having presented numerous papers at the SCRS on matters concerning bluefin tuna farming (including the use of the stereocamera, L-W equations, growth in farms), I endorse the contents of the Joint Statement presented by the farms.

The issues mentioned in the Joint Statement are valid scientific arguments, backed by verifiable scientific data, which do raise concerns about the achievable growths indicated in the new Growth Table.

In my opinion, it would not be correct to accept the current proposed Growth Table without taking into account the serious concerns which have been raised in the Joint Statement. I therefore believe It would be wiser this year to postpone any decision on the adoption of the updated Growth Table.

Yours sincerely,

Dr. Deguara
CRO Director
AquaBioTech Group
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