

INTER-AMERICAN TROPICAL TUNA COMMISSION
PERMANENT WORKING GROUP ON FLEET CAPACITY
12TH MEETING

DEL MAR, CALIFORNIA (USA)
23-24 OCTOBER 2011

DOCUMENT CAP-12-04

**SCENARIOS OF THE IMPACT ON THE TUNA RESOURCES IN THE EPO
OF VARIOUS INCREASES IN FLEET CAPACITY**

This document is an update of Document [SAC-02-INF A](#), presented to the 2nd Meeting of the Scientific Advisory Committee in May 2011. Some numbers were modified in accordance with changes in the Regional Vessel Register and with new numbers presented by one Member.

At its eleventh meeting in April 2011, the Permanent Working Group on Fleet Capacity made a [recommendation](#) to the Commission asking the Director to “prepare a document that will assist the deliberations of the meeting of the Commission in 2011, and that presents, in a preliminary manner, the different scenarios of the impact on the conservation of the resource of tuna and tuna-like species in the [eastern Pacific Ocean (EPO)] in relation to the different requests of capacity identified during the meeting and the Scientific Advisory Committee will be asked to examine, before the annual meeting of the Commission in 2012, that document, offering its comments and advice to the Commission”.

Accordingly, the IATTC staff has prepared this document, which presents eight such scenarios related to the requests for vessel capacity made at the meeting of the Working Group in April 2011 **and was discussed informally** during the IATTC meetings in July 2011. As indicated above, this updates Document [SAC-02-INF A](#), presented at the meeting of the Scientific Advisory Committee in May.

In evaluating the impact of the increases in capacity that would result from these requests, the staff assumed that the Commission would continue to implement area closures of duration sufficient to reduce fishing effort to a level corresponding to the maximum sustainable yield (MSY) of the tuna stocks. The calculations for estimating the duration of closures assume that a fractional increase (or decrease) in capacity equals the same fractional increase/decrease in fishing mortality. The evaluation of a conservation proposal presented at the 77th meeting of the Commission in March 2008 (Document [IATTC-77-04](#)) shows that the fraction of the year open to fishing closely matches the fractional change in fishing mortality. Based on that assumption, for the simple case of a closure of the EPO, not taking into account the supplementary closure of the high-seas area included in [recent and current conservation measures](#), the effect of the capacity increases/decreases is calculated as follows:

$$\text{Closure duration} = 365 [1 - (\text{target capacity})/(\text{proposed capacity})]$$

Each scenario of the effect of additional capacity has a different value for the term “proposed capacity”, since it adds to the current (2010) operational purse-seine capacity of 209,600 cubic meters (m³) of well volume the increase specified for each scenario.

The target capacity corresponding to the [two most recent IATTC conservation measures](#) are given in the Document [CAP-11-05](#), presented at the meeting of the Working Group in April.

The scenarios take into consideration three categories of requests for increases in capacity or claims for capacity considered by the Working Group, as well as another category corresponding to the existing capacity that can be used. The categories are:

- a) Requests by coastal Members based on the footnote to Resolution [C-02-03](#);

- b) Claims arising from disputes resulting from capacity transfers and/or differences in the implementation of Resolution C-02-03 since its entry into force;
- c) Requests for new increases in capacity for EPO coastal and non-coastal countries.
- d) Existing capacity that can be used.

The capacity in each of these categories is:

A		Requests based on footnote in Resolution C-02-03
Colombia	2,024 m ³	Add two purse-seine vessels: <i>Marta Lucía</i> (1,603 m ³) <i>Dominador I</i> (421 m ³) These vessels are currently fishing, but are not on the Regional Vessel Register
B		Disputes
Ecuador	2,209 m ³	Claim to the capacities of purse-seine vessels: <i>Roberto M</i> (1,161 m ³) (Operating as <i>Tunapesca</i> in Panama; duplicated on Regional Register) <i>Victoria A</i> (850 m ³) (Never on the Regional Register) <i>María del Mar</i> (198 m ³) (Never on the Regional Register)
Guatemala	3,762 m ³	Recover 3,762 m ³ of capacity, claimed since 2003 <i>Albacora Catorce</i> (1,881 m ³) (Operating as <i>Guayatuna Dos</i> in Ecuador; duplicated on Regional Register) <i>Albacora Doce</i> (1,881 m ³) (Operating as <i>Guayatuna Uno</i> in Ecuador; duplicated on Regional Register)
Venezuela	5,473 m ³	Recover 5,473 m ³ of capacity : <i>Jane IV</i> (1,250 m ³) <i>Baraka</i> (1,287 m ³) <i>Napoleón I</i> (1,668 m ³) <i>Templario I</i> (1,268 m ³) All currently on Regional Register under Panamanian flag
C		New requests
El Salvador	1,861 m ³	Addition of one vessel
Korea	42,238 m ³ (10,560 m ³)	Movement of purse-seine vessels to the EPO (30,170 tons (42,238 m ³)). Vessels limited to one trip of no more than 90 days each year (¼ of year). Full-year equivalent in EPO: 42,438 ÷ 4 = 10,560 m ³
Nicaragua	4,200 m ³	3,000 tons (4,200 m ³)
D		Existing capacity that can be used
Peru	5,000 m ³	Accepted by the 82 nd IATTC Meeting (Resolution C-11-12)
USA	10,400 m ³	32 vessels fishing west of 150°W and making 1 trip of 90 days in the EPO
		31,866 m ³ Total capacity in EPO

Regarding Peru in scenario 7, it was assumed that 150 metric tons (t) (210 m³) of capacity would be utilized for a small vessel that would fish for tunas opportunistically, which is equivalent to 19 m³ of full-time capacity, based on historical performance. Regarding Korea, in scenarios 1, 3, 4, and 8 it is assumed that the equivalent permanent total capacity is 10,560 m³; in scenario 2 it is assumed that no capacity is utilized, *i.e.* no trips are made during the year.

Another element which is not included in the current (2010) operational capacity of 209,600 m³ is the special allowance in paragraph 12 of Resolution [C-02-03](#), which allows a maximum of 32 United States purse-seine vessels that usually fish west of 150°W to make a single trip of no more than 90 days in any one year. The following two possibilities are considered:

1. All 32 vessels make a single trip during a year. The average capacity of Class-6 vessels in the EPO is 1,300 m³, thus total capacity is 41,600 m³ (1,300 x 32), and they make on average 4-5 trips per year. Full-time equivalent total capacity is thus 10,400 m³ (41,600 ÷ 4).
2. United States adds 31,866 m³ of total capacity in the EPO.

Based on the above, the following eight scenarios were used to calculate the impact of different combinations of capacity increases in terms of the number of days of closure required to meet the conservation goals over and above the recommendations of the staff in June 2008 and October 2010 (Documents [IATTC-78-06b](#) and [IATTC-81-06b](#), respectively). These calculations and their results are presented in detail in Annex 1.

			Jun 2008	Sep 2010
		Capacity (m ³)	Days of closure	
Base	Status quo 2010	209,600	84	62
Scenario	Description	Additional capacity	Additional days of closure	
1	All requests are resolved, increasing capacity; Korea utilizes all its requested capacity; Peru uses the 5,000 m ³ granted in Resolution C-11-12 .	33,065	37	41
2	All requests are resolved, increasing capacity; Korea does not utilize its requested capacity; Peru uses the 5,000 m ³ granted in Resolution C-11-12 .	22,505	26	29
3	All requests are resolved, increasing capacity; Korea utilizes all its requested capacity; the US utilizes its paragraph 12 capacity; Peru uses the 5,000 m ³ granted in Resolution C-11-12 .	43,465	47	51
4	Dispute requests are resolved without increasing capacity; other requests are resolved, increasing capacity; Korea utilizes all its requested capacity; US utilizes its paragraph 12 capacity; Peru uses the 5,000 m ³ granted in Resolution C-11-12 .	32,021	36	40
5	Dispute requests are resolved, increasing capacity; no new requests are accepted; US utilizes its paragraph 12 capacity; Peru does not use the 5,000 m ³ granted in Resolution C-11-12 .	21,844	26	28
6	Dispute requests are resolved, increasing capacity; only requests based on footnote in resolution are approved; US utilizes its paragraph 12 capacity; Peru uses the 5000 m ³ granted in Resolution C-11-12 .	26,844	31	34
7	Dispute requests are not resolved, capacity does not increase; requests based on footnote in resolution are approved, but Peru adds only 19 m ³ ; US utilizes its paragraph 12 capacity.	10,419	13	14
8	All requests are resolved, increasing capacity; Korea utilizes all its requested capacity; US utilizes its paragraph 12 capacity, plus total capacity of 31,866 m ³ ; Peru uses the 5000 m ³ granted in Resolution C-11-12 .	75,331	72	79

Annex-Anexo 1

SCENARIOS OF CAPACITY INCREASE REQUESTED BY THE

WORKING GROUP ON CAPACITY

ESCENARIOS DE INCREMENTO DE CAPACIDAD SOLICITADOS POR EL GRUPO DE TRABAJO SOBRE CAPACIDAD

1. All requests are resolved, increasing capacity; Korea utilizes all its requested capacity; Peru uses the 5,000 m³ granted in Resolution [C-11-12](#).
 Todas las disputas son resueltas, incrementando la capacidad; Corea utiliza toda su capacidad solicitada; Perú utiliza los 5.000 m³ asignados en la Resolución C-11-12.

		M ³ + ¹
Requests based on footnote in Resolution C-02-03 Solicitudes basadas en el pie de página en la Resolución C-02-03	Colombia	-
Disputes Disputas	Ecuador	2,209
	Guatemala	3,762
	Venezuela	5,473
New requests Nuevas solicitudes	El Salvador	1,861
	Korea	10,560
	Nicaragua	4,200
Potential capacity to be used Capacidad potencial por usar	Perú	5,000
TOTAL		33,065

2. All requests are resolved, increasing capacity; Korea does not utilize its requested capacity; Peru uses the 5,000 m³ granted in Resolution C-11-12.
 Todas las solicitudes son resueltas, incrementando la capacidad; Corea no utiliza su capacidad solicitada; Perú utiliza los 5.000 m³ asignados en la Resolución C-11-12.

		m ³ +
Requests based on footnote in Resolution C-02-03 Solicitudes basadas en el pie de página en la Resolución C-02-03	Colombia	-
Disputes Disputas	Ecuador	2,209
	Guatemala	3,762
	Venezuela	5,473
New requests Nuevas solicitudes	El Salvador	1,861
	Korea	0
	Nicaragua	4,200
Potential capacity to be used Capacidad potencial por usar	Perú	5,000
TOTAL		22,505

¹ m³ +: Increase in capacity on the Regional Vessel Register, in cubic meters

m³ +: Incremento de la capacidad en el Registro Regional de Buques, en metros cúbicos

3. All requests are resolved, increasing capacity; Korea utilizes all its requested capacity; the United States utilizes its paragraph 12 capacity; Peru uses the 5,000 m³ granted in Resolution C-11-12.
 Todas las solicitudes son resueltas, incrementando la capacidad; Corea utiliza su capacidad solicitada; EE.UU. utiliza su capacidad del párrafo 12; Perú utiliza los 5.000 m³ asignados en la Resolución C-11-12.

		m ³ +
Requests based on footnote in Resolution C-02-03 Solicitudes basadas en el pie de página en la Resolución C-02-03	Colombia	-
Disputes Disputas	Ecuador	2,209
	Guatemala	3,762
	Venezuela	5,473
New requests Nuevas solicitudes	El Salvador	1,861
	Korea	10,560
	Nicaragua	4,200
Potential capacity to be used Capacidad potencial por usar	Perú	5,000
Paragraph 12 of Resolution C-02-03 Párrafo 12 de la Resolución C-02-03	USA	10,400
TOTAL		43,465

4. Dispute requests are resolved without increasing capacity; other requests are resolved, increasing capacity; Korea utilizes all its requested capacity; the US utilizes its paragraph 12 capacity; Peru uses the 5,000 m³ granted in Resolution C-11-12.
 Las solicitudes por disputa son resueltas sin incrementar la capacidad; otras solicitudes son resueltas, incrementado la capacidad; Corea utiliza su capacidad solicitada; EE.UU. utiliza su capacidad del párrafo 12; Perú utiliza los 5.000 m³ asignados en la Resolución C-11-12.

		m ³ +
Requests based on footnote in Resolution C-02-03 Solicitudes basadas en el pie de página en la Resolución C-02-03	Colombia	-
New requests Nuevas solicitudes	El Salvador	1,861
	Korea	10,560
	Nicaragua	4,200
Potential capacity to be used	Perú	5,000
Paragraph 12 of Resolution C-02-03 Párrafo 12 de la Resolución C-02-03	USA	10,400
TOTAL		32,021

5. Dispute requests are resolved, increasing capacity; no new requests are accepted; the United States utilizes its paragraph 12 capacity, Peru does not use the 5,000 m³ granted in Resolution C-11-12. Las solicitudes por disputa son resueltas, incrementando la capacidad; no se aceptan solicitudes nuevas; EE.UU. utiliza su capacidad del párrafo 12, Perú no utiliza los 5.000 m³ asignados en la Resolución C-11-12.

		m ³ +
Disputes Disputas	Ecuador	2,209
	Guatemala	3,762
	Venezuela	5,473
Paragraph 12 of Resolution C-02-03 Párrafo 12 de la Resolución C-02-03	USA	10,400
TOTAL		21,844

6. Dispute requests are resolved, increasing capacity; only requests based on footnote in resolution are approved; the United States utilizes its paragraph 12 capacity; Peru uses the 5,000 m³ granted in Resolution C-11-12. Las solicitudes por disputa son resueltas, incrementando la capacidad; se aprueban solamente solicitudes basadas en el pie de página en la resolución; EE.UU. utiliza su capacidad del párrafo 12; Perú utiliza los 5.000 m³ asignados en la Resolución C-11-12.

		m ³ +
Requests based on footnote in Resolution C-02-03 Solicitudes basadas en el pie de página en la Resolución C-02-03	Colombia	-
Disputes Disputas	Ecuador	2,209
	Guatemala	3,762
	Venezuela	5,473
Potential capacity to be used Capacidad potencial por usar	Perú	5,000
Paragraph 12 of Resolution C-02-03 Párrafo 12 de la Resolución C-02-03	USA	10,400
TOTAL		26,844

7. Dispute requests are not resolved, capacity does not increase; requests based on footnote in resolution are approved, but Peru adds only 19 m³; the United States utilizes its paragraph 12 capacity. Las solicitudes por disputa no son resueltas, no se incrementa la capacidad; se aprueban las solicitudes basadas en el pie de página en la resolución, pero Perú añade solamente 19 m³; EE.UU. utiliza su capacidad del párrafo 12.

		m ³ +
Requests based on footnote in Resolution C-02-03 Solicitudes basadas en el pie de página en la Resolución C-02-03	Colombia	-
Potential capacity to be used Capacidad potencial por usar	Perú	19
Paragraph 12 of Resolution C-02-03 Párrafo 12 de la Resolución C-02-03	USA	10,400
TOTAL		10,419

8. All requests are resolved, increasing capacity; Korea utilizes all its requested capacity; the US utilizes its paragraph 12 capacity, plus total capacity of 31,866 m³; Peru uses the 5.000 m³ granted in Resolution C-11-12.

Todas las solicitudes son resueltas, incrementando la capacidad; EE.UU. utiliza su capacidad del párrafo 12, más su capacidad total de 31.866 m³; Perú utiliza los 5.000 m³ asignados en la Resolución C-11-12.

		m ³ +
Requests based on footnote in Resolution C-02-03 Solicitudes basadas en el pie de página en la Resolución C-02-03	Colombia	-
Disputes Disputas	Ecuador	2,209
	Guatemala	3,762
	Venezuela	5,473
New requests Nuevas solicitudes	El Salvador	1,861
	Korea	10,560
	Nicaragua	4,200
Potential capacity to be used	Perú	5,000
Paragraph 12 of resolution C-02-03 plus total capacity Párrafo 12 de la Resolución C-02-03 más la capacidad total	USA	42,266
TOTAL		75,331