

**JOINT IATTC AND WCPFC-NC WORKING GROUP MEETING ON THE
MANAGEMENT OF PACIFIC BLUEFIN TUNA
FOURTH SESSION**

Portland, Oregon, United States of America
3 – 5 September 2019

**CHAIRS' SUMMARY OF THE 4TH JOINT IATTC AND WCPFC-NC WORKING GROUP
MEETING ON THE MANAGEMENT OF PACIFIC BLUEFIN TUNA**

Agenda Item 1: Opening of the meeting

1. The 4th Session of the Joint IATTC and WCPFC-NC Working Group Meeting on the Management of Pacific Bluefin Tuna (JWG) was held September 3-6, 2019. The meeting was opened by co-chairs, Mr Masanori Miyahara (Japan, Northern Committee Chair) and Ms. Dorothy Lowman (USA, IATTC).
2. A full list of participants to the JWG is included in **Annex A**.

Agenda Item 2: Designation of co-chairs

3. The 4th Joint WG meeting was co-chaired by Mr. Masanori Miyahara (WCPFC-NC) and Ms. Dorothy Lowman (IATTC).

Agenda Item 3: Adoption of agenda

4. At the request of the United States, one additional item was added to the agenda - to allow for consideration of the meeting report prior to the close of the meeting. The co-chair noted that a more substantive meeting report would be developed this year, to capture the important work of Joint WG. The United States nominated Ms. Emily Crigler (USA) to serve as rapporteur for the meeting.
5. The provisional agenda was adopted with one additional agenda item, as suggested by the United States (**Annex B**).
6. Documents supporting the meeting were made available on WCPFC's website (<https://www.wcpfc.int/meetings/nc15>).

Agenda Item 4: Conservation and Management Measures for Pacific bluefin tuna (WCPFC CMM 2018-02 and IATTC RESOLUTION C-18-01)

4.1 Reports from ISC, IATTC-SAC and WCPFC-SC

7. Dr. Shuya. Nakatsuka (Japan) reported on the activities of ISC Pacific Bluefin Working Group (PBFWG) over the past year (NC15-IP03). The PBFWG held a workshop on 18-22 March

2019 in Jeju, Korea. The provisional PBF catch in 2018 was 10,496 t, which is the lowest since 1991. The PBFWG also developed responses to requests to ISC from IATTC-WCPFC NC Joint Working Group relevant to PBF management; The PBFWG reviewed the latest information and concluded that the Conservation Advice in 2018 should be maintained. In addition, the PBFWG conducted projections based on the 2018 assessment under additional harvest scenarios. The PBFWG also discussed how to prepare for the upcoming benchmark assessment scheduled in 2020.

8. The JWG discussed advice coming out of both the PBFWG and ISC19 Plenary relevant to PBF management. It was noted that not all of the advice included in the PBFWG summary report had been reflected in the advice from ISC19. ISC clarified that some of the information included in the PBFWG report was anecdotal and that the advice from ISC was based on the outcomes of the stock assessment and remained the same as advice from the previous year. Members also discussed the need to include the most recent recruitment estimates and to explore additional steepness values in the upcoming 2020 PBF stock assessment.

9. Dr. Mark Maunder (IATTC) provided an overview of relevant advice related to Pacific bluefin tuna given during the IATTC Scientific Advisory Committee (SAC) meeting in May, 2019, as well as advice given directly to the Commission at the IATTC annual meeting in July-August, 2019. The IATTC SAC did not provide advice on Pacific bluefin to the Commission at the IATTC annual meeting in 2019; however, the IATTC staff advice on Pacific bluefin was that the current management measures are adequate and that the science suggests increased catch could be taken while still meeting the rebuilding targets. IATTC staff did not provide advice on whether increased catch should or should not be taken, that is a decision for the member countries and depends on how quickly they desire rebuilding targets to be met. It was noted that recent recruitment levels are higher than the low recruitment scenario that was used to determine current management and that is the basis for the potential for increased catch.

10. The WCPFC Science Manager, Dr. Sungkwon Soh presented on outcomes of the 15th Regular Session of the WCPFC Scientific Committee and members were invited to discuss outcomes related to Pacific bluefin tuna. The summary of his presentation can be found in the NC15 Summary Report. Regarding the stock status of Pacific bluefin tuna, SC15 recommendations were as follows:

- a) SC15 noted that the total PBF catch by ISC members in 2018 was 10,148 mt, a 31% decrease from 2017 and a 25% decrease from the 2013-2017 average;
- b) SC15 also noted the management advice of ISC19; and
- c) SC15 advises the Commission to note the current very low level of SB (3.3% B_0), the current level of overfishing, and that the projections are strongly influenced by the inclusion of a relatively high but uncertain recruitment in 2016.

4.2 Reports on the implementation of conservation and management measures for Pacific bluefin tuna

11. The Joint WG reviewed WCPFC and IATTC members' implementation reports on conservation and management measures for PBF and discussed members' plans to remedy shortcomings, if any.

12. At the beginning of the discussion, the NC Chair explained the history of the implementation reports in NC and stressed the importance of them. Co-chairs requested the IATTC members to submit more detailed implementation reports to the JWG meeting next year.

13. Northern Committee Members were asked to present their reports on the implementation of conservation and management measures for Pacific bluefin tuna as required under CMM 2018-02. The co-chair noted that a full compilation of the catch and effort included in these reports is available as NC15-WP-02.

14. Canada (NC15-DP-01) reported that they have no fishery that targets Pacific bluefin tuna anywhere in the Pacific Ocean. However, one Pacific bluefin tuna was retained as bycatch in the North Pacific albacore troll fishery in 2018. In 2018 Canada exported no Pacific bluefin and imported 113 tons.

15. Cook Islands (NC15-DP-03) reported that they have no vessels operating in the North Pacific and no catch of Pacific bluefin in 2018.

16. Japan (NC15-DP-05) gave a brief presentation on its activities related to CMM 2018-02 and the characteristics of various fisheries catching Pacific bluefin tuna. The licenses for artisanal fisheries catching Pacific bluefin tuna in Japan, which include trolling, jigging and handling, were reduced from 24,086 in 2015 to 18,147 in 2018. It was noted that their catch depends on migration of Pacific bluefin tuna, which fluctuates drastically from year to year. Japan explained that there are about 1800 set-nets all over Japan. They are passive fishing gear, waiting for fish to come in, and therefore it can be difficult to control catch. Pacific bluefin tuna catch by set-nets is only 0.2% of total catch in Japan. The Japanese purse seine fishery, which targets jack mackerel and chub mackerel, and catches Pacific bluefin tuna only during its migration season. The Pacific bluefin catch by the Japanese purse seine fishery is 0.4% of the total catch. The juvenile catch limit of the purse seine fishery was reduced by 500t in 2018, 250t of which was converted to the catch limit of large Pacific bluefin tuna and remaining 250t was retained by Japan Fisheries Agency (JFA) as buffer. As a result of dividing allocation into many management units in order to keep the catch within the limit, a large portion of catch limit was not utilized in 2018. Japan noted that the increasing population of Pacific bluefin tuna is causing problems in their coastal fisheries. Fishermen have complained of PBF feeding on squid in the squid jigging fishery or damaging fishing gear in yellowtail longline fishery, and these appear to be worsening year by year. Japan also highlighted the current situation in the set-net fishery, noting that it was particularly serious because the passive fishery cannot select fish coming into the net. To avoid overshooting, set-net fishers in Japan make various efforts such as releasing Pacific bluefin tuna alive, reducing the number of net retrievals, not retrieving nets, or even closing the entrance of set nets. These efforts cause tremendous sacrifice of other species. Because of these issues, JFA is financially supporting projects to develop methods to alleviate the problem of bycatch of Pacific bluefin tuna, such as investigating a new set-net structure that can separate Pacific bluefin tuna from other species, which has resulted in a limited success. Regarding the management of aquaculture in Japan, sites raising Pacific bluefin tuna need to be registered and JFA has instructed farms not to increase the capacity of Pacific bluefin using wild fry. Starting from 2018 additional measures have been put into place to strengthen the management of Pacific bluefin tuna fisheries. A binding TAC was

introduced from 2018 to any fisheries that catch Pacific bluefin tuna. The reporting system was improved to ensure more accurate and timely reporting of Pacific bluefin tuna catch. Additionally, JFA secured a larger reserve to deal with catch overage in one area, and there is continued recruitment monitoring and data collection from aquaculture companies.

17. It was suggested that it would be helpful if the Japanese presentation could be made available to members on the NC website. Members requested further clarification on the recent decrease in the number of licenses issued in the Japanese artisanal fisheries. Japan explained that licenses were no longer being issued to vessels with no recent record of PBF catch. Japan also noted recent efforts to encourage catch of relatively larger fish to be sent to farms instead of small juvenile. Further information was requested from Japan on the management periods used for their various PBF fisheries. Japan explained the complexities of managing various fisheries across Japan, particularly given the variation in migration patterns. Japan recognized the complications associated with differing management periods, but expressed the need to continue to do so for the time being.

18. Korea (NC15-DP-06) reported on their implementation of CMM 2018-02. In 2018, Korea's catch limit for PBF was 598.856 tons. 535 tons of PBF were caught in total in 2018, comprising of 510.5 tons of small PBF and 24.5 tons of large PBF. To avoid overshooting, the Korean government issued an order to prohibit the capture of any PBF conservatively as from 26 March 2018. Although Korea does not have a large fish catch limit, according to paragraph 3 of CMM 2018-02, Korea used part of the catch limit for small fish to catch the large fish in 2018. So there was no overage of the catch limit in 2018. Regarding international trade, Korea requested that Japan double check their trade amounts. Korea reported importing 34 tons of frozen PBF from Japan in 2018, but Japan did not report export of frozen PBF to Korea. Korea requested further investigation. It was noted that there was no explanation of farming operations included in Korea's report. Korea explained that there are 2 PBF farms currently operating in Korea with juvenile fish in their cages - and that further information on farming operations could be included in future reports.

19. Chinese Taipei (NC15-DP-08) reported on the measures taken to manage catch and effort limits, data collection and international trade of Pacific bluefin. Chinese Taipei reported 480 longline vessels fishing for PBF in 2018, which was below the baseline level of 660 vessels. Chinese Taipei reported 381 mt of PBF caught in 2018, which was also below the 2002-2004 annual average levels. Chinese Taipei reported on the implementation of a CDS for PBF, and noted that the scheme can be used to monitor and collect data for PBF. In 2018, Chinese Taipei exported 1.6 metric tons of PBF and imported 11.9 mt.

20. The United States (NC15-DP-09) reported on its implementation of PBF measures in 2018. The United States explained that it does not have any vessels fishing for PBF in the WCPFC Area North of 20N, so it does not need to limit fishing effort. The catches of PBF 30kg or larger are typically in the range of 1-4 mt per year, and in 2018 were 1 mt. The United States monitors imports and exports of PBF, and in 2018 about 1,164 mt of bluefin tuna caught in the Pacific Ocean were imported to the U.S., with about 1,047 mt coming from Mexico, 118 mt from Japan, and less than 1 mt from New Zealand. About 4 mt of bluefin tuna caught in the Pacific Ocean were exported from the United States in 2018.

21. A number of additional inconsistencies were noted with regard to trade related information included in Member reports. Japan noted a discrepancy between Japanese reported exports of PBF to China and Chinese reported imports of PBF from Japan. Japan recorded 320 t of PBF exported to China in 2018 - but according to China, they only imported Atlantic bluefin tuna in 2018. A similar discrepancy was also reported last year for 2017. Additionally, Japan reported 0.4 t of imported PBF from the Cook Islands in 2018 - while the Cook Islands reported no catch of, PBF in 2018, Cook Islands agreed to include exports in its annual reporting. Japan also reported ~15 t of PBF imported from New Zealand in 2018. According to CMM 2018-02, CCMs which have a baseline catch of 10t or less of PBF may increase its catch as long as it does not exceed 10 t. Japan noted that further information should be requested from New Zealand on their catch and export of PBF in 2018.

22. It was noted that China, Fiji, the Philippines and Vanuatu were not present during the JWG meeting to report back on their implementation of CMM 2018-02. Additionally Members expressed concern that no reports had been received from Fiji, the Philippines or Vanuatu, and it was highlighted that the submission of these reports is critical for ensuring the appropriate management of PBF in the WCPFC.

23. China was not present to report on its implementation of CMM 2018-02 (NC15-DP-02). However, it was noted that China may not be compliant with the obligations of the PBF measure. It was highlighted that China has consistently reported they have no vessels targeting PBF - but they do not report catch of PBF. It was suggested that if China has longline fisheries operating in the North Pacific, even if they are not targeting PBF, it would be realistic to assume that China's vessels are taking at least some PBF. It was noted that in the Secretariat's compiled report on PBF information, it states that the reporting obligation is not applicable to China; however, it was suggested that the measure is both applicable to China and that China is required to report any catch of PBF, even bycatch, in line with the CMM. Noting these concerns, the NC Chair agreed to consult with China on this matter.

24. Noting concerns expressed by a number of Members, the NC Chair agreed to formally send letters to Fiji, the Philippines, and Vanuatu to request submission of required reports and to express concern over their lack of attendance during NC15. The NC Chair will also send a letter to China requesting more information on their bycatch as well as expressing the same concern about their lack of attendance.

25. Mexico and the United States reported on their implementation of Pacific bluefin management under the IATTC.

26. The United States (IATTC-NC-JWG04-04) reported on implementation of conservation and management measures in the Eastern Pacific Ocean. There are two U.S. gear types that target Pacific bluefin tuna commercially in the EPO, purse seine and hook and line, and they both occur within the U.S. EEZ. Other gear types catch bluefin incidentally. All U.S. vessels that harvest bluefin and land on the U.S. West Coast are required to have a Highly Migratory Species Permit and all Purse seine vessels must be listed on the IATTC's Active Purse Seine Regional Vessel Register. Regarding implementation of management measures in the EPO under IATTC, as a

reminder, the US has a 600 mt biennial limit for our commercial fisheries and an annual cap within that of 425 mt. The US exceeded that annual cap in 2017, and then imposed a very restrictive 2-mt trip limit applicable to our commercial vessels in 2018 so as not to exceed the biennial limit. This was to allow harvest of PBF in small quantities, whether caught incidentally or targeted, consequently preventing regulatory discards. Because of this small trip limit, the United States ended up with an overall under-harvest from the 2017-2018 catch limit. For 2019-202, there is a 630 mt biennial limit for the United States in 2019-2020, which incorporates a 30 mt addition to the catch limit as a result of that previous under-harvest. For this year and next, the United States will continue with very conservative trip limits to ensure no catch overage occurs: a 15 mt trip limit until catch is within 50 mt of the annual limit, at which time a 2 mt trip limit will be in effect.

27. Japan requested additional information on U.S. efforts to manage and track recreational catch of PBF. The United States explained that bag limits have been in place since 2015. Additionally, the IATTC measure calls for a commensurate 40% reduction in recreational fishery catch - and the U.S. recreational catch is within that 40% reduction, consistent with the IATTC measure. The co-chair asked whether the United States has a catch survey system for Pacific recreational fisheries similar to the system on the Atlantic coast. The United States responded that logbook reporting is implemented on the Pacific coast instead.

28. Mexico (IATTC-NC-JWG04-05) reported on implementation of conservation and management measures in the Eastern Pacific Ocean. Mexico's catch of PBF has been regulated since the start of the fishery by national regulations and by IATTC resolutions since 2012. In that year, resolution IATTC C12-09 established a 10,000 metric catch limit valid for 2012-2013. After that period, catch limits were reduced based on stock assessment results. Resolutions C14-06, C16-08 and C18-01 established for Mexico a biannual limit of 6000 metric tons starting 2015 until 2020. In 2016, Mexico voluntarily released 195 tons from farming pens, aiming to promote stronger conservation measures in the WCPFC to improve PBF situation. In 2018 the amount of catch was higher than the adopted catch limit, so an adjustment was made and imposed by the Mexican authority. In 2019, because the Mexican authorities closed the fishery to avoid a possible catch overage, catch was well below (20%) the adjusted limits for 2019-2020. Mexican authorities are developing a process to avoid further catch overages in the future. This year, although the catch limit was adjusted, Mexican authorities ordered the release of 245 tons of live PBF from the 2018 catch, as part of an internal process to address the accountable of the over catch.

29. Mexico was requested to include further information on fishing gear, measures taken to collect catch and effort data, and import and export data for PBF in future reports. The co-chair also noted that IATTC members do not have the same obligation to report to the Northern Committee, so thanked both Mexico and the United States for voluntarily reporting out on these measures in the Eastern Pacific Ocean.

Agenda Item 5: Harvest strategy and Long-term Management Framework for Pacific bluefin tuna fisheries (WCPFC HS 2017-02 and IATTC RESOLUTION C-18-02 – Amendment to C-16-08)

5.1 Review of conservation and management measures for PBF

30. Japan introduced NC15-DP-11, proposed amendments to CMM 2018-02 for Pacific Bluefin Tuna. Japan noted that proposed increases were not agreed to last year, but ISC was requested to review additional stock indices and to conduct additional stock projections and scenarios. ISC concluded that there was no need to change the scientific advice from the previous year and that the probabilities of achieving the first and second rebuilding targets exceeded 75% in all of the catch increase scenario projections requested by the JWG. Based on the updates from ISC, Japan has submitted a new proposal this year to increase catch limits based on scenario number 3 from the ISC report - a 10% increase for small fish and a 1300mt increase for large fish. This new proposal takes into account the concern of other members on the catch of juvenile PBF in the Northwest Pacific area. The proposal also includes a conversion factor which would be used in the transfer of small fish catch limit to large fish catch limit, to further incentivize catch of large fish instead of juveniles, as well as a new provision for the management of fishing years. Japan noted that the stock is increasing and that fishermen need to be compensated for their continued efforts and sacrifices which have contributed to the rebuilding of the stock.

31. Korea introduced NC15-DP-12, proposed amendments to CMM 2018-02 for Pacific Bluefin Tuna. Korea explained two proposed modifications to the current measure: 1) increase catch limits for large fish based on scenario number 5 from the ISC report; and 2) special considerations for small-scale set-net fisheries in Korea's territorial waters. Korea noted that ISC's advice that increases could be possible and that more PBF has been occurring recently in Korea's waters. Korea also explained that their current catch limit is only for small fish, but that large fish catch limits are needed. Additionally Korea's limited catch is from small-scale set nets which take place in their territorial waters - a passive gear which only catches PBF incidentally. Korea stated the current limits create a disproportionate burden on small scale fisherman, and these proposed modifications would reduce this burden.

32. The United States acknowledged that strides have been made toward the common objective to rebuild the PBF stock and that some challenges have been identified while managing the diverse fisheries. The United States remains precautionary but open to continue discussions and will offer ideas to solve operational challenges. Additional work will be required to ensure that the timing of recommendations would allow both RFMOs to share the benefits and burdens fairly. The United States also noted that more work is needed to better address the relative fishing impacts between the West and the East.

33. Mexico noted concern for the stock but explained that they may be willing to consider some increase, potentially for large fish only - as long as there continues to be a very high probability of reaching the rebuilding target. Japan explained that they are also cautious about the impact of any increase on the stock, which is why they chose scenario 3 and an 81% probability of achieving the target within the timeframe.

34. Pew and WWF strongly urged the JWG to reject the two proposals to increase the catch of Pacific bluefin tuna. It was suggested instead that the working group use the meeting to advance the PBF harvest strategy process by agreeing to candidate reference (both limits and targets) and harvest control rules. Pew and WWF reiterated that the stock is at 3.3% unfished biomass, is overfished, continues to experience overfishing, and based on the best available science from the ISC, the state of the stock is not better than last year, when the NC agreed not to increase catch

limits. The most recent stock projections assume recruitment will increase and then stay at the so-called average level after the first rebuilding target is met. However, this level has not been seen consistently in more than two decades and there is no guarantee that level will be consistently reached in the future. Raising quotas now would be very risky in light of this large uncertainty. Pew and WWF suggested that the working group should agree to continue current measures until the full benchmark stock assessment takes place next year.

35. Japan reminded members that last year the JWG agreed to look at additional stock indices such as recruitment indices and that the preliminary indication is that the stock recruitment remains above the 2016 low recruitment, giving more comfort for members to consider catch limit increase.

36. A small working group was held to further progress discussions on the proposed revisions to the conservation and management measure for PBF. The co-chair noted that during the small working group, one party expressed the view that no catch limit increases could be agreed to for 2020. Members worked to develop a modified proposal that provided some flexibility. The United States also developed a document outlining a number of outcomes and additional requests for the ISC.

37. Japan introduced NC15-DP11_Rev 1, a revised proposal to amend 2018-02 for Pacific Bluefin Tuna. Japan noted that two years ago the NC agreed to a harvest strategy including harvest control rules. Japan considered that all the components contained in the harvest strategy should be respected, and if the harvest control rules continue to be ignored, Japan will not pay respect to the other parts of the strategy. Japan expressed great disappointment that catch increases will not be achieved again this year as the expectation among Japanese stakeholders to see such increase became high after a similar proposal was rejected last year. The intention of the new proposal is to alleviate difficulties of Japan to some extent without increasing the catch limits. The revised proposal includes a 17% carry-over provision for 2020 only, a transfer of 300mt of large fish catch limit from Chinese Taipei to Japan for 2020 only, and a specific provision for the management of PBF fisheries by a management year other than calendar year. The proposed CMM would be reviewed and amended as needed in 2020 following the benchmark stock assessment for PBF and any recommendation from the next joint WG meeting.

38. The Cook Islands noted that the NC must continue to apply the precautionary approach in implementing its management decisions, considering the concerns some members, including the Cook Islands, have expressed over the low status of the stock. The Cook Islands noted the range of uncertainties in the most recent projections, and looks forward to the results of the benchmark assessment in 2020. The Cook Islands expressed sympathy to the Japanese position with regard to their domestic fisheries and acknowledged that the principles of the Harvest Strategy approach do allow for the possibility of a catch increase. Cook Islands agreed that the recommended text changes to the CMM are an acceptable compromise.

39. The JWG recommended that the WCPFC NC recommend NC15-DP11_Rev 2 to amend 2018-02 for Pacific Bluefin Tuna (**Annex C**).

40. Pew expressed concern that the changes agreed to will allow catch to increase next year by hundreds of tons over the previously agreed to limits – for both small and large fish. Adding

multiple exemptions to measures is not a transparent or effective way to manage a fishery. Pew noted that there has been no scientific analysis of these changes, but it is expected that they will further increase overfishing and only harm the chances of rebuilding the stock. Pew urged members to reconsider the recommendations and instead agree to maintain the current measure when they reconvene with a quorum in December.

41. The Chair of the ISC PBF WG clarified that in the projections conducted by ISC, the estimated catch for Chinese Taipei in 2019 in the projections was more than 900 t - as the fishing mortality for all fisheries were increased in order to utilize the catch limit to the greatest extent possible. In reality the recent catch by Chinese Taipei is around 400 t, meaning that the projection assumed about 500 t more catch than actually being taken.

42. The United States introduced a paper entitled Outcomes of the 4th Joint IATTC-WCPFC NC Working Group Meeting on the Management of Pacific Bluefin Tuna – which was intended to capture some key points for the IATTC and WCPFC NC to consider incorporating when developing future management actions for Pacific bluefin tuna. The JWG outcomes document included a number of requests to the ISC, including a number of projections based on the 2020 benchmark assessment and fishery impact on SSB under recent conditions taking into account the difference in age caught. The JWG outcomes document is included as **Annex D**.

5.2 Emergency rule

43. There were no discussions on this matter - but it will remain on the agenda next year.

5.3 Guidelines for the development of MSE

5.3.1 Report from the MSE Workshop

44. Dr. Shuya Nakatsuka (Japan) briefly presented the results of 2nd PBF MSE Workshop. ISC held its 2nd Workshop on PBF MSE, as requested by WCPFC HS2017-02, in May 2019 in San Diego, USA. The purpose of the Workshop was to promote understanding of MSE among stakeholders, particularly in the EPO and to continue discussions on elements of MSE for PBF, following up the results of 1st workshop. Participants did not wish to make specific decisions at the ISC workshop, so the JWG needs to consider the path forward for PBF MSE. Dr. John Holmes, Chair of ISC, followed up with the discussion took place at ISC19. To continue the MSE, ISC19 requested the NC-IATTC Joint Working Group on PBF identify 1) management objectives, 2) purpose of MSE, 3) terms of reference, and 4) candidate reference points and harvest control rules to evaluate. It was also noted that additional human resources are needed to accommodate the MSE workload.

45. IATTC staff noted that there are currently two rebuilding targets and an HCR in place, and that the PBF stock assessment provides a good understanding of the stock, so the task may not be as difficult as the albacore MSE. Japan noted that before the next workshop is held, the purpose and objectives of the workshop should be clearly defined.

5.3.2 Development of MSE

46. The United States introduced IATTC-NC-JWG04-03, Terms of Reference (TOR) for the Pacific Bluefin Tuna Management Strategy Evaluation, noting that the proposal speaks to a number of outstanding issues previously highlighted by the ISC Chair. The proposed TOR aims to provide some structure and purpose for the next PBF MSE workshop. The objective included in the proposed TOR focuses on the long term management of the stock, however, the United States noted that the current rebuilding target could be taken into consideration as well. The remainder of the proposal attempts to clarify the roles of the ISC, IATTC, NC and the JWG in the MSE process.

47. The United States also introduced IATTC-NC-JWG04-04, Candidate Reference Points and Harvest Control Rules for Pacific Bluefin Tuna. The proposal responds directly to the PBF harvest strategy currently in place, which states that the JWG should discuss and finalize guidelines for the MSE including long term candidate limit reference points, target reference points and harvest control rules to be provided to the ISC. The proposal includes three harvest control rules - two (HCR1 and HCR2) where the exploitation rate responds to the spawning stock biomass and a third (HCR3) which includes separate HCRs for large fish and small fish. The proposal also includes a number of candidate reference points which cover a series of possibilities for limit, threshold, and target reference points.

48. Japan noted that according to the outcomes from the 2nd JWG, the current harvest control rules will be applicable until the stock reaches the interim rebuilding target - at which point further harvest control rules should be considered. Japan pointed out that any harvest strategy produced through the MSE process will be applied to management of the stock after it reaches the second rebuilding target. Japan preferred HCR3 to others as this could theoretically address problems of coastal fisheries although there remain technical challenges for implementation. With regard to reference points, Japan would prefer a limit reference point of SSB at 30,000 mt above which there could be no relationship between the spawning stock biomass and recruitment. With regard to target reference points, Japan reminded members that the second rebuilding target could be reviewed based on scientific and socioeconomic factors, and given the current challenges faced by Japanese coastal fishermen, Japan could not imagine what would happen in coastal areas when the stock reaches the second rebuilding target, let alone these candidate target reference points.. Japan would prefer to include a probability of breaching the limit reference point, but to avoid candidate target reference points at this stage.

49. Based on additional input from members, the United States introduced IATTC-NC-JWG04-03_Rev 1, a slightly revised proposal for Terms of Reference (TOR) for the Pacific Bluefin Tuna Management Strategy Evaluation. The new proposal reflected modifications to the purpose of the MSE and to the roles of the various parties involved (i.e. IATTC, WCPFC NC, ISC and the JWG). There were a number of questions regarding the application of the current MSE process to the second rebuilding targets. It was also noted that funding for the workshop would need to be secured - given that the JWG was not a formal organization.

50. The JWG recommended that the WCPFC NC and the IATTC adopt the draft Terms of Reference (TOR) for the Pacific Bluefin Tuna Management Strategy Evaluation (**Annex E**).

51. The United States also introduced IATTC-NC-JWG04-04_Rev 1, a revised proposal for Candidate Reference Points and Harvest Control Rules for Pacific Bluefin Tuna. The revised proposal included one additional candidate limit reference point, two additional target reference points, and two new Fmin reference points. ISC noted that the number of harvest control rules and potential scenarios will require an enormous amount of work - and suggested that consideration should be given to reducing the number of requested scenarios. Members concurred that the number of scenarios could be reduced. After reviewing the outcomes of the albacore MSE, further consideration will be given to the workload associated with the harvest control rule scenarios.

52. The JWG recommended that the WCPFC NC and the IATTC adopt the draft Candidate Reference Points and Harvest Control Rules for Pacific Bluefin Tuna (**Annex F**).

5.4 Administrative matters

53. The JWG discussed potential funding for the MSE and the need to identify and fund technical experts to contribute to the MSE work. The co-chair noted that without funding and additional staff, the MSE work cannot be done. The United States concurred with the need to find additional technical experts to contribute to the process. The United States also expressed the intention to seek funding to support the MSE workshop - and requested that other members do the same. The co-chair reminded members that the MSE workshop should include the participation of scientists, managers and stakeholders.

Agenda Item 6: Catch document scheme (CDS)

54. Mr. Shingo Ota (Japan) the Chair of the CDS Working Group presented on the outcomes of the 2nd Catch Document Scheme Technical Meeting. A Chair's Summary Report of the meeting is included as **Annex G**. Participants discussed elements included in an information paper submitted by Japan (IATTC-NC-CDS02-2019/02) on the continued development of a draft CMM for a PBF CDS. The meeting made good progress but there are still several outstanding issues that require further consideration. Participants supported continuing work on the development of a draft CMM/Resolution for a PBF CDS through a virtual working group. The next CDS technical meeting will take place 1 day in advance of the next JWG meeting.

55. The Chair noted one item for consideration by the JWG. Participants of the CDS technical meeting expressed the need for further analysis of some of the elements to consider in the development of a PBF CDS. It was requested that the issue be raised at WCPFC16 and the next IATTC annual meeting. Participants suggested that there was a need for expert analysis on a number of budgetary and administrative aspects of different options for establishing an ePBCD system, including the possibility of piggybacking the ICCAT eBCD system, developing an electronic system based on the ICCAT system for WCPFC/IATTC, or developing an original electronic system for WCPFC/IATTC. Participants concluded that without the results of such an analysis, it would likely not be possible to finalize a draft CMM by 2020 as envisioned in the work plan for the development of a CDS.

Agenda Item 7: Next meeting

56. Japan offered to host the next JWG meeting in conjunction with WCPFC NC at a date to be determined. The JWG encouraged IATTC to consider convening its next regular session in September 2020 to allow for the JWG to meet in advance of the IATTC and facilitate the timely adoption of any JWG outcomes by both regional fishery management organizations in the same year. If this is not feasible, Japan offered to host the next JWG meeting separately from NC sometime between the ISC plenary and the IATTC meeting.

Agenda Item 8: Other business

Agenda Item 9: Adoption of the report

Agenda Item 10: Close of Meeting

**JOINT IATTC AND WCPFC-NC WORKING GROUP MEETING ON THE
MANAGEMENT OF PACIFIC BLUEFIN TUNA
FOURTH SESSION**

Portland, Oregon, United States of America
3 – 5 September 2019

LIST OF PARTICIPANTS

CO-CHAIRS

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**JOINT IATTC AND WCPFC-NC WORKING GROUP MEETING ON THE
MANAGEMENT OF PACIFIC BLUEFIN TUNA
FOURTH SESSION**

Portland, Oregon, United States of America
3 – 5 September 2019

PROVISIONAL ANNOTATED AGENDA

- 1. Opening of the meeting**
- 2. Designation of co-chairs**
- 3. Adoption of agenda**
- 4. Conservation and Management Measures for Pacific bluefin tuna (WCPFC CMM 2018-02 and IATTC RESOLUTION C-18-01)**
 - 4.1 Reports from ISC, IATTC-SAC and WCPFC-SC
 - 4.2 Reports on the implementation of conservation and management measures for Pacific bluefin tuna
- 5. Harvest strategy and Long-term Management Framework for Pacific bluefin tuna fisheries (WCPFC HS 2017-02 and IATTC RESOLUTION C-18-02 – Amendment to C-16-08)**
 - 5.1 Review of conservation and management measures for PBF
 - 5.2 Emergency rule
 - 5.3 Guidelines for the development of MSE
 - 5.3.1 Report from the MSE Workshop
 - 5.3.2 Development of MSE
 - 5.4 Administrative matters
- 6. Catch document scheme**
- 7. Next meeting**
- 8. Other business**
- 9. Adoption of the report**
- 10. Close of Meeting**

**JOINT IATTC AND WCPFC-NC WORKING GROUP MEETING ON THE
MANAGEMENT OF PACIFIC BLUEFIN TUNA
FOURTH SESSION**

Portland, Oregon, United States of America
3 – 5 September 2019

CONSERVATION AND MANAGEMENT MEASURE FOR PACIFIC BLUEFIN TUNA

CONSERVATION AND MANAGEMENT MEASURE 2019-XX

The Western and Central Pacific Fisheries Commission (WCPFC):

Recognizing that WCPFC6 adopted Conservation and Management Measure for Pacific bluefin tuna (CMM 2009-07) and the measure was revised ~~six~~^{eight} times since then (CMM 2010-04, CMM 2012-06, CMM 2013-09, CMM 2014-04, CMM 2015-04, ~~and~~ CMM 2016-04, CMM2017-08 and CMM 2018-02) based on the conservation advice from the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) on this stock;

Noting with concern the latest stock assessment provided by ISC Plenary Meeting in July 201~~6~~⁸, indicating the following:

- (1) SSB fluctuated throughout the assessment period (1952–201~~4~~⁶), (2) SSB steadily declined from 1996 to 2010, and (3) ~~the decline appears to have ceased since 2010, although the stock remains near the historic low (2.6% of unfished SSB) slow increase of the stock continues since 2011 including the most recent two years (2015-2016);~~
- ~~The 2014 estimated recruitment was relatively low, and the average recruitment for the last five years may have been below the historical average~~The 2015 recruitment estimate is low and similar to estimates of previous years while the 2016 recruitment estimate is higher than the historical average, and the uncertainty of the 2016 recruitment estimate is higher than in previous years because it occurs in the terminal year of the assessment model and is mainly informed by one observation from troll age-0 CPUE index;
- The fishery exploitation rate in 201~~4~~⁵-201~~3~~⁶ exceeded all biological reference points evaluated by the ISC except FMED and FLOSS.
- Since the early 1990s, the WCPO purse seine fisheries, in particular those targeting small fish (age 0-1) have had an increasing impact on the spawning stock biomass, and in 201~~4~~⁶ had a greater impact than any other fishery group.
- The projection results indicate that: ~~(1) the probability of SSB recovering to the initial rebuilding target (SSBMED1952-2014) by 2024 is 69% or above the level prescribed in current management measures by the WCPFC (CMM 2015~~8~~⁴)-042) if low recruitment scenario is assumed and WCPFC CMM 2015-04 and IATTC Resolution (C-14~~8~~⁰)-061) continue in force and are fully implemented; and (2) a 10% reduction in the catch limit for fish smaller than 30 kg would have a larger effect on recovery than a 10% reduction in the catch limit for fish larger than 30 kg under the low recruitment scenario resulted in an estimated 987% probability of achieving the initial biomass rebuilding target (6.7% of SSBF=0) by 2024; and~~
- The estimated probability of achieving the second biomass rebuilding target (20% of SSBF=0) 10 years after the achievement of the initial rebuilding target or by 2034, whichever is earlier, is 96%; and
- Catching a high number of smaller juvenile fish can have a greater impact on future spawning stock biomass than catching the same weight of larger fish;

Noting also that in its response to requests from IATTC-WCPFC NC Joint Working Group, ISC Plenary Meeting in July 2019:

- Noted that the Japanese troll recruitment index value estimated for 2017 is similar to its historical average (1980-2017), that Japanese recruitment monitoring indices in 2017 and 2018 are higher than the 2016 value and that there is anecdotal evidence that larger fish are becoming more abundant in EPO, although this information needs to be confirmed for the next stock assessment expected in 2020;
- Recommended maintaining the conservation advice from ISC in 2018; and,
- Conducted projections of scenarios for catch increase in the same manner as in the 2018 assessment.

Further recalling that paragraph (4), Article 22 of the WCPFC Convention, which requires cooperation between the Commission and the IATTC to reach agreement to harmonize CMMs for fish stocks such as Pacific bluefin tuna that occur in the convention areas of both organizations;

Adopts, in accordance with Article 10 of the WCPFC Convention that:

General Provision

1 This conservation and management measure has been prepared to implement the Harvest Strategy for Pacific Bluefin Tuna Fisheries ([Harvest Strategy 2017-02](#)), and the Northern Committee shall periodically review and recommend revisions to this measure as needed to implement the Harvest Strategy.

Management measures

2 CCMs shall take measures necessary to ensure that:

- (1) Total fishing effort by their vessel fishing for Pacific bluefin tuna in the area north of the 20° N shall stay below the 2002–2004 annual average levels.
- (2) All catches of Pacific bluefin tuna less than 30 kg shall be reduced to 50% of the 2002– 2004 annual average levels. Any overage or underage of the catch limit shall be deducted from or may be added to the catch limit for the following year. The maximum underage that a CCM may carry over in any given year shall not exceed 5% of its annual initial catch limit.¹

3 CCMs shall take measures necessary to ensure that all catches of Pacific Bluefin tuna 30kg or larger shall not be increased from the 2002-2004 annual average levels^{2,3}. Any overage or underage of the catch limit shall be deducted from or may be added to the catch limit for the following year. The maximum underage that a CCM may carry over in any given year shall not exceed 5% of its annual initial catch limit¹. However, in 2018, 2019, and 2020 CCMs may use part of the catch limit for Pacific bluefin tuna smaller than 30 kg stipulated in paragraph 2 (2) above to catch Pacific bluefin tuna 30 kg or larger in

¹ [Notwithstanding paragraph 32 and 43, a CCM may carry over in 2019 up to 17% of its ~~each annual~~ initial 2019 catch limits, which ~~that~~ remains uncaught, to 2020.](#)

² CCMs with a base line catch of 10 t or less may increase its catch as long as it does not exceed 10 t.

³ [300 tons of the catch limit of Pacific bluefin tuna 30kg or larger of Chinese Taipei will be transferred to Japan in 2020.](#)

the same year. In this case, the ~~catch~~ amount of catch 30 kg or larger shall be counted against the catch limit for Pacific bluefin tuna smaller than 30 kg. CCMs shall not use the catch limit for Pacific bluefin tuna 30 kg or larger to catch Pacific bluefin tuna smaller than 30 kg. The ISC is requested to review, in its work referred to in Section 5 of Harvest Strategy, the implications of this special provision in terms of PBF mortality and stock rebuilding probabilities in 2020. Based on that review, in 2020 the Northern Committee will determine whether it should be continued past 2020, and if so, recommend changes to the CMM as appropriate.

4 All CCMs except Japan shall implement the limits in paragraph 2 and 3 on a calendar-year basis. Japan shall implement the limits using a management year other than the calendar year for some of its fisheries and have its implementation assessed with respect to its management year. To facilitate the assessment, Japan shall:

a. Use the following management years:

1. For its fisheries licensed by the Ministry of Agriculture, Forestry and Fisheries, use the calendar year as the management year.
2. For its other fisheries, use 1 April – 31 March as the management year⁴.

b. In its annual reports for PBF, for each category described in a.1 and a.2 above, complete the required reporting template for both the management year and calendar year clearly identifying fisheries for each management year.

~~45~~ CCMs shall report their 2002–2004 baseline fishing effort and <30 kg and >=30 kg catch levels for 2013 and 2014, by fishery, as referred to in paragraphs 2 and 3, to the Executive Director by 31 July 2015. CCMs shall also report to the Executive Director by 31 July each year their fishing effort and <30 kg and >=30 kg catch levels, by fishery, for the previous 3 year, accounting for all catches, including discards. The Executive Director will compile this information each year into an appropriate format for the use of the Northern Committee.

~~56~~ CCMs shall intensify cooperation for effective implementation of this CMM, including juvenile catch reduction.

~~67~~ CCMs, in particular those catching juvenile Pacific bluefin tuna, shall take measures to monitor and obtain prompt results of recruitment of juveniles each year.

~~78~~ Consistent with their rights and obligations under international law, and in accordance with domestic laws and regulations, CCMs shall, to the extent possible, take measures necessary to prevent commercial transaction of Pacific bluefin tuna and its products that undermine the effectiveness of this CMM, especially measures prescribed in the paragraph 2 and 3 above. CCMs shall cooperate for this purpose.

~~89~~ CCMs shall cooperate to establish a catch documentation scheme (CDS) to be applied to Pacific bluefin tuna in accordance with the Attachment of this CMM.

~~910~~ CCMs shall also take measures necessary to strengthen monitoring and data collecting system for Pacific bluefin tuna fisheries and farming in order to improve the data quality and timeliness of all the data reporting;

⁴ For the category described a.2, the TCC shall assess in year 20XX its implementation during the management year that starts 1 April 20XX-1 (e.g., in the 2020 compliance review, the TCC will assess Japan's implementation for its fisheries licensed by the Ministry of Agriculture, Forestry and Fisheries during calendar-year 2019 and for its other fisheries during 1 April 2019 through 31 March 2020).

~~10~~11 CCMs shall report to Executive Director by 31 July annually measures they used to implement paragraphs 2, 3, 4, 5, ~~6~~7, ~~7~~8, 9~~10~~ and ~~12~~13 of this CMM. CCMs shall also monitor the international trade of the products derived from Pacific bluefin tuna and report the results to Executive Director by 31 July annually. The Northern Committee shall annually review those reports CCMs submit pursuant to this paragraph and if necessary, advise a CCM to take an action for enhancing its compliance with this CMM.

~~11~~12 The WCPFC Executive Director shall communicate this ~~CMM~~Conservation Management Measure to the IATTC Secretariat and its contracting parties whose fishing vessels engage in fishing for Pacific bluefin tuna in EPO and request them to take equivalent measures in conformity with this CMM.

~~12~~13 To enhance effectiveness of this measure, CCMs are encouraged to communicate with and, if appropriate, work with the concerned IATTC contracting parties bilaterally.

~~13~~14 The provisions of paragraphs 2 and 3 shall not prejudice the legitimate rights and obligations under international law of those small island developing State Members and participating territories in the Convention Area whose current fishing activity for Pacific bluefin tuna is limited, but that have a real interest in fishing for the species, that may wish to develop their own fisheries for Pacific bluefin tuna in the future.

15 The provisions of paragraph ~~13~~14 shall not provide a basis for an increase in fishing effort by fishing vessels owned or operated by interests outside such developing coastal State, particularly Small Island Developing State Members or participating territories, unless such fishing is conducted in support of efforts by such Members and territories to develop their own domestic fisheries.

16 This CMM replaces CMM 2018-02. On the basis of stock assessment conducted by ISC and reported to NC in 2020, and other pertinent information, this CMM shall be reviewed and may be amended as appropriate.

Development of a Catch Document Scheme for Pacific Bluefin Tuna

Background

At the 1st joint working group meeting between NC and IATTC, held in Fukuoka, Japan from August 29 to September 1, 2016, participants supported to advance the work on the Catch Documentation Scheme (CDS) in the next joint working group meeting, in line with the development of overarching CDS framework by WCPFC and taking into account of the existing CDS by other RFMOs.

1. Objective of the Catch Document Scheme

The objective of CDS is to combat IUU fishing for Pacific Bluefin Tuna (PBF) by providing a means of preventing PBF and its products identified as caught by or originating from IUU fishing activities from moving through the commodity chain and ultimately entering markets.

2. Use of electronic scheme

Whether CDS will be a paper based scheme, an electronic scheme or a gradual transition from a paper based one to an electronic one should be first decided since the requirement of each scheme would be quite different.

3. Basic elements to be included in the draft conservation and management measure (CMM)

It is considered that at least the following elements should be considered in drafting CMM.

- (1) Objective
- (2) General provision
- (3) Definition of terms
- (4) Validation authorities and validating process of catch documents and re-export certificates
- (5) Verification authorities and verifying process for import and re-import
- (6) How to handle PBF caught by artisanal fisheries
- (7) How to handle PBF caught by recreational or sport fisheries
- (8) Use of tagging as a condition for exemption of validation
- (9) Communication between exporting members and importing members
- (10) Communication between members and the Secretariat
- (11) Role of the Secretariat
- (12) Relationship with non-members
- (13) Relationship with other CDSs and similar programs
- (14) Consideration to developing members
- (15) Schedule for introduction
- (16) Attachment
 - (i) Catch document forms
 - (ii) Re-export certificate forms
 - (iii) Instruction sheets for how to fill out forms
 - (iv) List of data to be extracted and compiled by the Secretariat

4. Work plan

The following schedule may need to be modified, depending on the progress on the WCPFC CDS for tropical tunas.

- 2017 The joint working group will submit this concept paper to the NC and IATTC for endorsement. NC will send the WCPFC annual meeting the recommendation to endorse the paper.
- 2018 The joint working group will hold a technical meeting, preferably around its meeting, to materialize the concept paper into a draft CMM. The joint working group will report the progress to the WCPFC via NC and the IATTC, respectively.
- 2019 The joint working group will hold a second technical meeting to improve the draft CMM. The joint working group will report the progress to the WCPFC via NC and the IATTC, respectively.
- 2020 The joint working group will hold a third technical meeting to finalize the draft CMM. Once it is finalized, the joint working group will submit it to the NC and the IATTC for adoption. The NC will send the WCPFC the recommendation to adopt it.

**JOINT IATTC AND WCPFC-NC WORKING GROUP MEETING ON THE
MANAGEMENT OF PACIFIC BLUEFIN TUNA
FOURTH SESSION**

Portland, Oregon, United States of America
3 – 5 September 2019

**OUTCOMES OF THE 4TH JOINT IATTC-WCPFC NC WORKING GROUP MEETING ON
THE MANAGEMENT OF PACIFIC BLUEFIN TUNA**

The Joint IATTC-WCPFC NC Working Group (JWG) on the Management of Pacific bluefin tuna recommends that the IATTC and WCPFC NC consider incorporating the following actions in their decisions:

General Discussion

The Joint Working Group recognizes that upon expansion of certain WCPO purse seine fisheries targeting juvenile fish starting in the mid-1990s, the fishery impact on the spawning stock biomass (SSB) increased in the WCPO and the resultant fishing mortality by all fisheries caused decline in the size of the spawning stock.

Review of current CMMs

The JWG noted the U.S. position that future increases in catch will need to contribute to rebalancing the distribution of fishing opportunities between the WCPO and EPO, such as through a 50-50 split in the allocation of any catch limit increases between WCPFC and IATTC.

Requests to the ISC

To request ISC to conduct projections of the harvest scenarios shown in Table 1 and the base case (current management regime), based on the 2020 assessment. The outputs should include the probability of reaching the initial and 2nd rebuilding targets by their respective target dates in accordance with paragraph 2.1 of HS2017-02, the likely date (year) of reaching each of the two targets, the expected relative fishery impact on SSB of each of the major EPO and WCPO fisheries upon reaching each of the two targets, and any other outputs deemed useful by the ISC.

Table 1. Scenarios for catch increase

West Pacific		East Pacific
Small fish	Large fish	
0	500t	500t
250t	250t	500t

0	600t	400t
5%	1300t	700t
10%	1300t	700t
5%	1000t	500t
0	1650t	660t
5%		5%
10%		10%
15%		15%
20%		20%
Small fish 125 [mt] Large fish 375		550

* 250t transfer of catch limit from small fish to large fish by Japan is assumed to continue until 2020.

ISC is requested to provide fishery impact on the SSB under recent conditions taking into account the difference in age caught. Provide a matrix of conversion values across age classes.

Catch Documentation Scheme (CDS)

Note the CDS WG Chairman's summary. Schedule another 1-day meeting for CDS in conjunction with the next Joint WG meeting.

Management Strategy Evaluation (MSE)

Adoption of the MSE Terms of Reference and candidate harvest control rules and reference points.

Future meeting

Japan offered to host the next JWG meeting in conjunction with WCPFC NC at a date to be determined. The JWG encouraged IATTC to consider convening its next regular session in September 2020 to allow for the JWG to meet in advance of the IATTC and facilitate the timely adoption of any JWG outcomes by both regional fishery management organizations in the same year.

**JOINT IATTC AND WCPFC-NC WORKING GROUP MEETING ON THE
MANAGEMENT OF PACIFIC BLUEFIN TUNA
FOURTH SESSION**

Portland, Oregon, United States of America
3 – 5 September 2019

**TERMS OF REFERENCE FOR PACIFIC BLUEFIN TUNA
MANAGEMENT STRATEGY EVALUATION**

The Northern Committee (NC) of the Western and Central Pacific Fisheries Commission (WCPFC) in consultation with the Inter-American Tropical Tuna Commission (IATTC), requested the International Scientific Committee for Tuna and Tuna-Like Species in the North Pacific Ocean (ISC) to begin work on a management strategy evaluation (MSE) for Pacific bluefin tuna (PBF) in 2019 with a goal of completing the first iteration of the MSE by 2024. As requested in the WCPFC harvest strategy for PBF fisheries, the ISC organized two MSE workshops, one in 2018 in Yokohama, Japan, and one in 2019 in San Diego, California, USA, to support the identification of specific management objectives, including level of risks and timelines. These terms of reference will guide the MSE.

Purpose of MSE

To evaluate the expected performance of alternative long-term management strategies for Pacific bluefin tuna fisheries once the second rebuilding target is reached. This does not prevent the earlier use of the MSE if the JWG agrees.

Role of the ISC

To provide technical guidance on and oversee the development, execution and outputs of the model to be used in the PBF MSE.

Role of the IATTC-WCPFC NC Joint Working Group (JWG)

The JWG will provide overall guidance on the MSE. Depending on the availability of necessary funds, the JWG will convene workshops to solicit input from managers, scientists, and stakeholders. In providing guidance on the MSE, the JWG will take into account views expressed in stakeholder workshops. The guidance on the MSE may include, but is not limited to, specification of management objectives, performance indicators, timelines, candidate reference points, and candidate harvest control rules. The JWG will provide progress reports on the MSE to the IATTC and WCPFC NC, as appropriate.

**JOINT IATTC AND WCPFC-NC WORKING GROUP MEETING ON THE
MANAGEMENT OF PACIFIC BLUEFIN TUNA
FOURTH SESSION**

Portland, Oregon, United States of America
3 – 5 September 2019

**CANDIDATE REFERENCE POINTS AND HARVEST CONTROL RULES FOR
PACIFIC BLUEFIN TUNA**

The Western and Central Pacific Fisheries Commission (WCPFC) harvest strategy for Pacific bluefin tuna fisheries states that “The Joint WG will start to discuss in 2018, and aim to finalize no later than 2019, guidelines for the MSE, including at least one candidate long-term target reference point (TRP), two candidate limit reference points (LRPs) and candidate harvest control rules (HCRs), which will be provided to the ISC.”

The following candidate HCRs and reference points will be considered in the management strategy evaluation (MSE) for Pacific bluefin tuna fisheries. Additional HCRs and reference points may be submitted and considered.

Harvest Control Rules

Candidate HCRs 1a and **1b** are illustrated in Figure 1 where fishing mortality is controlled depending on stock status relative to the defined reference points. The F_{target} rate applies when the stock is larger than $SSB_{\text{threshold}}$, while F_{min} rate applies when the stock is smaller than SSB_{limit} , and there is either a linear or sigmoidal transition in F for stock sizes between SSB_{limit} and $SSB_{\text{threshold}}$. F_{min} would be defined as an F rate that is less than the F rate corresponding to the SSB_{limit} . **Candidate HCR 1a** has a linear transition between SSB_{limit} and $SSB_{\text{threshold}}$ whereas **Candidate HCR 1b** has a sigmoidal transition between SSB_{limit} and $SSB_{\text{threshold}}$ and could be viewed as more conservative with respect to uncertainty in underlying biomass/abundance estimates when approaching SSB_{limit} , as well as avoiding abrupt management breakpoints.

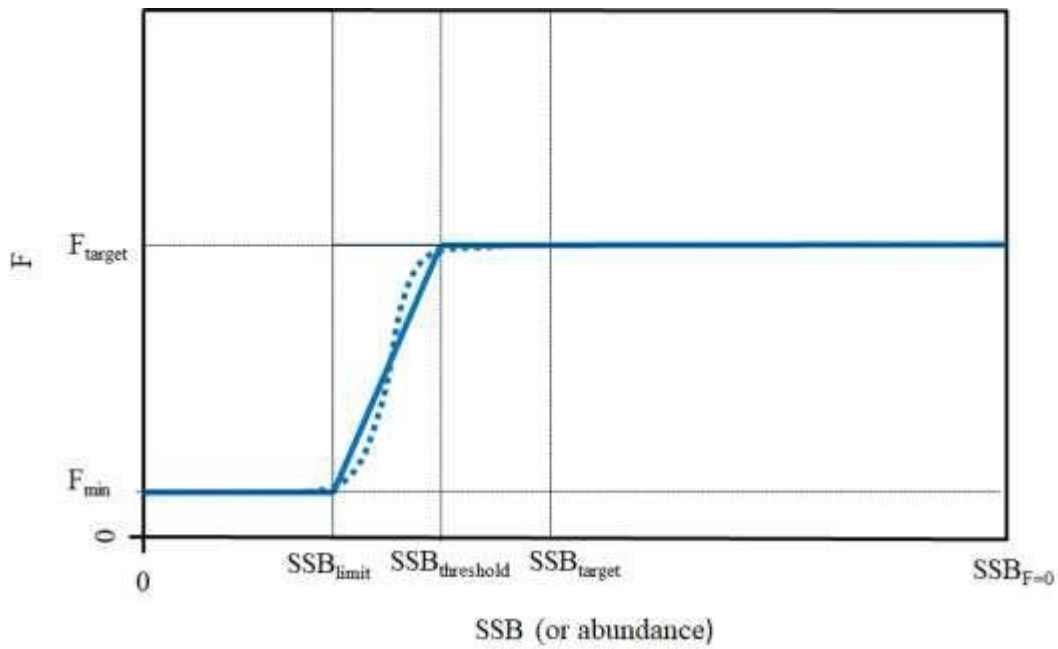


Figure 1. Candidate HCRs 1a (solid line) and 1b (dashed line)

Candidate HCR 2 is illustrated in Figure 2 and is similar to Candidate HCRs 1a and 1b in that F declines once the SSB_{limit} is breached, but unlike Candidate HCRs 1a and 1b, there is no $SSB_{threshold}$ between SSB_{limit} and SSB_{target} .

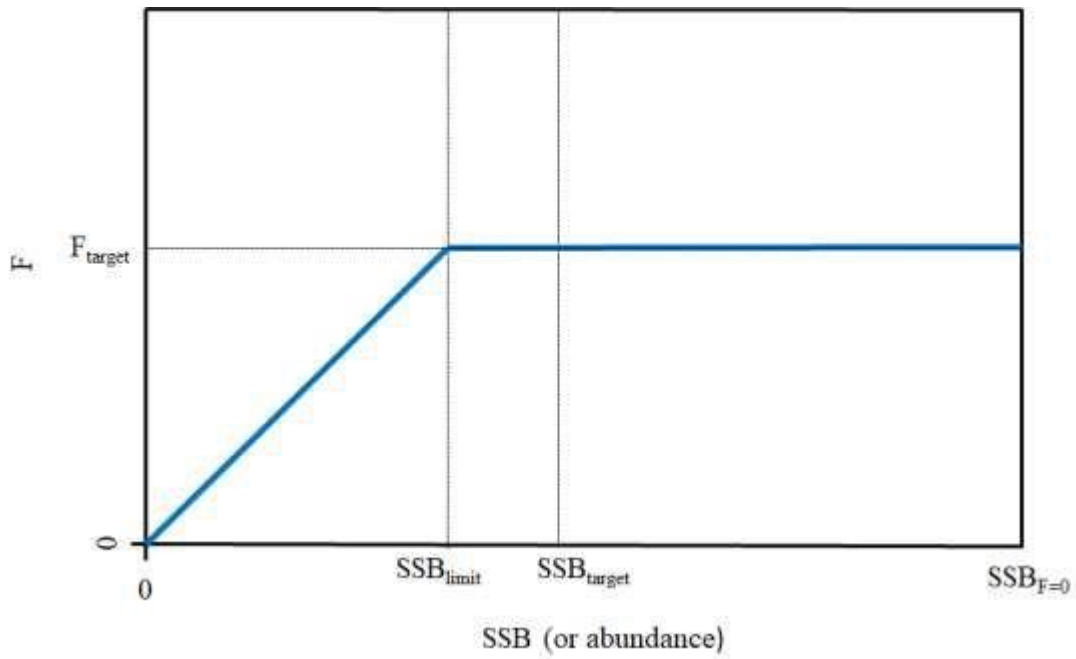


Figure 2. Candidate HCR 2

Candidate HCR 3 specifies two HCRs, one for old-fish fisheries and one for young-fish fisheries. For fisheries that harvest primarily mature Pacific bluefin tuna (e.g., longline fisheries), the HCR could be either Candidate HCRs 1a, 1b or 2 (i.e., fishing mortality is controlled as a function of the size of the spawning stock), and for fisheries harvest primarily immature Pacific bluefin tuna, the HCR would control fishing mortality as a function of recruitment, such as using an index of recruitment based on CPUE in age 0 or 1 fisheries. This approach is similar to that used in Maunder 2014⁵.

All of the above candidate HCRs are general in concept and require further work to address issues such as regional distribution, fishery selectivity and fleet allocation.

Candidate Reference Points

The following candidate reference points for the Pacific bluefin tuna MSE are based in part on the hierarchical approach that the WCPFC adopted for identifying limit reference points for key target species as well as the approach taken by the IATTC in identifying interim LRPs for tropical tunas. Under the hierarchical approach adopted by the WCPFC, and as indicated in the harvest strategy for Pacific bluefin tuna fisheries, Pacific bluefin tuna is a Level 2 stock, as the stock recruitment relationship for Pacific bluefin tuna is not well known, but key biological and fishery variables are reasonably well estimated. LRPs for Level 2 stocks are identified as either $FX\%SPR_0$ and either $X\%SB_0$ or $X\%SB_{current, F=0}$. In the IATTC, the interim LRP for tropical tuna stocks is the SSB associated with 50% of the unfished recruitment with assuming a stock-recruitment relationship steepness of 0.75. In addition to an LRP and a TRP, each of Candidate HCRs 1a and 1b require identification of a threshold reference point ($SSB_{threshold}$) and an F_{min} . The combinations of LRPs, threshold reference points and TRPs will depend on which of the Candidate HCRs are evaluated. Further consideration is needed for the reference points associated with the recruitment-based HCR in HCR 3.

Candidate Limit Reference Points: $5\%SSB_{F=0}$, $7.7\%SSB_{F=0}$, $15\%SSB_{F=0}$, $20\%SSB_{F=0}$

Candidate Threshold Reference Points (for candidate HCRs 1a and 1b): $15\%SSB_{F=0}$, $20\%SSB_{F=0}$, $25\%SSB_{F=0}$

Candidate Target Reference Points: $F_{SPR10\%}$, $F_{SPR15\%}$, $F_{SPR20\%}$, $F_{SPR30\%}$, $F_{SPR40\%}$

Candidate F_{min} : $5\% F_{target}$, $10\% F_{target}$

⁵ Maunder, Mark. (2014). Management Strategy Evaluation (MSE) Implementation in Stock Synthesis: Application to Pacific Bluefin Tuna. IATTC Stock Assessment Report. 15. 100-117.

**JOINT IATTC AND WCPFC-NC WORKING GROUP MEETING ON THE
MANAGEMENT OF PACIFIC BLUEFIN TUNA
FOURTH SESSION**

Portland, Oregon, United States of America
3 – 5 September 2019

**CHAIR'S SUMMARY OF THE
2ND CATCH DOCUMENTATION SCHEME (CDS) TECHNICAL MEETING**

1. Opening of Meeting

1.1 Welcome

1. Mr. Shingo Ota, Chair of the WG, opened the meeting and welcomed the participants.

1.2 Selection of rapporteur and adoption of agenda

2. Mr. Hirohide Matsushima of Japan was appointed the rapporteur for the meeting. The provisional agenda was adopted without any change (Appendix 1).

1.3 Meeting arrangements

2. Development of a Catch Documentation Scheme for Pacific Bluefin Tuna

2.1 Review of the 1st CDS Technical Meeting and intersessional work

2.1.1 Review of the 1st CDS Technical Meeting

3. Chair briefly reviewed the results of the 1st WG.

2.1.2 Possible cost

4. Japan provided the participants with information on the cost for establishing the ICCAT eBCD system, which was provided by the ICCAT Secretariat. The development of the ICCAT eBCD system was initiated in 2012, after a one-year feasibility study in 2011 which cost about € 20 thousand. After 4.5 years, the ICCAT eBCD system has been fully implemented since July 2016. A total of about € 1.2 million was spent between 2012 and 2015, so it could be considered a rough estimate of the minimum cost for a system development and preparation for implementation. ICCAT continued to upgrade the eBCD system even after the implementation, and between 2016 and 2018, a total of about €1.1 million was spent.

5. Japan also informed that while the cost was initially financed through three different sources (i.e. Working Capital Fund, voluntary contribution and regular budget), ICCAT agreed last year on an eBCD funding scheme in its regular budget, which was reflected in the Regulation 4 of ICCAT Financial Regulations. This scheme stipulates that a basic fee of US\$ 700 is paid by those members of the Commission that catch and/or trade Atlantic bluefin tuna, while a share of remaining cost is calculated based on the bluefin tuna catch, the total number of transactions (trades) in the eBCD system and the volume of bluefin tuna import by each Member.

6. Japan was requested to contact the ICCAT Secretariat to investigate on how the catch and/or trade data were applied retrospectively in the eBCD funding scheme.

2.1.3 A report from the virtual working group

2.2 Discussion on the draft CMM

7. The meeting participants discussed a paper submitted by Japan (IATTC-NC-CDS02-2019/02) (Appendix 2) and concluded the followings:

(1) Objectives (para 1.1)

Participants supported adding a paragraph specifying a scope of PBCD and clarifying that recreational catches would not be covered. For the time being, assuming that recreational catches are outside the scope, it was suggested the paragraph be revised as follows; “The objective of Pacific Bluefin Tuna Catch Documentation (PBCD) scheme is to identify the origin of ~~any~~ Pacific bluefin tuna in order to support...”

(2) Electronic/paper (para 1.2)

Participants generally supported establishment of an electronic system, and that paper PBCDs should be allowed only in limited circumstances (e.g., malfunctions of electronic system), which would be subject to further discussion. A preparation period should be secured before a full implementation of an electronic system, while the duration of such period would be further considered.

(3) Definition of term (para 1.3)

Participants supported adding a definition of *Catch*, which is “*Catch means*: commercial capture of bluefin tuna resources”, while keeping the definition of *Harvest* as it is.

Regarding the definitions of *Export* and *Import*, the United States and Canada intended to work together to suggest any necessary revisions, as well as to add a new definition of *Landing*. These definitions would be provided for the review of the virtual working group.

The definition of *Transshipment* would be added, which would read that “*Transshipment means* the unloading of all or any of the dead fish on board a fishing vessel to another fishing vessel either at sea or in port”.

(4) Others (para 1.4)

It was clarified that collars were not included in the list of fish parts which would be exempted in the proposed text (i.e. heads, eyes, roes, guts and tails) which means that they are subject to the CDS and the text would be revised to make the point clear.

(5) General provisions (para 2.1)

The first bullet point of the section should be tentatively revised as follows; “(1) The catching or carrier vessel master or trap operator...”, pending further discussion on whether it should be

appropriate for carrier vessel master to fill in an ePBCD.

On the second and third bullet points, the United States and Japan would work together to make more specific on what would be exempted from those provisions.

The fourth bullet point would be further discussed in the virtual working group on whether or not different treatment of small-scale fisheries should be established.

On the fifth bullet point, it was confirmed that Japan would develop detailed requirements of tagging, as was provided in the relevant ICCAT Recommendation.

(6) Validator (para 2.3)

Japan would work with the United States to consider a new provision for the purpose of ensuring that authorized individuals or institutions other than government officials would perform appropriate validation procedures.

(7) Relationship with non-members (para 3)

With regard to the degree of access granted to non-members, Japan would investigate the case of ICCAT to be reported in the virtual working group.

(8) Others (para 4)

The Chair or somebody on his behalf will seek to raise awareness among the participants of Joint IATTC and WCPFC-NC Working Group Meeting on the management of Pacific bluefin tuna as well as WCPFC16 and IATTC next annual meeting about the need of expert analysis on pros and cons from budgetary and administrative aspects of different options for establishing an ePBCD system, such as piggybacking the ICCAT eBCD system, developing an electronic system based on the ICCAT system for WCPFC/IATTC, or developing an original electronic system for WCPFC/IATTC. The Chair would also report to the Joint Working Group that without the results of such an analysis, it would likely not be possible to finalize a draft CMM by 2020 as envisioned in the work plan for the development of a CDS.

Participants supported dividing the total cost of an ePBCD system between WCPFC and IATTC, taking into account PBF catches in each Convention area, which would require further consultations and budgetary decisions in each RFMO.

Participants were generally comfortable pursuing a similar formula as ICCAT, which is mentioned in paragraph 5 above, in calculating a cost sharing of an ePBCD system among members in each organization, while it needs to be further considered with additional information in paragraph 6 above.

Participants noted the need to consider the potential expansion of a CDS to other species in either RFMO, which could have implications for the design of the scheme as well as its financing.

Japan would propose a provision on how to secure confidentiality of information contained in an ePBCD system.

Participants are encouraged to develop separate but compatible drafts for each RFMO and to

consider the likely challenges related to coordination and administration of a scheme between both organizations.

3 Next Meeting

8. Participants recommended convening the next CDS technical meeting as a one-day meeting to be held before the Joint Working Group meeting in 2020.

4 Other Business

9. It was agreed to continue the virtual working group led by Japan (Mr. Hirohide Matsushima) in accordance with the following schedule;

By the end of February 2020	Japan will circulate a first round of draft CMM/Resolution among the working group members
By the end of March 2020	Comments on the first draft are to be submitted to Japan from the working group members
By the end of May 2020	Taking into account the comments, Japan will circulate the second draft CMM/Resolution among the working group
By the end of June 2020	Comments on the second draft are to be submitted to Japan from the working group members
One month before the next CDS technical meeting	A finalized draft CMM/Resolution will be submitted to the WCPFC Secretariat for circulation among members of the Joint IATTC-WCPFC NC WG

5 Report to the Joint WG

10. The Chair will provide his summary of the CDS technical meeting to the Joint Working Group.

6 Close of the Meeting

11. The meeting was closed at 5 pm.

**JOINT IATTC AND WCPFC-NC WORKING GROUP
CATCH DOCUMENTATION SCHEME (CDS) TECHNICAL MEETING**

2 September 2019
Portland, Oregon, USA

AGENDA

AGENDA ITEM 1 Opening of Meeting

- 1.1 Welcome
- 1.2 Selection of rapporteur and adoption of agenda
- 1.3 Meeting arrangements

AGENDA ITEM 2 Development of a Catch Documentation Scheme for Pacific Bluefin Tuna

- 2.1 Review of the 1st CDS Technical Meeting and intersessional work
 - 2.1.1 Review of the 1st CDS Technical Meeting
 - 2.1.2 Possible cost
 - 2.1.3 A report from the virtual working group
- 2.2 Discussion on the draft CMM

AGENDA ITEM 3 Next Meeting

AGENDA ITEM 4 Other Business

AGENDA ITEM 5 Report to the Joint WG

AGENDA ITEM 6 Close of the Meeting

**JOINT IATTC AND WCPFC-NC WORKING GROUP
CATCH DOCUMENTATION SCHEME (CDS) TECHNICAL MEETING**

2 September 2019
Portland, Oregon, USA

**Proposed outline on major elements to be included in
the draft WCPFC CMM for Pacific bluefin tuna CDS⁶**

1 General Provisions

1.1 Objective

- The objective of Pacific Bluefin Tuna Catch Documentation (PBCD) scheme is to identify the origin of any Pacific bluefin tuna in order to support the implementation of Conservation and Management Measure (CMM) for Pacific bluefin tuna, as well as to prevent the products non-compliant with the CMM from entering into a supply chain.

1.2 Electric/paper

- Use of the electronic Pacific Bluefin Tuna Catch Documentation (ePBCD) system is mandatory for all CCMs.
- Paper PBCDs shall not be accepted, except in the limited circumstances specified in XX.
**The schedule of the introduction of ePBCD system will be considered later, taking into account of capacities and resources available of developing countries including Small Islands Developing States (SIDS), as well as of the development of a Catch Documentation scheme for tropical tunas.*

1.3 Definition of term

For the purpose of this CMM, the following definition of terms applies: see the **Attachment 1**.

1.4 Others

- Any landing, transfer into cages, harvest, transshipment, import, export or re-export of Pacific bluefin tuna without a completed and validated ePBCD shall be prohibited.
- Import, export or re-export of fish parts other than the meat (i.e., heads, eyes, roes, guts and tails) shall be exempted from the requirement of this CMM.

2 Validation of ePBCDs

2.1 General provisions

- (1) The catching vessel master or trap operator, (2) its authorized representative, (3) the operator of farms, or (4) the authorized representative of the flag, farm, or trap CCM shall complete the ePBCD by providing the required information in appropriate sections and request validation for the ePBCD for catch landed, transferred to cages, harvested, transhipped or exported on each occasion that it lands, transfers, harvests, transships or exports Pacific bluefin tuna.
- Validation shall not be required for transfer of live Pacific bluefin tuna between cages, while such transfer shall be recorded in the ePBCD.
- The ePBCD shall be validated for each landing, transfer to cages, harvest, transshipment or export. When Pacific bluefin tuna is not exported, sections of the ePBCD for transfer to cages and/or harvest can be validated at the end of each fishing season.

⁶ A draft IATTC Resolution for Pacific Bluefin Tuna CDS will be developed in a same format as a WCPFC CMM.

- Where the Pacific bluefin tuna quantities caught and landed are less than X metric ton or Y fish, the logbook or the sales note may be used as a temporary PBCD, pending conversion to the ePBCD and the validation within a period of Z working days or prior to export, whichever is first.
- Validation shall not be required in the event that all Pacific bluefin tuna available for sale are tagged by the flag CCM of the catching vessel or the trap CCM that fished the Pacific bluefin tuna.

2.2 Timing of validation

**A timing of validation after landing, transfer to cages, harvest, transshipment or export will be considered later, taking into account of specifications of the ePBCD system.*

2.3 Validator

The ePBCD must be validated by an authorized government official, or other authorized individual or institution, of the flag CCM of the catching vessel, the CCM of the seller/exporter, or the trap or farm CCM that caught, harvested or exported the Pacific bluefin tuna.

3 Relationship with non-members

Access to the ePBCD system shall be granted to WCPFC non-members to facilitate trade of Pacific bluefin tuna.

4 Others

- A cloud-based the ePBCD system shall be set up in the WCPFC/IATTC Secretariat. The WCPFC/IATTC Secretariat shall allocate necessary staff and resources to support, maintain and develop functions of the ePBCD system.
- A cost associated with support, maintenance and functionality development of the ePBCD system, which is calculated by dividing its total cost between WCPFC and IATTC in proportion to a Pacific bluefin tuna catch in each Convention area, shall be financed by additional annual contributions made by those CCMs that catch and/or trade Pacific bluefin tuna.

Draft definition of terms	Reference
<p><i>Transfer means:</i></p> <ul style="list-style-type: none"> - any transfer of live Pacific Bluefin tuna from the fishing vessel, its net, or the trap to the transport cage or other fishing vessels; - any transfer of live Pacific Bluefin tuna from the transport cage to another transport cage; - any transfer of live Pacific Bluefin tuna from one farm to another, or between different cages in the same farm; 	<p><ICCAT> Paragraph 3 of Recommendation 18-02.</p> <ul style="list-style-type: none"> - any transfer of live bluefin tuna from the catching vessel's net to the transport cage; - any transfer of live bluefin tuna from the transport cage to another transport cage; - any transfer of the cage with live bluefin tuna from a towing vessel to another towing vessel; - any transfer of live bluefin tuna from one farm to another, or between different cages in the same farm; - any transfer of live bluefin tuna from the trap to the transport cage independently of the presence of a towing vessel.
<p><i>Caging means:</i> The relocation of live Pacific Bluefin tuna from the transport cage or trap to the farming or fattening cages</p>	<p><ICCAT> Paragraph 3 of Recommendation 18-02. The relocation of live bluefin tuna from the transport cage or trap to the farming or fattening cages</p>
<p><i>Farming/fattening means:</i> Caging of Pacific Bluefin tuna in farms and subsequent feeding aiming to fatten and increase their total biomass.</p>	<p><ICCAT> Paragraph 3 of Recommendation 18-02 Caging of bluefin tuna in farms and subsequent feeding aiming to fatten and increase their total biomass.</p>
<p><i>Harvest means:</i> The killing of bluefin tuna in farms.</p>	<p><ICCAT> Paragraph 3 of Recommendation 18-02 The killing of bluefin tuna in farms or traps</p>
<p><i>Export means:</i> Any movement of Pacific Bluefin tuna from the territory of the CCM where the fishing vessel is flagged or where the trap or farm is established to the territory of another CCM or non-member of the Commission, or from the fishing grounds to the territory of a CCM which is not the flag CCM of the fishing vessel or to the territory of a non-member of the Commission.</p>	<p><ICCAT> Paragraph 2 b) of Recommendation 18-13 Any movement of bluefin tuna in its harvested or processed form (including farmed) from the territory of the CPC where the fishing vessel is flagged or where the trap or farm is established to the territory of another CPC or non-Contracting Party, or from the fishing grounds to the territory of a CPC which is not the flag CPC of the fishing vessel or to the territory of a non- Contracting Party.</p>

<p><i>Import means:</i> Any introduction of Pacific Bluefin tuna into the territory of a CCM, which is not the CCM where the fishing vessel is flagged or where the trap or the farm is established.</p>	<p><ICCAT> Paragraph 2 c) of Recommendation 18-13 Any introduction of bluefin tuna in its harvested or processed form (including farmed) into the territory of a CPC, which is not the CPC where the fishing vessel is flagged or where the trap or the farm is established.</p>
<p><i>Re-export means:</i> Any movement of Pacific Bluefin tuna from the territory of a CCM where it has been previously imported.</p>	<p><ICCAT> Paragraph 2 d) of Recommendation 18-13 Any movement of bluefin tuna in its harvested or processed form (including farmed) from the territory of a CPC where it has been previously imported.</p>
<p><i>Artificial fry means:</i> Fry of Pacific Bluefin tuna raised from fertilized eggs spawned by adult fish that are in an artificially controlled environment.</p>	<p>None</p>