## Urgent need for use of stereoscopic cameras in southern bluefin tuna farming

Scientists working for the CCSBT (Commission for the Conservation of Southern Bluefin Tuna) were disappointed again when the Commission could not agree on the implementation of stereoscopic cameras in tuna farming cages in the annual meeting held in October 2013. This issue could be now regarded as the most serious problem remaining unsolved while the stock condition shows a clear sign of recovery that resulted in second consecutive substantial increase of the TAC (Total Allowable Catch). Scientific Committee (SC) of the CCSBT has been frustrated for a long time over the stalemate in moving toward adoption of compulsory use of the stereoscopic cameras. The SC recommended the use of stereoscopic cameras as the best feasible method to monitor accurately the numbers and weight of tuna transferred into farming cages. This has immediate implication with the TAC management that requires accurate and transparent accountability.

Australia is only country that produces farmed southern bluefin tuna (SBT) and it uses almost all its catch quota for SBT farming. Juvenile seed fish of ages 2-3 are captured by purse seiners kept alive, transferred to towing cages and again transferred into the farming cages where the seed fish are raised for about 6 months. The measurement is done when the juveniles transferred into the farming cages. Estimation of total purse seine caught SBT has been made set by set using size/weight measurements of the total of 40 sample fish, recently increased to 100 fish. However, there remains doubt in the estimates made by this method that the catch of the purse seine caught may exceed the catch quota. This issue was actively discussed in the SC and the SC recommends to use the cameras but has not yet been settled in the Commission despite Australia has announced for several years to introduce stereoscopic cameras in the Commission meetings. Australia explains that failure to follow its announcements is due to its domestic reasons.

It is ironical that an Australian company produces and sells many good quality stereoscopic cameras not only domestically but also internationally. The cameras are now used commonly in the tuna farming because of its accuracy and affordable price. Therefore, International Commission for the Conservation of Atlantic Tunas (ICCAT) sets a mandatory rule to use this method for improvement of accuracy of the Atlantic bluefin catch by purse seiners and amount of transferred blueifn tuna in the farm cages. I think the use of stereoscopic cameras is necessary to obtain accurate estimates of the catches not only for the fishermen involved in the farming but also responsibility of the tuna RFMOs including CCSBT, ICCAT and IATTC that deal with the tuna farming.

Delay in implementing the use of stereoscopic cameras would increase suspicion of exceeding the Australian catch quotas and continued failure of promises is disgrace of the CCSBT.