



CCSBT-ERS/1905/05 (Rev. 1)

Progress with the SMMTG Recommendations

Background

The CCSBT's Effectiveness of Seabird Mitigation Measures Technical Group (SMMTG), co-Chaired by Dr Small from BirdLife International, met in Tokyo, Japan from 4 to 6 November 2014. The SMMTG produced a series of recommendations that were reviewed by the Eleventh Meeting of the Ecologically Related Species Working Group (ERSWG 11) during March 2015. The ERSWG 11 meeting supported the SMMTG's recommendations with some modifications and provided a set of agreed recommendations at Attachment 4 of the ERSWG 11 report.

The workplan from ERSWG 12 contains an activity to “Review the CCSBT's progress against the modified SMMTG recommendations in Attachment 4 of the Report of ERSWG 11”. This activity was tasked to the Secretariat with assistance from Members and was scheduled to be completed before ERSWG 13.

Progress with the SMMTG Recommendations

The Secretariat compiled the modified recommendations of the SMMTG together with a summary of progress against the recommendations into a simple table with recommendations on the left and progress against the recommendations on the right. Some of the progress items came from the summary of SMMTG recommendations in the ERSWG 11 report, some were added by the Secretariat and some were suggested by Dr Small from Birdlife International¹. The table of recommendations and progress against recommendations was then circulated to Members on 20 February 2019 for Members' comments and for Members to advise on additional areas of progress.

The summary of progress against SMMTG recommendations, including comments from Members, is provided at **Attachment A** for consideration by ERSWG 13.

There appears to have been substantial progress made against most aspects of the SMMTG recommendations. The project lead by Birdlife international with cooperation of CCSBT Members and other countries under the umbrella of the Common Ocean's ABNJ Tuna Project has been an important contributor to some of this progress. Further progress is expected during discussion at ERSWG 13 on papers being developed by Members on the topics of: identification of high-risk areas; multi-year seabird strategy; and analysis of seabird captures².

There are a few SMMTG recommendations where little progress appears to have been made in the CCSBT context. These include:

- 1) Development of mechanisms to facilitate the collection and analysis of DNA from bycaught birds including reference databases.

¹ The Secretariat contacted Dr Small for comment in her role as co-Chair of the SMMTG.

² Across CCSBT statistical areas, yearly quarters and mitigation setup.

- 2) Sharing, and encouraging other t-RFMOs to share, documents, formats and procedures for observer data collection through a dedicated web portal or through the WCPFC-hosted Bycatch Mitigation Information System (BMIS).
- 3) Requesting that the other t-RFMO Secretariats provide brief descriptions of the availability and resolution of fishing effort data³, including an explicit statement of the assumptions used in raising that data. BMIS can provide a portal for storing this information and maintaining it in an updated form. The SMMTG highlighted the need to understand the degree of overlap in reporting seabird bycatch and associated data to multiple tuna RFMOs.
- 4) Development of estimates of background bycatch rates (pre-bycatch mitigation) using retrospective analyses, in order to compare these to current seabird bycatch rates and assess effectiveness of tuna RFMO seabird CMMs.

In relation to “2” and “3” above, progress has been made with the BMIS team to enable CCSBT contributions to BMIS, so the relevant documents can now be included in BMIS if they are provided to the CCSBT secretariat.

With respect to item “4” above, ERSWG 11 expressed varying levels of optimism and assigned different levels of priority to this task, noting issues with data availability and that high variability between fleets might hamper the combination of fleets for estimation of an area-wide baseline.

Prepared by the Secretariat

³ For the CCSBT, this information was provided in a paper from the Secretariat ([CCSBT-ERS/1703/06](#)).

CCSBT's progress against the modified SMMTG recommendations in Attachment 4 of the Report of ERSWG 11

(Slight changes have been made to the wording of some recommendations so that the recommendations make sense in the context of this table. Footnotes have been added to the recommendation to indicate where the ERSWG 12 Workplan has specified that related work is to be conducted.)

Recommendation	Progress
Provide documents to January 2015 Kobe TWG-BYC Meeting	
<ul style="list-style-type: none"> • SMMTG requested that the CCSBT Secretariat submit current CCSBT documents on national reporting requirements and observer information standards to the January 2015 Kobe TWG-Bycatch meeting. 	<ul style="list-style-type: none"> • ERSWG 11 noted that this task was conducted.
Reviewing Content and Coverage of t-RFMO Seabird CMMs	
<ul style="list-style-type: none"> • That the ERSWG consider developing a work plan which has an increased use of collaborative analyses. These might include joint stock assessment style workshops in which participants bring data and undertake collaborative analyses, bilateral collaboration intersessionally or designating key scientists to undertake analyses of joint datasets. A draft workplan to begin this work with respect to cooperation across tRFMOs will be provided in an Appendix of the finalised scoping paper that will be submitted to ERSWG 11.¹ 	<ul style="list-style-type: none"> • ERSWG 11 noted that Appendix 2 of the final scoping paper included ideas for collaboration across tuna RFMOs on seabird bycatch analyses. These were further developed by ERSWG 11 as two linked preliminary project proposals which were to be finalised by Birdlife International prior to submission for funding as additional components under Birdlife International's existing ABNJ Tuna Project (Birdlife's ABNJ Project). One proposal was aimed at capacity development for the analysis of seabird data. The other was aimed at using the skills developed to progress assessments across tuna RFMOs. The ERSWG 11 participants endorsed these proposals as a potentially very effective way to evaluate effectiveness of seabird conservation measures, facilitate the assessment of cumulative impacts, and improve skills that could be applied to a range of other bycatch species. • Birdlife's ABNJ Project has subsequently supported a series of workshops in 2017-2019 towards a global assessment of albatross bycatch in tuna fisheries. The final workshop was held from 25 Feb – 1 Mar 2019. The report of the workshop will be submitted to ERSWG 13 if it is available in time. • WCPFC's Project 68 is an attempt to assess seabird bycatch over the last 10 years and to look for any temporal changes. The results may not be compelling due to lack of data but it should identify gaps and could promote the idea of collaboration across all tRFMOs.

¹ The ERSWG 12 Workplan specifies "Actively contribute to and participate in the project planned by BirdLife International under the Common Ocean ABNJ Tuna Project to conduct a joint assessment with national scientists of the effectiveness of seabird mitigation in tuna RFMOs" by all Members (2017-2019).

Methods for Reviewing Data on t-RFMO Longline Fleets

<ul style="list-style-type: none"> Measures of both % longline observer coverage and spatial-temporal representativeness are important metrics of longline observer program data. Spatial and temporal representativeness are needed for developing reliable estimates of seabird capture rates and in particular for understanding and reducing uncertainty in estimates. For the purpose of evaluation, the % coverage of observations be calculated as number of hooks observed per stratum divided by total fishing effort per stratum, and that representativeness should be evaluated using the calculated proportion of strata which have met the relevant target level of observer coverage. <i>The ERSWG considered that metrics should be developed on a fleet by fleet basis as it noted that there was substantial variation in reported capture rates among fleets. The ERSWG agreed that this metric would be a useful addition to be calculated and reported after the Data Exchange had been completed.</i>² 	<ul style="list-style-type: none"> This information is included in the final report of Birdlife’s ABNJ Project. The Secretariat will include both the % longline observer coverage per stratum (fleet, year and statistical area) and the “representativeness” (by fleet and year) in its paper to ERSWG 13 on summaries from the ERSWG Data Exchange.
<ul style="list-style-type: none"> Several activities could help improve the quality of observer data, including: 	<ul style="list-style-type: none"> ERSWG 11 noted these points and commented that it incorporated them, where appropriate, into comments on the Observer Standard (which CCSBT 22 subsequently adopted in 2015) and its Workplan.
<ul style="list-style-type: none"> o The ACAP-Japan seabird species identification guide, which is planned to be translated into French, Spanish, Korean, Taiwanese, Indonesian and other key languages; 	<ul style="list-style-type: none"> The ACAP-Japanese seabird species guides were published in English, Chinese, Portuguese and Traditional Chinese between August 2015 and January 2016. These are available on ACAP’s website.
<ul style="list-style-type: none"> o Collecting whole specimens when practical and when not practical collecting biological samples and/or bycatch photos for confirmation of species ID; 	<ul style="list-style-type: none"> Japan noted that its scientific observers collect photographs to aid in identification.
<ul style="list-style-type: none"> o Debriefing observers after the trip to elicit more information about the occurrence of high bycatch events; 	
<ul style="list-style-type: none"> o More detailed guidance on priorities for seabird related tasks, including how to allocate observer time appropriately, recognising multiple demands made on observer time; and 	
<ul style="list-style-type: none"> o Development of mechanisms to facilitate the collection and analysis of DNA from bycaught birds including reference databases. 	

² The ERSWG 12 Workplan specifies “Conduct collaborative analyses to identify the reasons for large differences in bycatch rates between fleets” (before ERSWG 13). New Zealand to lead this activity with collaboration from all Members.

<ul style="list-style-type: none"> • It would be useful to have a central system by which seabird bycatch photos collected by observers could be validated. Alternatives could include accessing online volunteer networks (such as www.ispotnature.org) or seabird specialists.³ 	<ul style="list-style-type: none"> • Progress advised by individual Members includes: <ul style="list-style-type: none"> ○ Indonesia has had a NPOA Seabird since the end of 2016. BirdLife South Africa conducted capacity building for observers to collect data and photograph seabirds in October 2018. Indonesia currently collects, and stores seabird bycatch photos obtained by the Research Institute for Tuna Fisheries- Bali. ○ Taiwan is building a central system by which seabird bycatch photos collected by observers could be validated. ○ South Africa does not have such a system, but the observer company regularly trains observers in seabird identification with the help of seabird specialists. ○ New Zealand advised that it has not made progress on this item. • It is expected that the ERSWG will further consider this recommendation in the context of the multi-year seabird strategy, which is under development by Australia.
<i>Methods to monitor implementation of mitigation measures</i>	
<ul style="list-style-type: none"> • CCSBT should share, and encourage other t-RFMOs to share, documents, formats and procedures for observer data collection through a dedicated web portal or through the WCPFC-hosted BMIS⁴. 	<ul style="list-style-type: none"> • The ERSWG 13 meeting announcements contain changes to the information requested with meeting documents to facilitate loading of documents to BMIS. In addition, at the request of the Secretariat, the BMIS team has added certain CCSBT information to BMIS, including a link to the public domain CCSBT bycatch data, the CCSBT's new binding ERS Resolution and a CCSBT "collection" to make it easier to find CCSBT specific information.

³ CCSBT and ACAP have entered into MoU commencing in 2015, to facilitate cooperation between CCSBT and ACAP, including development of systems for collecting and analysing data, and exchanging information concerning the bycatch of albatrosses and petrels caused by fishing for SBT. A central system could be maintained under the auspices of the MoU.

⁴ Bycatch Mitigation Information System.

<ul style="list-style-type: none"> • The ERSWG requests the Compliance Committee to collate information from Members on the types of information collected on bycatch mitigation measures under compliance programs for SBT vessels (e.g. port inspections and other monitoring and surveillance programs). This information should be provided to the ERSWG for scientific purposes associated with assessing total seabird mortality and for feedback to the Compliance Committee on the collection of better data for scientific purposes. The group suggested that CCSBT Members be encouraged to assist in the development of electronic monitoring technologies through participating in trials and reporting back on their experiences. 	<ul style="list-style-type: none"> • The Compliance Committee (CC) amended its reporting template⁵ in October 2015 to collect this information from Members annual reports. The resultant information was provided to ERSWG 12 in 2017 (CCSBT-ERS/1703/07), which indicated that the information “<i>was useful and informative, as it indicates that Members currently vary in terms of the systems they use to monitor use of mitigation measures by their fleets. However, that the information from the different Members varied in detail, and in general more detail was required.</i>”. ERSWG 12 further requested the CC to consider ways to effectively monitor seabird mitigation measures. The CC responded by adding collection of seabird mitigation information to Annex B of CCSBT’s Port Inspection Resolution, noting that this was a starting point. • For electronic monitoring (e-monitoring), CC 13 and EC 25 discussed the development of e-monitoring standards based on the progress at WCPFC (CCSBT-CC/18010/25). There are no agreed e-monitoring standards within CCSBT at this stage. • CC 13 recommended that the Secretariat work with Members and BirdLife to develop a proposal to enhance the implementation of ERS measures through outreach/ education and to verify compliance with measures. An update will be provided at ERSWG 13 on progress with this proposal
<p><i>Methods to measure and monitor the level and impact of seabird bycatch</i></p>	
<ul style="list-style-type: none"> • There should be a tiered approach to measuring and monitoring seabird bycatch and the efficacy of mitigation measures, as per the following: <ul style="list-style-type: none"> ○ The first tier would entail monitoring based on the agreed annual reporting template. This would include estimates of seabird bycatch per unit fishing effort and total number of seabirds caught. 	<ul style="list-style-type: none"> • The Secretariat’s summary of the ERSWG Data Exchange presented to ERSWG 12 (CCSBT-ERS/1703/05) provided tables on observed and total (simple estimate only) seabird mortalities per year, statistical area and species group. Figures indicating seabird mortality rates were also provided. Similar information will be presented to ERSWG 13.

⁵ Adding section III(2)(d).

<ul style="list-style-type: none"> ○ The annual monitoring should be complemented by periodic (once every three to five years) assessments, using fine-scale information, preferably at a set level and across multiple t-RFMOs if possible, taking into account data confidentiality. This could take the form of a data assessment workshop, at which countries and relevant experts collaboratively undertake the data analyses, or alternatively could involve Members conducting their own analyses according to agreed protocols and contributing the results of these analyses to the assessment process.¹ 	<ul style="list-style-type: none"> ● Birdlife’s ABNJ Project has supported this, with a data assessment workshop in 2017, followed by two regional data preparation workshops in 2018, followed by the final global albatross bycatch assessment workshop from 25 Feb – 1 March 2019. ● Some Members were involved in these workshops: <ul style="list-style-type: none"> ○ South Africa noted that this included a small expert workshop in Cape Town, supported by BirdLife, where observer data from South Africa, Brazil and the Republic of Korea and other fleets were assessed making use of fine-scale information. ○ South Africa also noted that there was a collaborative data assessment workshop held in Uruguay in April 2018, focussed on Indian and Atlantic Ocean fleets that South Africa participated in. Fine scale observer data from Brazil (SAO), Japan (SAO and IO), Portugal (SAO and IO), South Africa (SAO and IO) and Uruguay (SAO) were submitted and analysed at the level of longline set. ○ Korea noted that there a workshop held in Korea in January 2018 in collaboration with BirdLife, aimed to discuss on data availability for seabird bycatch assessment and to facilitate communication with Korean fleets on the use of best practices seabird bycatch mitigation measures. ○ Indonesia provided national report related information and Indonesian tuna longline characteristics. Due to limited expertise to conduct its own analyses, Indonesia is still in the process of estimating fishing effort for Indonesia LL vessels operating south of 25S. ● Other progress advised by individual Members includes: <ul style="list-style-type: none"> ○ New Zealand is preparing analysis of seabird captures across CCSBT statistical areas, yearly quarters, and mitigation set up, which is to be presented to ERSWG 13. ○ Taiwan has conducted analysis on its own data to assess the seabird bycatch by Taiwanese-flagged vessels annually. ● It is expected that the ERSWG will further consider this recommendation in the context of the multi-year seabird strategy, which is under development by Australia.
<ul style="list-style-type: none"> ● As far as possible assessment methods and efforts should be harmonised across tuna RFMOs so that the cumulative impacts of fishing activities on seabirds can be determined.¹ 	<ul style="list-style-type: none"> ● ERSWG 11 noted that although cross t-RFMO assessments would be valuable, and that it endorsed the newly developed proposals for such assessments to be submitted by Birdlife International noted above, the ERSWG has a responsibility to undertake assessments and provide advice to the Extended Commission.

Development and Testing of Assessment Methods

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| <ul style="list-style-type: none">• The planned revisions to the CCSBT seabird risk assessment will identify absolute levels of spatial and temporal risk of seabird bycatch within the CCSBT area. There is currently no definition of what are “high risk” areas. ERSWG11 agreed to address the definition of ‘high risk areas’ through discussion of papers presented at ERSWG12 and at any joint meetings of the tuna RFMOs. <i>This was considered to be a useful complement to the results of forthcoming New Zealand seabird risk assessment and may facilitate the analysis of seabird bycatch data.</i>⁶ | <ul style="list-style-type: none">• The CCSBT still does not have an agreed definition for high risk areas. However, subject to it not prejudicing further discussion surrounding the definition of high-risk areas or the potential application of remedies, ERSWG 12 agreed to support New Zealand in an analysis to identify potential high-risk areas, using method 3A from CCSBT-ERS/1703/12.• New Zealand is preparing a paper with analysis to identify high-risk areas, which is to be presented to ERWSG 13.• South Africa noted that the January 2019 Global Bycatch Assessment Workshop of Birdlife’s ABNJ Project in South Africa has identified areas of high bird bycatch on a 5 x 5 resolution for the Southern Oceans and that this will facilitate the identification of “high risk” areas.• Indonesia noted that its longline fleet operated mostly in area 1 (spawning area) and area 2 and therefore assumed that it is not operating in a “high risk” area.• Japan commented that it is impossible to absolutely evaluate the level of spatial and temporal risk, because this depends on the distribution of fishing effort as well as seabird density. Japan also commented that a lack of information about seabird distribution makes very difficult to evaluate bycatch risks properly.• It is expected that the ERSWG will further consider this recommendation in the context of the multi-year seabird strategy, which is under development by Australia. |
| <ul style="list-style-type: none">• CCSBT should prepare a brief description of the availability and resolution of fishing effort data, including an explicit statement of the assumptions used in raising that data. Options for improving effort data should also be outlined. CCSBT should request that the other t-RFMO Secretariats provide similar summaries. Under the ABNJ Tuna Project, the WCPFC-based BMIS can provide a portal for storing this information and maintaining it in an updated form. The group highlighted the need to understand the degree of overlap in reporting seabird bycatch and associated data to multiple tuna RFMOs. | <ul style="list-style-type: none">• The requested information was prepared by the Secretariat and submitted to ERSWG 12 as paper CCSBT-ERS/1703/06. The paper has not been included in BMIS at the present time. |

⁶ ERSWG 12 Workplan specifies that “Undertake a second iteration of the seabird Ecological Risk Assessment, including additional data from CCSBT Members and tuna RFMOs and including other fishing methods operating within the southern hemisphere” in late 2017. New Zealand to lead this with collaboration from other Members and Secretariat.

<ul style="list-style-type: none"> • The group agreed that more work is required on potential methods for calculating bycatch rates and extrapolating to total number of birds killed. New Zealand will progress this work in 2015 and an ACAP subgroup will discuss the topic in 2016. CCSBT Members were encouraged to contribute expertise to these ongoing efforts. 	<ul style="list-style-type: none"> • ERSWG 12 revised its reporting format including estimated total mortalities of ERS in CCSBT fisheries, which is table 1 of ERSWG annual report template (Attachment 4 of ERSWG12 report). If specific approach other than a simple ratio to estimate total mortalities, the method used to estimate total mortalities should be described in detail. • South Africa advised that the 2019 Global Bycatch Assessment Workshop Report of Birdlife’s ABNJ Project included four different modelling approaches to determine global Southern Hemisphere bycatch of seabirds in Pelagic Longline fisheries. Results on the estimates were broadly similar across models. • ACAP, with contribution from New Zealand authors, considered bycatch estimation metrics in 2016 and 2017 (see SBWG7_Doc05 and SBWG8_Doc_05). ACAP revised its bycatch reporting template and requested that its members complete this revised template to inform further discussion at the Eleventh Meeting of ACAP’s Advisory Committee in May 2019. • A risk assessment model has been developed by experts from Japan and New Zealand since 2017. It was presented at WCPFCSC and the IOTC WPEB. The SEFRA model was effective for estimation of the number of bycatches by species and was suggested as one of the methods to use at the Global Bycatch Assessment Workshop. • Indonesia advised that its observer data on seabird interactions with longlines are limited and that it does not have experts to analyse estimated total mortalities. Nevertheless, Indonesia provides seabird bycatch in its report to the ESC. • It is expected that the ERSWG will further consider this recommendation in the context of the multi-year seabird strategy, which is under development by Australia.
<p><i>Ways of extending monitoring across other tuna RFMOs</i></p>	
<ul style="list-style-type: none"> • The ERSWG Work Plan shall include the development of estimates of background bycatch rates (pre bycatch mitigation) using retrospective analyses, in order to compare these to current seabird bycatch rates and assess effectiveness of tuna RFMO seabird CMMs. It was noted that these may only be possible for certain regions, and that phased implementation meant there would seldom be a knife-edge transition pre and post implementation. Such an analysis would need to:¹ 	<ul style="list-style-type: none"> • Members at ERSWG 11 expressed varying levels of optimism and assigned different levels of priority to this task. While the outcome will depend on the data available it was noted that high variability between fleets might hamper the combination of fleets for estimation of an area-wide baseline. In such cases, the pre- and post-comparisons would be within specific fleets only. • <u>South Africa noted that the 2019 Global Bycatch Assessment Workshop Report indicated that consistent reporting of mitigation measures used is still a challenge and data are available for only a few fleets in some regions. Analyses of these data might provide a measure of effectiveness in the context of these fleets.</u> • <u>Birdlife noted that WCPFC’s Project 68 has been grappling with these issues and suggested that we</u>
<ul style="list-style-type: none"> ○ Identify suitable datasets which have a long enough time series and sufficient levels of observer coverage; 	
<ul style="list-style-type: none"> ○ Identify what the seabird CMMs required and when they were implemented; and 	

<ul style="list-style-type: none"> ○ Take care not to confound comparisons with changes in fishing gear configurations, areas fished or seasons fished. 	<p><u>should wait for the outcome of this project to help guide progress on these issues.</u></p> <ul style="list-style-type: none"> ● <u>New Zealand noted that publicly available data on observer seabird captures by species and total estimated seabird captures in New Zealand goes back to the 2002/03 fishing year (available at https://www.dragonfly.co.nz/data/). Other observer data sources on seabird captures goes back to the 1993/94 fishing year.</u> ● <u>Indonesia advised that: It has few longline vessels operating south of 25S; its observer coverage is still very low to provide sufficient dataset; its current priority is to increase of observer coverage to provide sufficient data spatially and temporally; and it currently uses night setting and weighting branch line methods to minimise interaction with seabirds while operating south of 25S.</u> ● <u>New Zealand advised that in its legislation (applicable to the New Zealand surface longline fishery), seabird mitigation requirements were implemented in 2007, with several iterations since then⁷.</u> ● It is expected that the ERSWG will further consider this recommendation in the context of the multi-year seabird strategy, which is under development by Australia.
<ul style="list-style-type: none"> ● It was agreed that it would be useful to submit to the June 2015 ICCAT Subcommittee on Ecosystems meeting a proposal for tuna RFMO collaboration on seabird bycatch analyses. 	<ul style="list-style-type: none"> ● The proposal to release the SMMTG report with its included scoping paper to the June 2015 ICCAT Subcommittee on Ecosystems (and to the next bycatch working group meetings of other tuna RFMOs and ACAP) prior to the paper becoming public at the next annual meeting of the Extended Commission (EC) was not approved by the EC (see CCSBT Circular #2015/016). However, CCSBT 22 agreed to changes in the Rules of Procedure that could allow such approval to be provided in the future.
<i>Annual Report Data Exchange Template</i>	
<ul style="list-style-type: none"> ● ERSWG recommended that the proportion of effort associated with the use of various mitigation measures be added to the Data Exchange Format of the Template for the Annual Report to the Ecologically Related Species Working Group (ERSWG). This would assist in interpreting any trends in the unstandardised catch rate data it contains and in measuring the effectiveness of seabird CMMs. 	<ul style="list-style-type: none"> ● ERSWG 11 adopted an amended template to address this recommendation.
<ul style="list-style-type: none"> ● The group recommends that the ERSWG review the data included in the annual report template to support improved evaluation of seabird CMMs. 	<ul style="list-style-type: none"> ● ERSWG 11 noted that this was accomplished during its meeting and the review of CCSBT-ERS/1503/06.

⁷ The iterations included: Fisheries (Seabird Sustainability Measures—Surface Longlines) Notice 2007, requirements were to use a tori line and set at night; Fisheries (Seabird Sustainability Measures—Surface Longlines) Notice 2008, requirements were to use a tori line and either set at night or line weighting; Fisheries (Seabird Sustainability Measures—Surface Longlines) Circular 2011, requirements were to use a tori line and either set at night or use line weighting; Fisheries (Seabird Mitigation Measures—Surface Longlines) Circular 2014, requirements were to use a tori line and either set at night or line weighting; and Fisheries (Seabird Mitigation Measures—Surface Longlines) Circular 2018, requirements are to use a tori line and either set at night or line weighting.