**Collated recommendations from SA-WP-08 and SA-WP-09**

**Recommendations pertaining to the collection and analysis of observer data:**

* Given its importance (in particular length data) in these assessments, efforts to expand observer coverage for longline fleets operating in the WCPO is strongly recommended;
* pending availability of resources, analysis of the statistical power of WCPO observer coverage configurations to detect changes in spatio- temporal abundance of bycatch species is recommended;
* it is recommended that SC develop a strategy to ensure that observer deployments are spatially and temporally representative of fishing effort, and to inform this strategy, spatial and temporal observer coverage for each fleet be reported and evaluated in an SC observer data gaps review paper;

* Emphasis on improving the consistent collection of accurate observer effort during the set is needed, as this variable is essential to the estimation of accurate by-catch rates;
* Given larger individuals may not always be brought on-board, we recommend an investigation into whether there is a size bias in recording length;
* To support future sex-specific modelling in blue shark, we recommend that observers report sex of sharks for all fish handled;
* We recommend provision of expanded metadata to facilitate merging variables from different programs into a single harmonized database. This could be assisted by an active collaboration of member countries with SPC during the initial merging operation.

**Recommendations pertaining to the collection and analysis of logsheet data:**

* We recommend that, pending availability of resources, SPC undertake a systematic, fleet-specific evaluation of the nature and extent of data quality issues as a specific project and report the findings to SC13;
* It is recommended that the use of Electronic Monitoring approaches be pursued to supplement observer coverage;
* It is recommended that approaches to ensure full enumeration of key shark catches in logsheets (both retained and discarded) are pursued;
* Provision by all fleets of operational covariates like hooks-between-floats and set time to interpret CPUE trends is encouraged.

**Recommendations for future catch reconstructions:**

* It is recommended that an investigation into blue shark catch, effort and length data prior to 1994 be undertaken, particularly for the South Pacific high seas driftnet fishery;
* It is recommended that future catch reconstructions utilise data sources additional to observer data, such as trade data;
* Noting the increase prevalence of regulations aimed at managing WCPO shark mortality, future catch reconstruction should prioritize the inclusion of discard mortality scenarios;
* We recommend active collaboration between interested CCMs for any South Pacific blue shark assessment occur, e.g., through expert workshops.

**Recommendations for biological studies**

* Noting the paucity of biological data for this assessment, we recommend further work focused on growth, mortality, reproduction and movement for South Pacific blue shark;
* Geographical expansion of currently localized tagging activities would assist future assessments. Improvement of the utility of tagging information from recreational fisheries is recommended, which is currently limited by uncertainty in the length at capture information;
* We recommend that further work on stock structure be undertaken for blue shark in the southern WCPO to confirm the assumption of a single stock;
* Gaining information on key mating, parturition and nursery grounds for the South Pacific is recommended to support the development of targeted data collection programmes, for data analyses and potential management interventions;
* It is recommended that an investigation of the potential for modern genetic techniques, such as gene tagging and close-kin genetic analysis, to provide fishery independent indicators of population size be undertaken.

**Recommendations for future assessments**

* It is recommended that the project “Develop proposed target and limit reference points for elasmobranchs" continues to be prioritized so that planned stock assessments for sharks in the WCPO be effectively translated into management advice;
* The availability and quality of additional sources of data existing east of the WCPFC-CA should be carefully considered before future stock assessments for South Pacific blue shark occur;
* Noting the significant catch of blue sharks and other species of interest associated with the Southern bluefin tuna fishery within the WCPFC-CA, increased collaboration with the concerned parties for the purpose of assessing WCPO stocks should be pursued.

**Model oriented recommendations**

* Alternative formulations of the stock recruitment function within Multifan-CL could be considered for future assessments, including the potential to incorporate shark specific information of reproductive biology (e.g. litter size);
* We recommend that the potential to place a prior on the unexploited stock size be examined.