

Results of SWG on Management Objectives

Suggested **initial list** of performance indicators (shaded) for Tropical Purse Seine Fisheries **for the purpose of the evaluation of HCRs only**. SPC is requested to continue the work on HCRs based on the suggested indicators here as much as possible. Short-, medium-, and long-term calculation results would be provided, if possible. **The list is interim and should be reviewed and may be revised when further information is available.**

Objectives included here do not consist a consensus view of the SWG. The SWG developed a list of useful indicators, simply using the MOW/US suggestions as a guide without agreeing/disagreeing them. Each indicator is considered to have different importance to different CCMs, thus should not be considered to have equal weights.

Objective Type	MOW4 Strawman	US proposal (DP22)	SWG suggestion of objective	Performance Indicator (WP14)	Monitoring Strategy (WP14)	SWG Suggestion to include as an indicator
Biological	Maintain SKJ (and YFT & BET) biomass at or above levels that provide fishery sustainability throughout their range.	Maintain SKJ, YFT, BET stock sizes above LRPs.		Probability of $SB/SB_{F=0} > 0.2$ in as determined from MSE.	Probability of $SB/SB_{F=0} > 0.2$ in the long-term as determined from the reference set of operating models	Yes
Economic	Maximise economic yield from the fishery			Predicted effort relative to E_{MEY} (to take account of multi-species	Observed rent from the fishery relative to MEY.	Yes

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Objective Type	MOW4 Strawman	US proposal (DP22)	SWG suggestion of objective	Performance Indicator (WP14)	Monitoring Strategy (WP14)	SWG Suggestion to include as an indicator
				considerations, SKJ, BET and YFT; may be calculated at the individual fishery level). B _{MEY} and F _{MEY} may also be considered at a single species level.	Observed effort in the fishery relative to E _{MEY} .	
			Maximize catch	Average expected catch. (may also be calculated at the assessment region level)	Observed catch information	Yes
	Increase fisheries-based development within developing states (SIDS) economies, especially on-shore processing capacity.			As a proxy: Average proportion of SIDS-catch to total catch for fisheries operating in specific regions.	Percentage contribution of fisheries to GDP. Proportion of total catch processed by SIDS Value of product exported from SIDS.	
	Maintain acceptable CPUE.			Average deviation of predicted SKJ CPUE from reference period levels.	Observed CPUE maintained at or greater than specified levels.	Yes

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Objective Type	MOW4 Strawman	US proposal (DP22)	SWG suggestion of objective	Performance Indicator (WP14)	Monitoring Strategy (WP14)	SWG Suggestion to include as an indicator
	Optimise fishing effort			EMEY (as for Maximise economic yield). Effort consistent with specified level	Annual monitoring through logbook/VMS	
	Maximise SIDS revenues from resource rents	Take into account the special requirements of developing states and territories		Proxy: average value of SIDSs/non-SIDSs catch Average proportion of SIDS effort or catch to total effort or catch for fisheries operating in specific regions	Observed proportion of SIDS-effort/catch to total effort/catch from SIDS waters from logsheet or VMS data	Yes
	Catch stability			Average annual variation in catch in the short, medium and long term.	Observed variation in catch from logsheet data	Yes
	Stability and continuity of market supply			Average annual variation in catch effort in the short-, medium- and long-term	Observed variation in catch From logsheet data Observed variation in market prices Market throughput of tuna products	

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Objective Type	MOW4 Strawman	US proposal (DP22)	SWG suggestion of objective	Performance Indicator (WP14)	Monitoring Strategy (WP14)	SWG Suggestion to include as an indicator
			Effort predictability	Effort variation relative to reference period level (may also be calculated at the assessment region level).		Yes
		Maintain SKJ, YFT, BET stock sizes around TRPs (where adopted).		Probability of and deviation from $SB/SB_{F=0} > 0.5$ (SKJ) in the short-medium- long-term as determined from MSE (may also be calculated at the assessment region level).	Current median adult biomass, as determined from the reference set of Operating Models.	Yes
Social	Affordable protein for coastal communities			As a proxy: Average proportion of CCMs-catch to total catch for fisheries operating in specific regions.	Average fish consumption per year per person relative to some target.	
	Food security in developing states (import replacement)			As a proxy: Average proportion of CCMs-catch to total catch for fisheries operating in specific regions.	Ratio of locally marketed fish to imported fish products.	Yes
	Avoid adverse impacts on small scale fishers	Minimize adverse impacts on other fisheries, including:		o MSY of SKJ, BET, YFT	Monitoring of fisheries in CCMs	Yes

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Objective Type	MOW4 Strawman	US proposal (DP22)	SWG suggestion of objective	Performance Indicator (WP14)	Monitoring Strategy (WP14)	SWG Suggestion to include as an indicator
		<ul style="list-style-type: none"> o Downstream fisheries like longline fisheries; o Competing fisheries like troll, pole-and-line, and non-tropical purse seine fisheries; 		<ul style="list-style-type: none"> o Possible information on other competing fisheries targeting SKJ. (may also be calculated at the assessment region level) o Any additional information on other fisheries/species as possible. 		
	Employment opportunities			As a proxy: Average proportion of CCMs-catch to total catch for fisheries operating in specific regions as determined from stochastic projections.	Monitoring of fishing and processing sector in CCMs	
Ecosystem	Minimise bycatch	Minimize adverse impacts on NADSs		Number of FADs sets Expected catch of other species as possible	Ratio of target species catch to catch of non-target species from observer program	Yes
	Minimise ecosystem impact			Size or age structure of population Total bycatch amount	From observer based size sampling and stock assessment outputs	

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Other		Adhere to the other principles and provisions of the Convention.				