Compilation of tasks needed and decisions taken for the development of an OMP for the toothfish (*Dissostichus eleginoides*) resource in the Prince Edward Islands region

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*Extracted from previous aide memoire	Further work required*	Outcome	Decision taken*	Further Decisions needed
Assessment input data and deadlines				
Input data			It was agreed that the same data sets currently used as inputs to the assessments should be retained.	None.
Deadlines for data availability?			Data encompassing the period to the end of 2017 to be used.	None.
Operating models				
Assessment approach.		–	The DSWG agreed that there is no basis to assume more than one	None until conditioning

			toothfish stock in the PEI EEZ at this stage, and conditioning of the toothfish operating models should proceed under this assumption using the same methodology as in previous assessments.	completed and available for checking.
Robustness test issues:				
Biological parameter values	Compilation of available/recent estimates of relevant biological parameters (such as M, σ_R and h) from other areas to inform on the reliability of those currently used in the PEI assessment.	Completed	It was agreed that using available data to estimate M (e.g. using a catch-curve) is not viable. Any attempt would be compromised by the selectivity issue. The DSWG agreed that alternative values broadly encompassing these estimates be used as sensitivities.	What alternatives are to be used?
	Use available tag-recapture data (fish lengths at release and subsequent recapture) to estimate growth rate.	Completed	The DSWG agreed that the "new" growth parameters estimated during this analysis, as well as values "in-between" these and those used in previous assessments should be adopted as sensitivities in the updated assessment.	Shall we use averages of the current sets of values?
Proportional depredation on catches	Explore and advise on results from other studies (COLTO, Paul Tixier) in CCAMLR areas that have attempted to estimate levels of depredation.	?	Given the new data that are available, the manner in which cetacean depredation is currently accounted for in the assessment may require adjustment, and a trend in the magnitude of depredation over time may also need to be considered.	Discussion needed as the way forward in unclear.
	Available observer data should be	Completed	It was agreed that due to the	Discussion

	examined to establish whether or not cetacean depredation can be quantitatively considered (rather than qualitatively, as is currently the case). Catch at length data should be examined to establish whether or not patterns in catch size structure can be attributed to, or be indicative of, cetacean depredation. The Patagonian toothfish task team was requested to advise on the implications of these data in terms of the assessment, as well as on further analyses (e.g. spatial investigations, impacts of gear changes over time) that may be required. The Chair was requested to interact with Paul Tixier on the cetacean depredation issue.	 Pending Pending	limited number of records of damaged fish these data would not be useful in attempts to quantify the magnitude of cetacean depredation. It was agreed that while records of interactions between cetaceans and vessels/gear could be a useful data set, clarity on data collection is required. It was agreed that at this time, records of observations of cetaceans in the vicinity of the vessels are perhaps the most useful quantitative data available. It was noted, however, that these data suggest that the current assumption regarding a linear increase in cetacean depredation from 2000 to a "maximum" from 2002 onwards may be invalid, and that cetacean depredation may in fact have been a feature from the earliest years of the legal fishery.	needed as the way forward in unclear.
	The influence of the changes in gear (both past and future) on depredation estimates will need to be considered.		It was noted that the assumption that trotlines prevent cetacean depredation (even when the excluder device is deployed) is not entirely correct.	What model adjustments for this are to be made?

Treatment of pre-exploitation biomass (*K*), CPUE and CAL data			It was agreed that the approach used in recent assessments (fixing K and the relative weighting applied to the CPUE and CAL data) be maintained.	None. Part of conditioning in progress.
Retrospective pattern, given downward trend in trotline CPUE since 2012 which model does not mimic	Attempt a run where the most recent (declining) CPUE estimates are strongly up-weighted.		To be done in OMP development.	None. Robustness test.
	Also consider a run that excludes the first 2 years of trotline CPUE data (the relatively low values for these years might reflect a "learning new gear" aspect that biased the catch rate downwards, rather than reflecting lower abundance).		To be done in OMP development.	None. Robustness test to be developed.
	It was noted that the downward trend in trotline CPUE since 2010 is a key issue, suggesting a 50% decline in abundance over this period. The possibility that this decline in CPUE could, to some extent, reflect changes in factors other than abundance (such as altered fishing behaviour/patterns or increased levels of depredation) requires consideration.	SAPTIA suggests the recent decline in CPUE is due to a combination of cetacean depredation and unfavourable weather conditions.	Include a month effect in the CPUE standardisation to account for a weather effect on catch rates.	RECONSIDER - there is already a month effect in the standardisation.
Alternative historical selectivity assumptions	Check whether or not the size structures of catches in other areas are consistent with the hypothesis that larger fish tend to drop off	Pending	It was agreed that what is being used at present is appropriate – there is no basis for considering alternative historical selectivity	None (Unless alternatives are suggested).

	Spanish longlines when hauling, hence the dome shaped selectivity.		patterns for the base case to what is currently assumed for the base case assessment.	
Past illegal catch levels	The first (large) estimate of illegal catches in the time series has a profound impact on the perception of stock status, and the question was raised as to whether or not there is any objective basis to review and possibly revise this estimate, or at least throw some light on its accuracy.		Consultation with Denzil Miller has indicated that there is no basis to change the 1997 estimate of IUU catch that is currently being used in the assessment.	None.
Tag loss/mortality	The CCAMLR document describing between-vessel differences in tag recovery rates has been circulated among the task team members.		It was noted that suggestions for additional/alternative robustness tests should be tabled at the next DSWG meeting.	
	It was noted that the available PEI tagging data could be used to explore a potential vessel effect on tag recovery rates.	Completed	Little evidence of this possible source of bias is shown by data.	Presumably no change to present assessment.
	Evaluate possible differences in tagging "success" between the two vessels.	Completed	None evident.	Presumably no change to present assessment.
Data to be used in the CMPs				
Trotline CPUE			It was agreed that this would be retained as the primary data source.	None.
Mean length of catch			It was recognised that this is a relatively weak index, but it was agreed that it should be considered	None (now).

			for use.	
Tag-recapture data	A check on tag-release data to ensure CCAMLR tagging targets are being met in PEI.	Completed	The data indicate that although these targets were not met in the early years of the fishery, tagging rates since 2013 are consistent with a target of 1 fish per ton of catch. The DSWG consequently considered that tag-recapture data will continue to be collected at this rate in the future, and could consequently be included in the analyses forming the basis for the OMP.	Clarity needed – are these data intended for conditioning OMs only, or for use as MPs input as well?
	Explore a possible area effect in the tag-recapture rates.	Completed	There is an effect.	Can this be ignored in OMs and MPs as adjusting for it could prove rather difficult?
Assumptions regarding the future				
Fishing gear to be used	Likely scenarios of future gear use and of the proportion of the TAC that is likely to be caught (including an estimate of the CPUE level that would induce operators to avoid fishing in the PEI) for CMP testing are being considered.	Completed	It was noted that exclusive use of trot line gear in the PEI in future is unlikely. The possibility of a gear change from trot lines to autolines is likely for one vessel, while the other is likely to retain trotlines. This scenario needs to be considered in the OMP.	Discussion needed on how this is to be done.
Full use of TAC?	SAPTIA representatives indicated that a TAC of 700 – 800 t per			Okay if OMP evaluation

	annum is required to sustain two vessels in the PEI EEZ.			assumes TAC will always be taken?
Objectives and performance statistics				
Target abundance objective			In view of the importance of economic viability considerations, it was agreed that a decision on this be deferred until the results of the updated analyses are available.	None now – await further analyses.
Performance stats for: Catch Risk (in terms of falling below some *B/K* threshold) Stability (AAV) Economic viability (CPUE relative to some baseline)			It was agreed that while these performance statistics should be used as a starting point, these might require reconsideration/augmentation as testing proceeds.	None now – await further analyses.