Agenda Item F.5.b
NMFS Report
March 2012

Considerations for Selecting Species for Assessment in 2013

This year's planning for upcoming assessments is currently marked by greater uncertainty than has usually been the case, due to the upcoming review of enhanced data-limited methods and their possible inclusion in this cycle. We are hopeful that at least one method will be endorsed for moving forward with this approach, and that one STAR Panel will be set aside for initial review of several such assessments. Accordingly, we recommend that the Council allow itself the flexibility to delay finalizing the 2013 schedule until its September 2012 meeting, in order to accommodate the development of Terms of Reference and a list of species for which enhanced data-limited assessments would be conducted, should this spring's review of methods result in the Council's endorsement of at least one such approach. Based on this expectation, the suggestions and discussion presented here assume that 8 benchmark (full) assessments will be conducted in 2013. One reason for this, as discussed below, is that it is not clear that sufficient personnel will be available to lead 10 full assessments in 2013.

Over the past 6 years, stock assessment teams lead by those not employed by NMFS have declined steadily, from 7 in 2005 to one co-lead in 2009 to none in 2011. Additionally, over that period, expectations regarding the comprehensiveness of benchmark assessment documents have increased. That factor and the demands for additional model exploration during review meetings have meant that it is no longer possible to have only one person assigned to each assessment. The NW and SW Fishery Science Centers believe that it would be very challenging for them to lead more than 9 full assessments in 2013, and that 8 is a more realistic total for maintaining assessment quality.

Because of these limitations, both Centers believe that it is more important than ever to optimize the use of the resources which we devote to the development and review of assessments. Since the 2005 cycle, most of the non-hake assessments conducted for this Council have involved rebuilding species, and these have been accompanied by an equal number of additional rebuilding analyses.

Because of the limited availability of new data for cowcod, however, the Council elected to move forward with status reports for that species, which summarize ACLs, catch data, and any other relevant information from the preceding two years. We believe it is time for the Council to consider the appropriateness of skipping assessments for rebuilding species during some cycles, in favor of status reports, where conditions merit.

The rebuilding situations of yelloweye and canary rockfish resemble cowcod in several respects: they are not expected to reach their target biomasses for decades, they are very long-lived fish characterized by low productivity, they have not demonstrated the capability of producing large, sporadic recruitments, as has bocaccio, and the indices of abundance included in their assessment models are not highly informative. Under these circumstances, we believe that intermittent status reports, which focus on reporting fishing mortality, ACLs, and changes in indices and other data, would comply with the requirement to assess the status of rebuilding stocks every two years.

There are numerous factors which the Council and its advisors should consider in prioritizing species for assessment. Included among these are:

- Availability/adequacy of data; including new data series that have become available since last assessment, or major changes to existing time series
- The species' PSA Vulnerability Score
- The species' importance to the fishery, including cumulative and recent fishing mortality
- The species' importance to the ecosystem
- The number of years since the last assessment, if it has ever been assessed
- The importance of and ability to address unresolved issues/problems in the most recent assessment
- The survey trend for the species, (if available)
- Whether the species is tracked in the Agency's Fishery Stock Sustainability Index

An overview of recommendations from the NW and SW Fishery Science Centers is provided in Table 1. Recommendations which we support strongly are indicated by capital 'X's, while other choices which we regard as more discretionary are indicated by small 'x's. As discussed above, we propose that status reports be conducted for cowcod, canary rockfish and yelloweye rockfish in 2013. Based on the agreed plan to review the 2011 survey data for bocaccio this spring, to resolve uncertainty regarding the size of the 2010 year class, we also suggest a bocaccio update in 2013, unless serious concern persists following this spring's review. We suggest that the Council plan for 8 full assessments in 2013. We recommend full assessments for petrale sole, darkblotched rockfish, shortspine and longspine thornyheads, which have not been assessed since 2005, and bank rockfish, which has a high vulnerability score and has never been assessed in a manner consistent with current protocols.

Beyond those 5, there are several possibilities for the remaining 3 slots. If the Council prefers that a canary assessment be conducted, it would need to be be a full assessment. If an assessment is felt to be necessary for the recently rebuilt widow rockfish stock, that would also need to be a full assessment. Black rockfish is a highly important species to northern nearshore fisheries and has not been assessed since 2007. However, as assessments for other nearshore species, which have traditionally relied upon CPUE indices for trend information, catch limits in those fisheries may limit the ability to reliably discern changes in status since the last

assessments. Black rockfish has also been assessed in separate models for northern and southern areas, and might require an entire review meeting to address the full range of the stock.

Other species which have been discussed in recent years include yellowtail rockfish, which was last updated in 2005 and not fully assessed since 2000, rex sole, and sanddabs. These flatfish have lower vulnerability scores, but they have never been assessed and have more data than many of the alternatives. Additionally, there may be a few unassessed species, such as rougheye, aurora, redbanded, or rosethorn rockfish, that have high vulnerability scores and may have sufficient data for a successful benchmark assessment. Other species with high vulnerability scores, particular nearshore species, are unlikely to have informative indices over the past decade and commonly have had limited sampling of biological information.

As noted above, we suggest that the bocaccio assessment be an update, and that a status report, rather than an update, be developed for yelloweye rockfish. Pacific ocean perch is the other species for which an update is required. If the Council determines that a new sablefish assessment is a high priority, we propose that it be an update. This list represents a minimum of 2 and a maximum of 4 updates. We note that, from a workload perspective, developing 8 full assessments, 4 updates, and 6-10 data-limited assessments may not be realistic.

There are several species for which enhanced data-limited assessment approaches may be informative as to stock status and allowable harvest, as well as whether potential depletion concerns merit future examination through full assessments. These include several species already mentioned--rex sole, Pacific sanddabs, yellowtail, rougheye, aurora, redbanded, and rosethorn rockfishes—as well as others, such as stripetail and halfbanded rockfishes, spotted ratfish, grenadiers, and Pacific cod, which have never been assessed. Additionally, there are some species whose assessments are no longer current, which were last assessed to be well above target levels, whose status could be updated using enhanced data-limited methods relying on updated survey data. These would include: arrowtooth flounder, English sole, and chilipepper rockfish.

Table 1. Possible schedule for west coast groundfish assessments in 2013.

Species	Last Assessment prior to 2011			2011			2013 (current)			Adequate Through	PSA Vul. Score	on FSSI list
	Year	Full / Update	Model	Full	Update	Affliation	Full	Update	Affliation			
Number of assessments				*8*	*4*		*8*	*2-3*				
Blackgill rockfish	2011	Full	SS v3	X		SWFSC				2016	2.08	Y
Bocaccio rockfish	2011	*Hybrid*	SS v3		X	SWFSC		X	SWFSC	2016	1.93	Y
Canary rockfish	2011	Update	SS v3		X	NWFSC	x or *stat rept		NWFSC	2016	2.01	Y
Cowcod	2009	Update	SS v2		* stat rept	SWFSC		* stat rept	swfsc	2016	2.13	Y
Darkblotched rockfish	2011	*Hybrid*	SS v3		X	NWFSC	X		NWFSC	2016	1.92	Y
Dover sole	2011	Full	SS v3	X		NWFSC				2016	1.54	Y
Greenspotted rockfish		Full	SS v3	X		SWFSC				2016	1.98	
Pacific ocean perch	2011	Update	SS v3	X		NWFSC		X	NWFSC	2016	1.69	Y
Petrale sole	2011	Full	SS v3	X		NWFSC	X		NWFSC	2016	1.94	Y
Sablefish	2011	Full	SS v3	X		NWFSC		x	nwfsc	2016	2.13	Y
Spiny Dogfish		Full	SS v3	X		NWFSC				2016	2.13	Y
Widow rockfish	2011	Full	SS v3	X		SWFSC	x		SWFSC	2016	2.05	Y
Yelloweye rockfish	2011	Full	SS v3		X	NWFSC		x/*stat rep	NWFSC	2016	2.00	Y
Cabezon	2009	Full	SS v3							2014	1.68	Y
Greenstriped rockfish	2009	Full	SS v3							2014	1.88	
Lingcod	2009	Full	SS v3							2014	1.55	Y
Splitnose rockfish	2009	Full	SS v3							2014	1.82	Y
Arrowtooth	2007	Full	SS v2							2012	1.21	Y
Black rockfish - N	2007	Full	SS v2				x		?	2012	1.94	Y
Black rockfish - S	2007	Full	SS v2				x		?	2012	1.94	Y

Species	Last Assessment prior to 2011				2011		2013 (current)			Adequate Through	PSA Vul. Score	on FSSI list
	Year	Full / Update	Model	Full	Update	Affliation	Full	Update	Affliation			
Blue rockfish	2007	Full	SS v2							2012	2.01	Y
Chilipepper rockfish	2007	Full	SS v2							2012	1.35	Y
English sole	2007	Update	SS v2							2012	1.19	Y
Longnose skate	2007	Full	SS v2							2012	1.68	Y
Cal. Scorpionfish	2005	Full	SS v2							2010	1.41	Y
Gopher rockfish	2005	Full	SS v2							2010	1.76	Y
Kelp greenling	2005	Full	SS v2							2010	1.56	Y
Longspine thornyhead	2005	Full	SS v2				X		SW or NW	2010	1.54	Y
Shortspine thornyhead	2005	Full	SS v2				X		NWFSC	2010	1.80	Y
Starry flounder	2005	Full	SS v2							2010	1.04	Y
Yellowtail rockfish	2005	Update	SS v1				x		nwfsc	2010	1.88	Y
Bank rockfish	2000	"Simple -Full"	SS v1				X		SWFSC	2005	2.02	Y
Bronzespotted rockfish					# tech memo	SWFSC					2.12	
Rougheye rockfish							x		nwfsc		2.27	Y
Aurora rockfish							x		nwfsc		2.10	
Redbanded rockfish							x		nwfsc		2.02	
Rosethorn rockfish							x		nwfsc		2.09	
Rex sole							x		nwfsc		1.28	Y
Pacific sanddab							x		nwfsc		1.25	Y

* status report would compare total mortality with the projections form the rebuilding analysis