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Mr. Don Hansen, Chair &
Dr. Don McIsaac, Executive Director
Pacific Fishery Management Council
7700 NE Ambassador Place #200
Portland, OR 97220-1384

RE: Agenda item B.1.b – Open Public Comment

Dear Chairman Hansen, Dr. McIsaac, and Council members,

I am a sardine fisherman from Bellingham, Washington. My vessels have operated out of Astoria, Oregon since 1999. I understand that the Council's workload is heavy but I feel the following issue is important enough to bring to your attention and hopefully you can find time to address it.

I am sure you are aware of the current situation regarding the sardine resource. The HG is decreasing yet the fishermen are seeing more fish available in the ocean. For the sardine industry depending upon this season's HG things will be difficult at best. I am hopeful the collaboration of industry and science in developing a new abundance index will alleviate some of this. However, there is one issue that, if it takes place, would absolutely devastate the sardine industry. The environmental component of the CPS FMP harvest control rule needs to be addressed immediately!

As background, the environmental component of the harvest control rule dictates the harvest exploitation of sardines based on sea surface temperature data from Scripps Pier in La Jolla, CA using a 3 year running average. Once that number is established it gets put into the following formula to arrive at the harvest fraction:

$$FMSY = 0.248649805 T_2 - 8.190043975 T + 67.4558326$$

By rule the harvest fraction cannot exceed 15% and can drop to as low as 5% depending on the temperature (T) input into the formula. The fraction is higher at higher temperatures because it is believed that sardine stock productivity is higher under ocean conditions associated with warm water temperatures. While I do not disagree with this theory I have some problems with how it is used to dictate the HG based on the following reasons

- The use of the sea surface temperature at Scripps Pier may not necessarily reflect the health of the entire sardine region during periods of high abundance.
- The formula which dictates the harvest fraction and the cutoff temperatures have not been evaluated for a long time.
- The steepness of the exploitation curve is a big concern. A drop from 15% to 5% could happen in one year's time and would severely harm the industry. Could there be a way to limit the quickness of the drop?
- Lastly, and most importantly, under this formula it is possible for industry to be held to a 5% harvest rate when expansion and growth in the resource is taking place.

The following spreadsheet models the historic harvest using the CPS FMP. The model uses the average yearly temperatures at Scripps Pier, a three year running average, and a breakdown of what the harvest rate would have been in those years. This model shows the formula would have severely restricted harvest in some years we know were expansion years (1916 – 1936). If the HG Formula is allowed to continue, using the environmental component as is, we could have years of a 5% harvest on a fishery that may still be expanding.

Year	Scripps SST	3 yr. Avg.	15% Harvest < 17.207	Between	5% Harvest 16.846 >
1916					
1917	16.68				
1918	17.35				
1919	16.87	16.967		1	
1920	16.55	16.923		1	
1921	16.55	16.657			1
1922	16.48	16.527			1
1923	17.36	16.797			1
1924	16.55	16.797			1
1925	17.01	16.973		1	
1926	18.07	17.210	1		
1927	16.87	17.317	1		
1928	16.73	17.223	1		
1929	17.18	16.927		1	
1930	17.45	17.120		1	
1931	18.50	17.710	1		
1932	16.31	17.420	1		
1933	15.65	16.820			1
1934	17.52	16.493			1
1935	16.71	16.627			1
1936	17.61	17.280	1		
			<u>6</u>	<u>5</u>	<u>7</u>

As you can see in the above spreadsheet between 1919 and 1936 there would have been 7 years of fishing at the minimum rate during a time period when the resource was now known to be expanding.

For the above reasons I am sure you can see why we should take another look at the environmental component of the harvest control rule. With everything already facing the industry any additional, possibly unjustified, cut in the HG would be disastrous. Again, I know your time is very limited but I am hopeful that you can see this is looked into sooner rather than later.

Thank you for your time and consideration of this matter.

Regards,

Ryan Kapp