

Concerns with Pacific Sardine Management

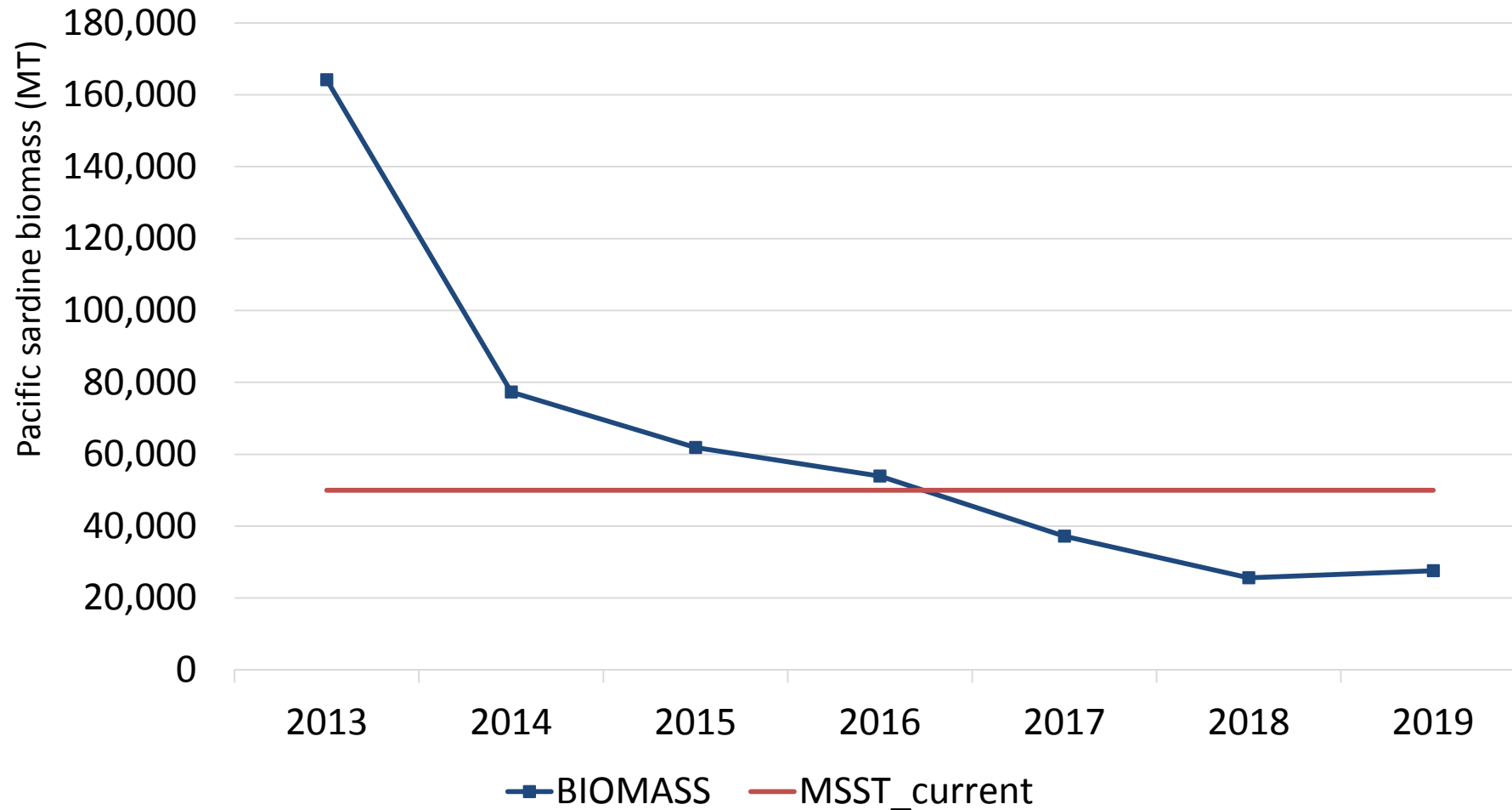
Ben Enticknap and
Dr. Geoff Shester

June 20, 2019

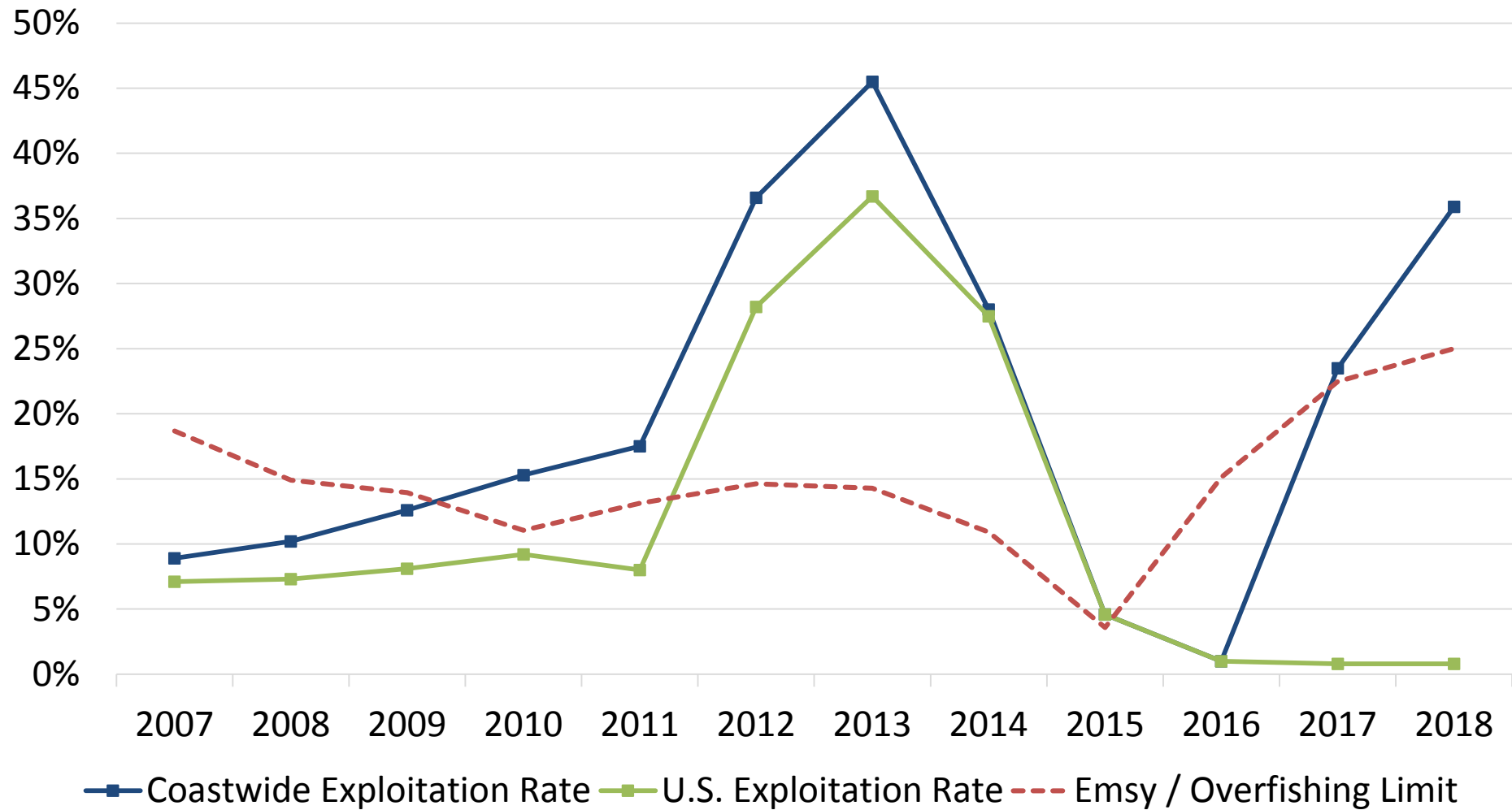
PFMC Agenda Item F.1 NMFS Report



Pacific Sardine Must Be Immediately Declared Overfished



International Overfishing is Occurring



New study published since April 2019

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Technical note

Re-evaluation of the environmental dependence of Pacific sardine recruitment

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- “using data from the latest, stock-differentiated assessments, we show that sardine recruitment does not vary significantly with [CalCOFI] SST annual.”
- “Spurious relationship”
- Implication: Emsy of 26% overestimates current sardine productivity and does not prevent overfishing

| Point of Concern Criteria (CPS FMP) | Rationale |
|--|---|
| Any adverse or significant change in the biological characteristics of a species (age composition, size composition, age at maturity, or recruitment) is discovered. | Zwolinski & Demer 2019 discovered that CalCOFI temperature is no longer a predictor of recruitment, which was the basis for the temperature based Emsy of 26% used to calculate the 2019-20 sardine OFL, ABC and ACL. |
| An overfishing condition appears to be imminent or likely within two years. | Coastwide landings exceeded MSY in 2017 and 2018 according to the 2019 sardine assessment. Stock is currently below MSST |
| Developments in a foreign fishery occur that affect the likelihood of overfishing of CPS. | Mexican catch levels have significantly increased in the last two years, and have resulted in coastwide harvest rates exceeding MSY according to the 2019 stock assessment. This is likely to continue unless management actions are taken. |
| Control rule (harvest policy) parameters or approaches require modification. | CalCOFI temperature must be removed because it's not best available science. The static 87% distribution is flawed and must be corrected. Stock differentiation (northern and southern subpops) in assessments means current management harvest parameters must be revisited. |