Status of the widow rockfish resource in 2009

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Main differences from 2007 assessment:

1. Full assessment
2. Use SS3 interface – not direct ADMB coded as in previous assessments
3. Time period in model 1916 to 2008 (vs. 1958 to 2006)
4. New data:
   - 2007-08 data: catch, age, and survey
   - Catch: CA re-construction data (1916-68)
   - NWFSC combo survey (2003-08)
5. Selectivity functions and male offsets
6. Age group changed from 20+ to 30+
7. Use hybrid F (fishing mortality)

Brief summary

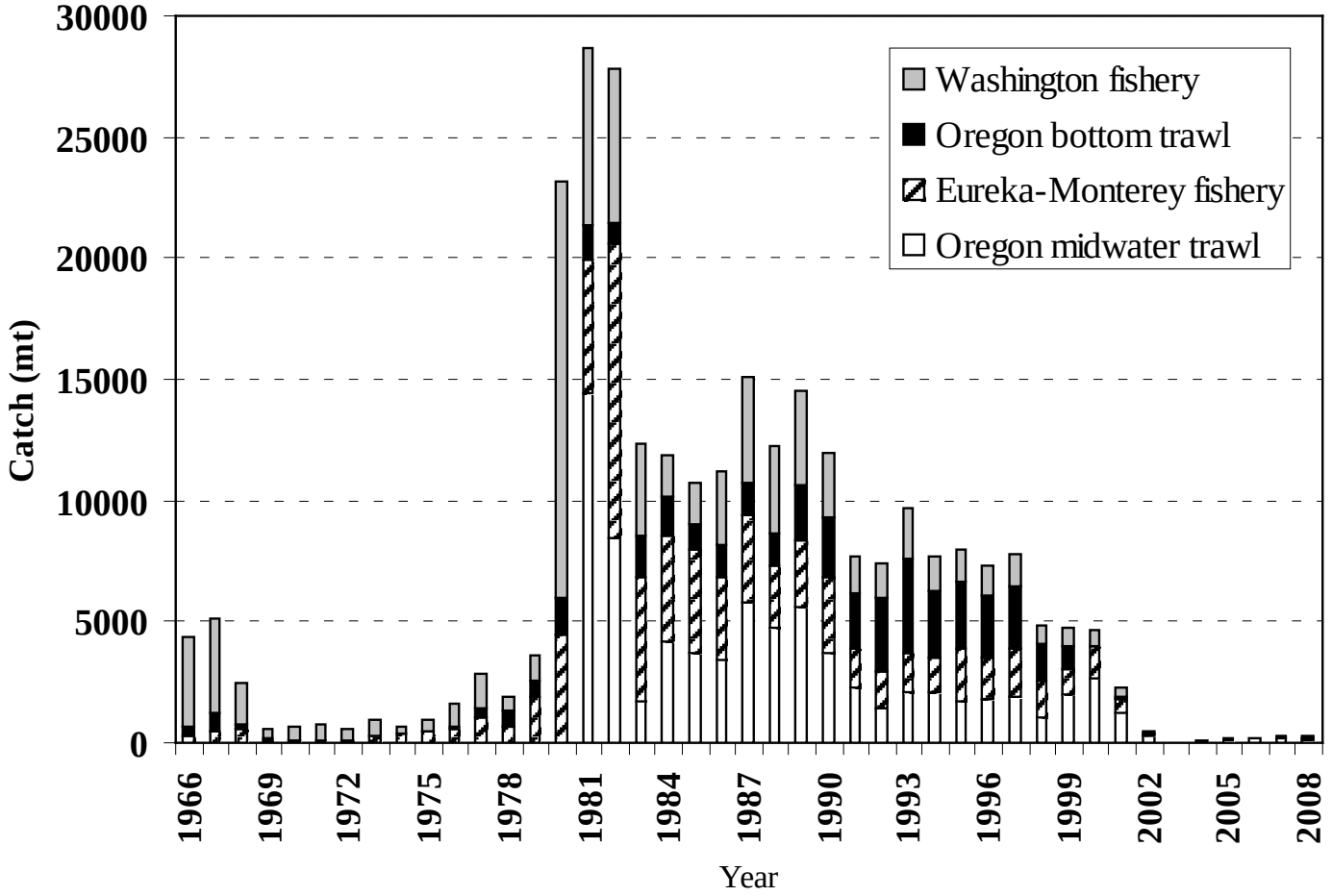
- Overall trend of the population similar to 2007 assessment;

- Estimated current depletion = 38.5% (35.5% in 2007);

- Low recruitments in recent years.

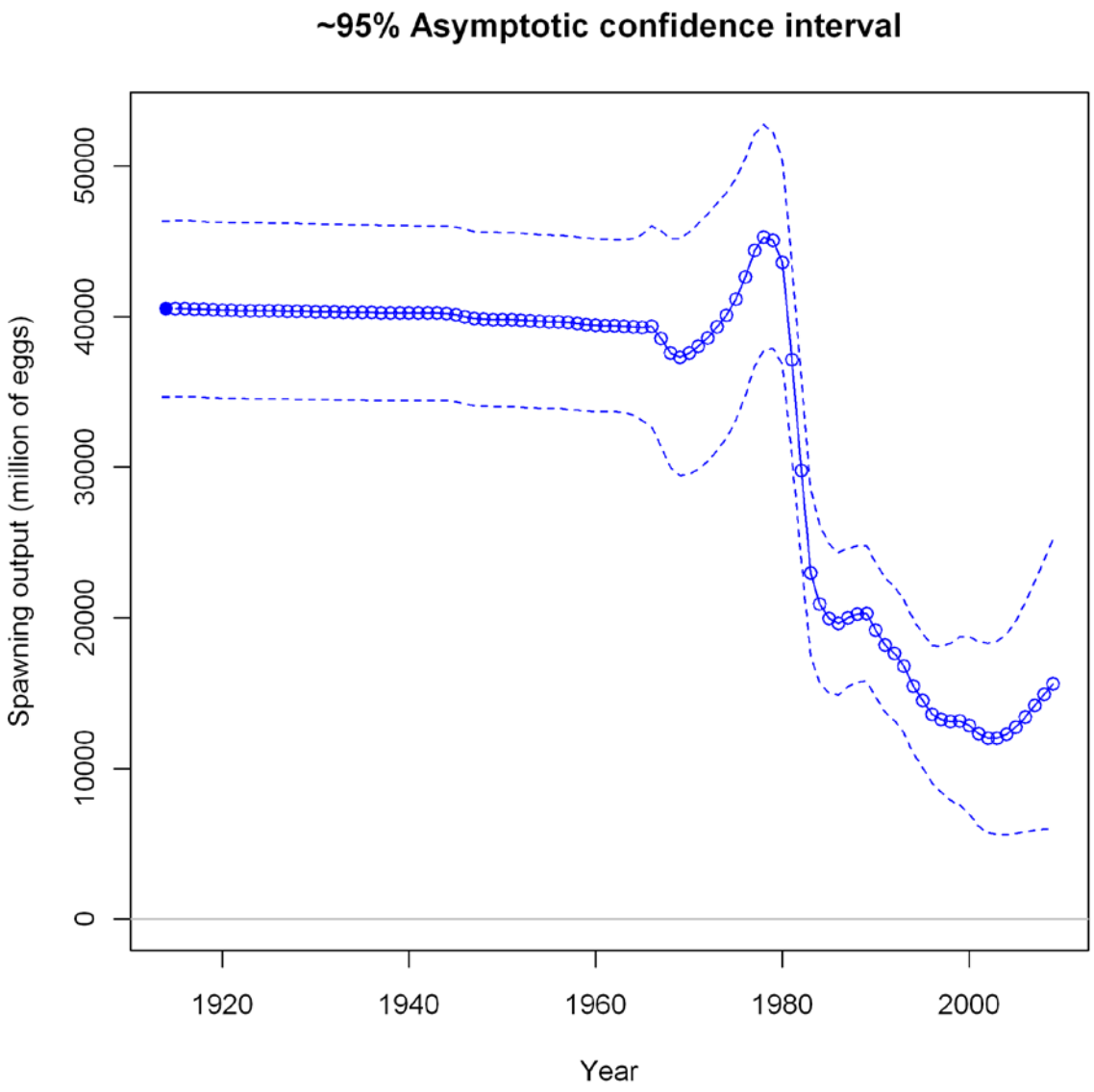
Catches by four fisheries 1966 to 2008

(all years in next slide)

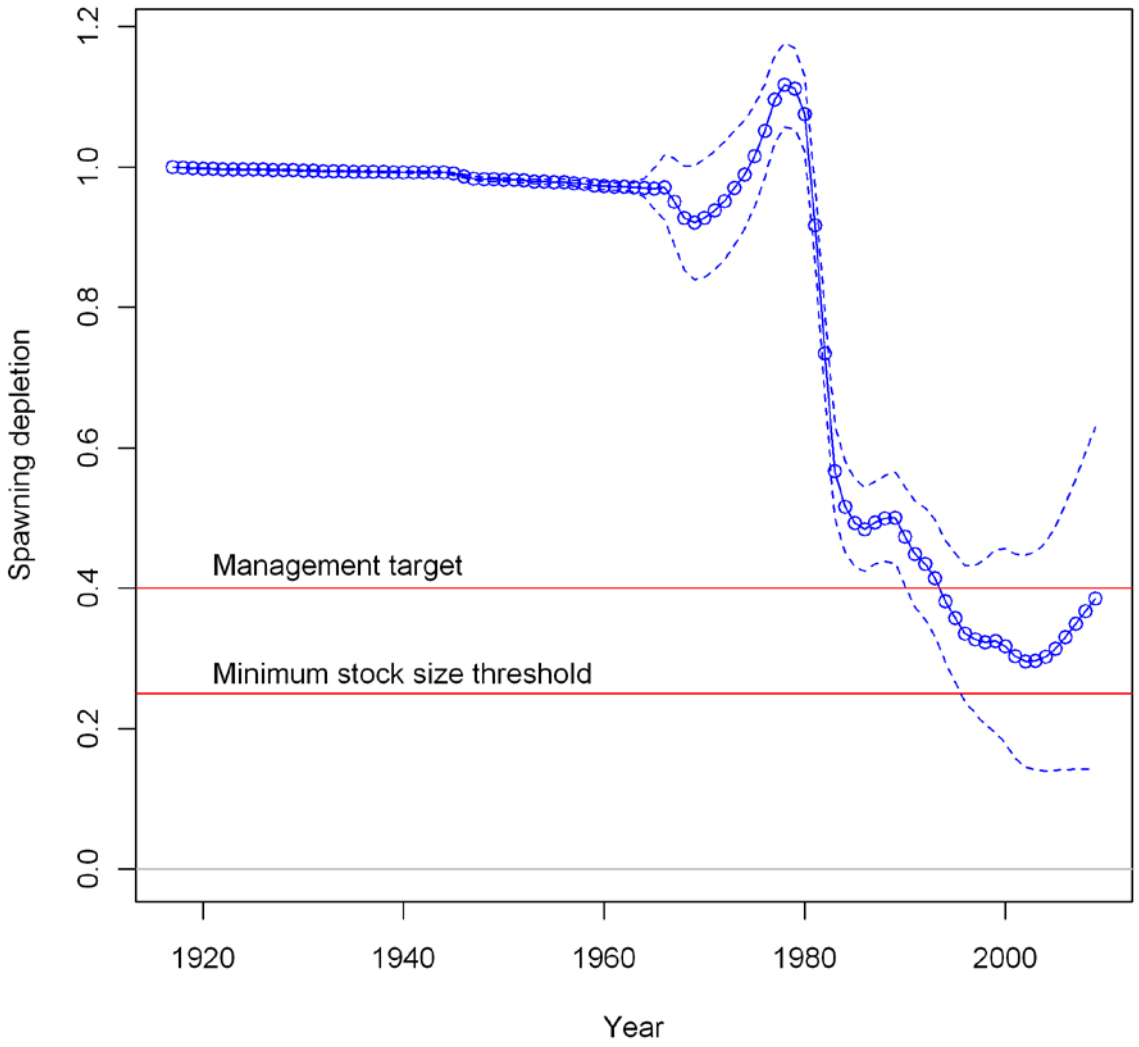


- **Peaked in early 1980s, decreasing since then**
- **Very low catches in recent years**

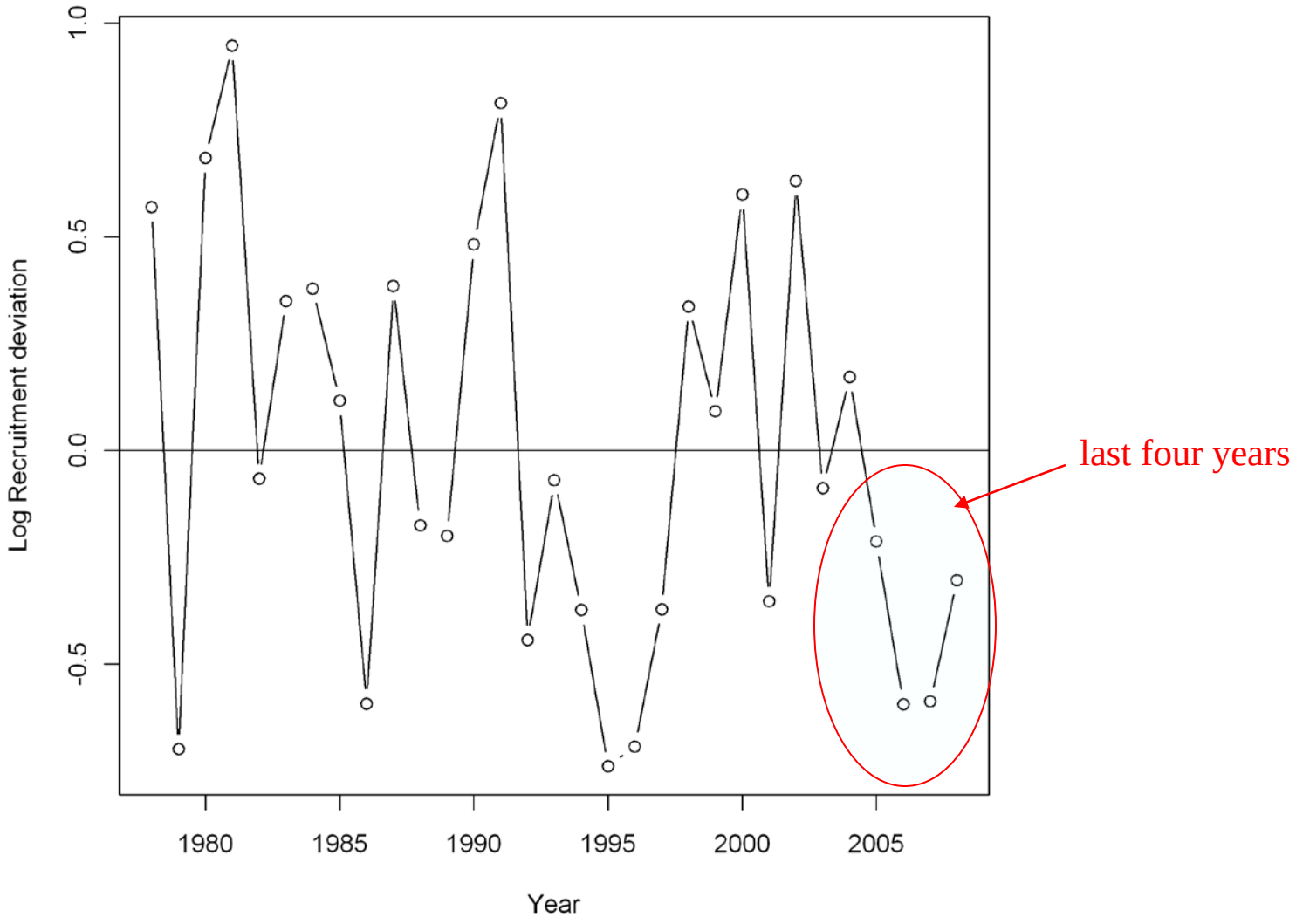
Base model – spawning output (two areas combined)



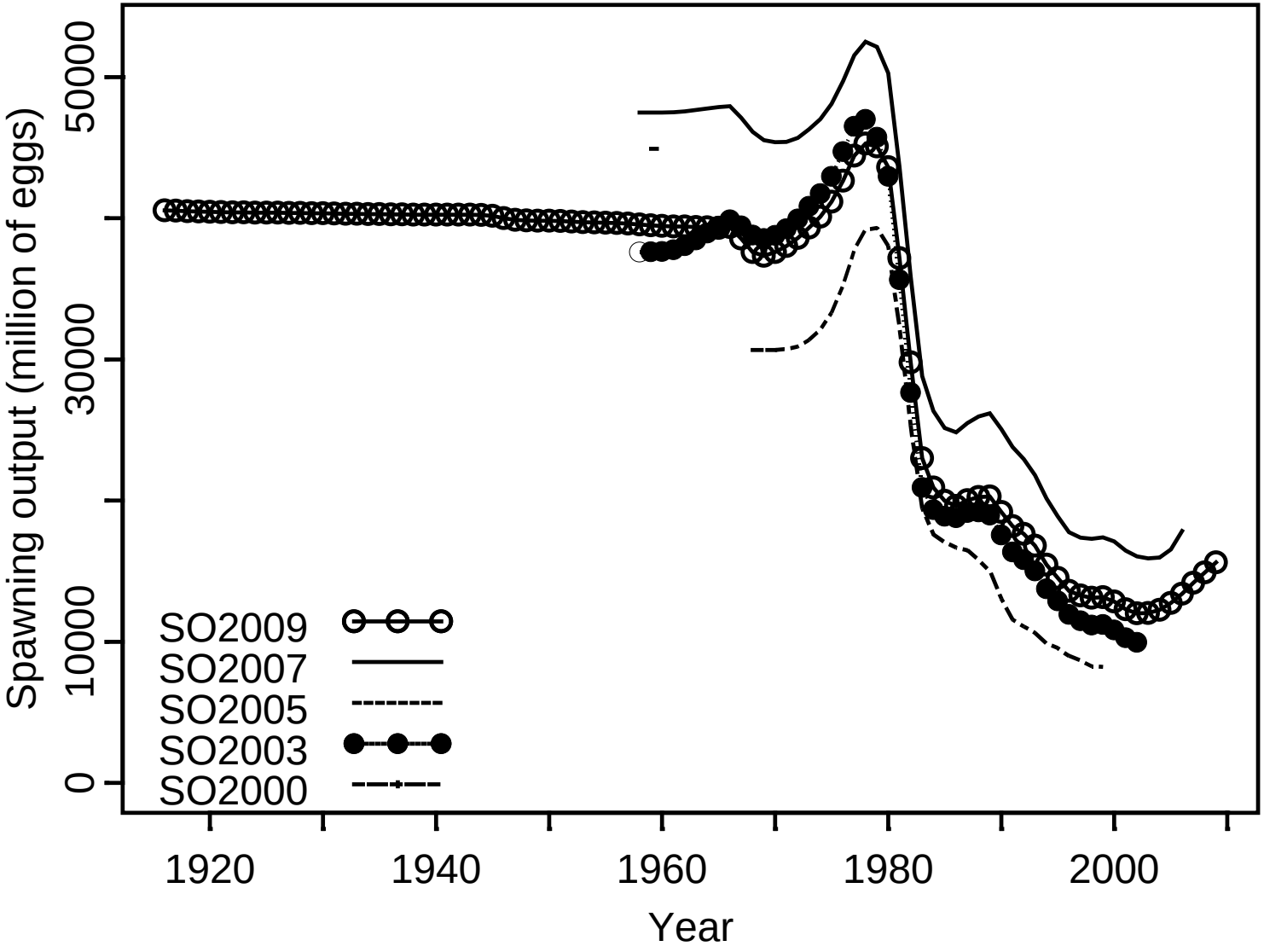
Base model – depletion (two areas combined)



Base model – Recruitment deviation (log)



Spawning outputs - Comparisons to previous assessments



Brief summary

- **Estimated depletion in 2009 is 38.5%, better than estimated 35.5% in 2007;**
- **Estimated *h* is 0.40, higher than estimated values of previous assessments (lower than prior);**
- **Base model is sensitive to key parameters (*h*, *M*, proportion of recruitment to northern area);**
- **Large uncertainties in model – lack of good data in recent years – becoming 'data-poor' species?**