1. EBFM is here in a policy context, still trying to implement
2. Implementation has been slow.
3. Stock assessment is core to the fisheries management process
   1. Fig on how stock assessment works? Include different insertion points and potentials kind of information
   2. Advances in stock assessment (review by skern mauritzen) suggest not many advances have been made
4. Stock assessment is only one way in which ecosystem stuff can be advanced, and not necessarily the best way. But because it’s something that is relevant to all regions it can provide a microcosm through which to investigate how ecosystem science influences management.
5. We sought to characterize how and why ecosystem information was being used to inform stock assessment models and communication about them through stock assessment reports
   1. In addition to inventorying the assessments, we investigated how ecosystem information was being used and why. In particular we were interested in characterizing different ways in which information may be used. Zador and qualitative information.
6. Hypotheses about when eco info would be included
   1. Importance: Stock status (“importance”)
   2. Possibilities: Data availability
   3. Relevance: Life history types

Discussion:

1. Where are we? Summary of results- eco info is being used.
   1. Fishery> physical env > ecological
   2. Factors that affect observation processes are more common than ecological processes
2. Where are we going? Are the barriers to more progress?
   1. Overfished status
      1. Climate and fishing combined
   2. Data
      1. Funding for diet studies
      2. expertise
   3. Institutional (stock assessment process)
      1. Barriers
         1. Creative process
      2. Solutions
         1. Ecosystem and assessment working together
      3. Moving assessment authors around ? (exchange)
3. Where to put ecosystem info?
   1. Observation vs process
   2. Already sampling effects directly (compositional data) and multiple indices of abundance, little room for ecosystem info (Bretton?)
   3. Prioritization—expanded stock assessments (pcouncil and SAIP)
   4. Qualitative vs quantitative (zador)
4. Limitations of our study:
   1. Only assessment models reports (not control rules or reference points)
   2. Scores are coarse
   3. Hard to control for review processes in different regions (and what goes in the report)
5. Conclusions and Future work: Broad EBFM paragraph