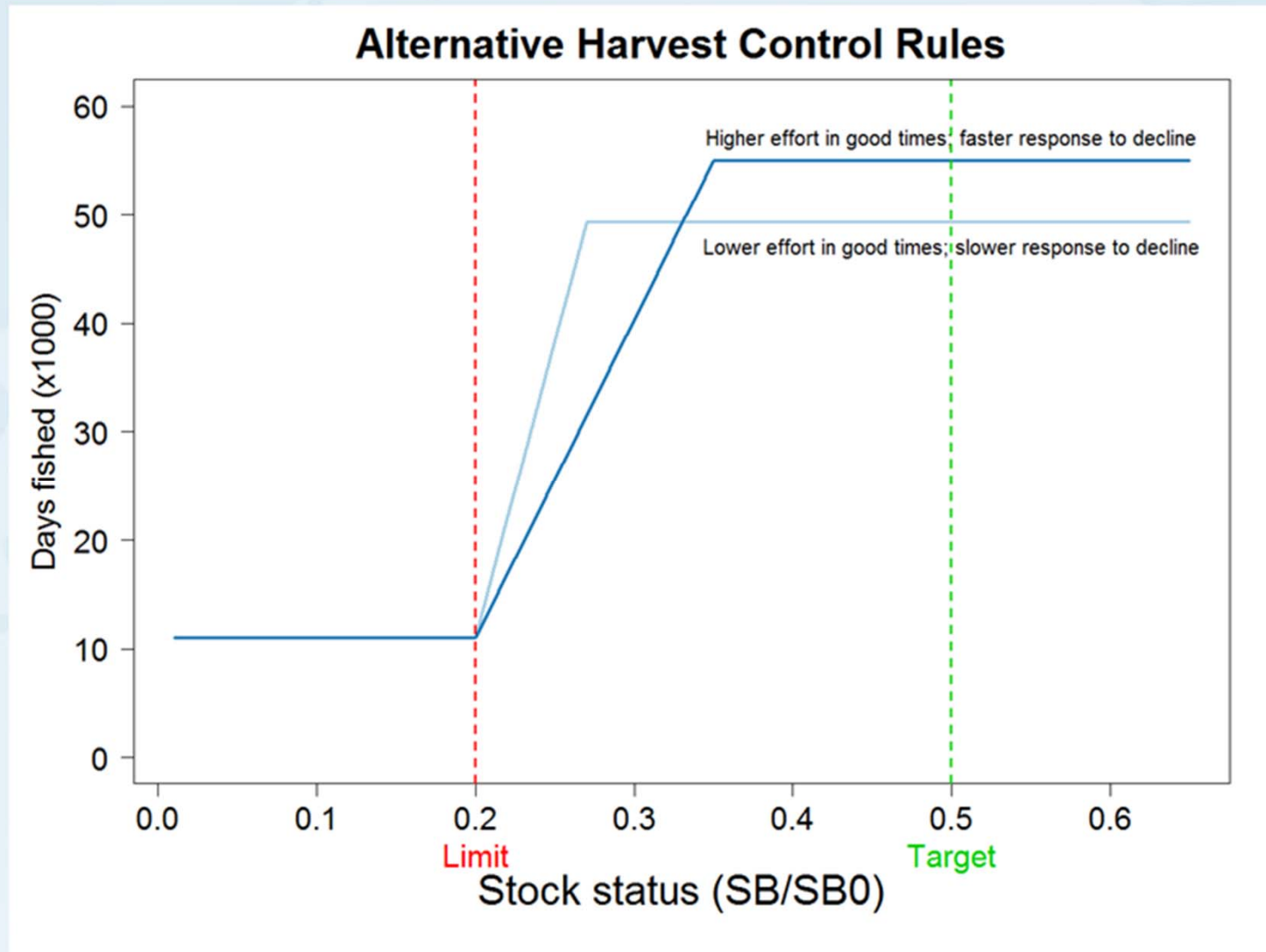




# Design of harvest control rules 2



Slide 1

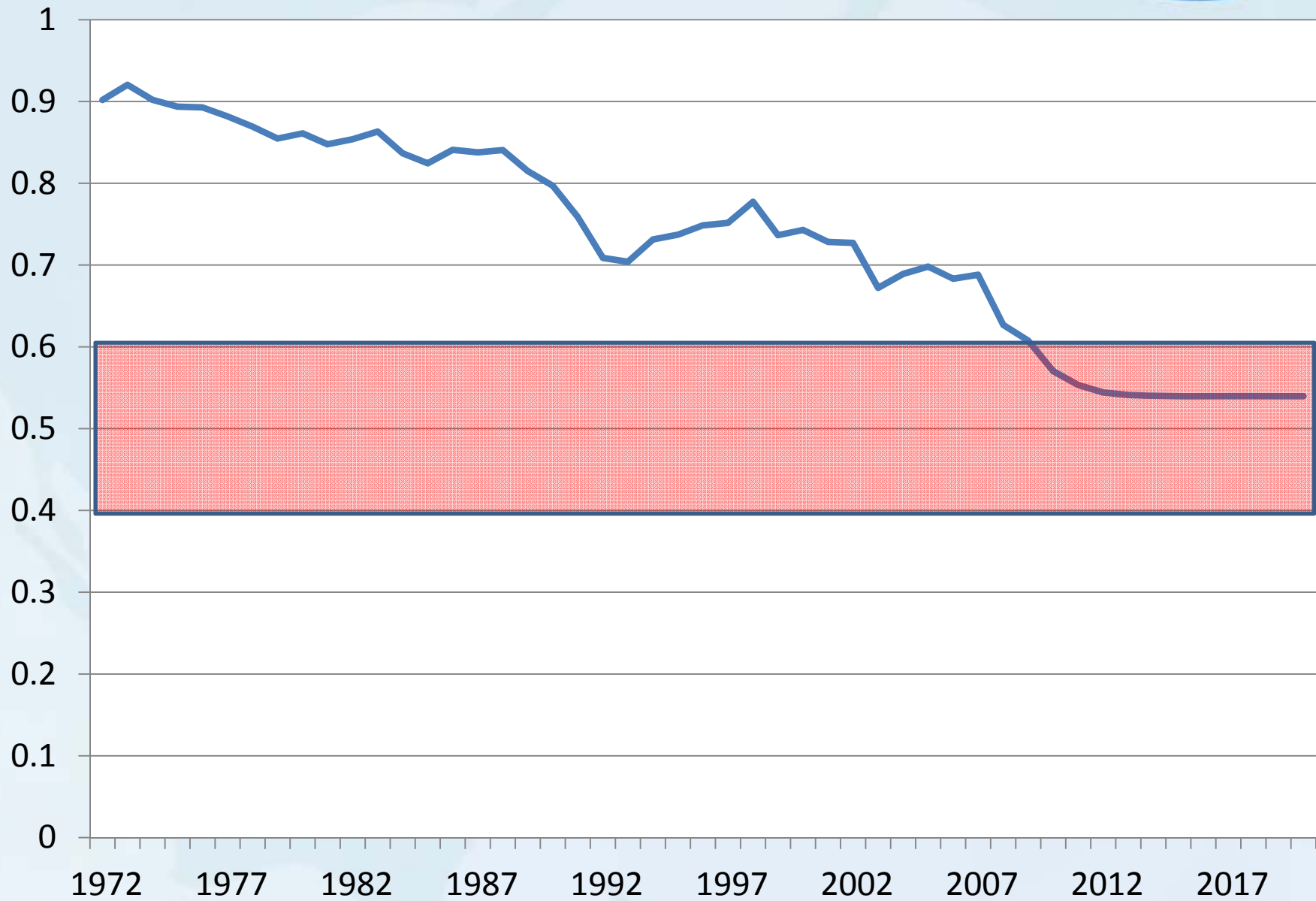
---

2

The lag effect in terms of the decline in effort when SB below target needs explaining (i.e. not sure I understand it!)

Ian Cartwright, 11/26/2013

## Skipjack biomass compared to unfished





## Considering a TRP in the range 0.4-0.6

- Not advisable to have a target lower than the levels that have been experienced?
- Not advisable to have a higher target level that requires immediate large reductions in fishing effort
- Something that recognizes current fishing conditions and fishery performance



# Possible way forward: immediate term

- To be provided to SC10 in 2014 with a view to recommending a TRP and HCR to WCPFC 11
  - Evaluate skipjack stock status against an interim target reference point of 0.5.
  - Apply harvest control rules such as those presented in this paper and examine robustness to the new assessment
  - Include performance indicators relating to fish sizes and examine the acceptable magnitude of changes in fishing effort



## **Possible way forward: longer term**

- **Develop a 'gaming tool' to allow stakeholders to better understand HCRs in practice**
- Integrate the application of SKJ harvest control rules with implications for bigeye and yellowfin
- Package the TRP and HCR in a broader management strategy that includes broader purse seine management