

# The assumptions associated with the indices of South African anchovy abundance provided by the Daily Egg Production Method

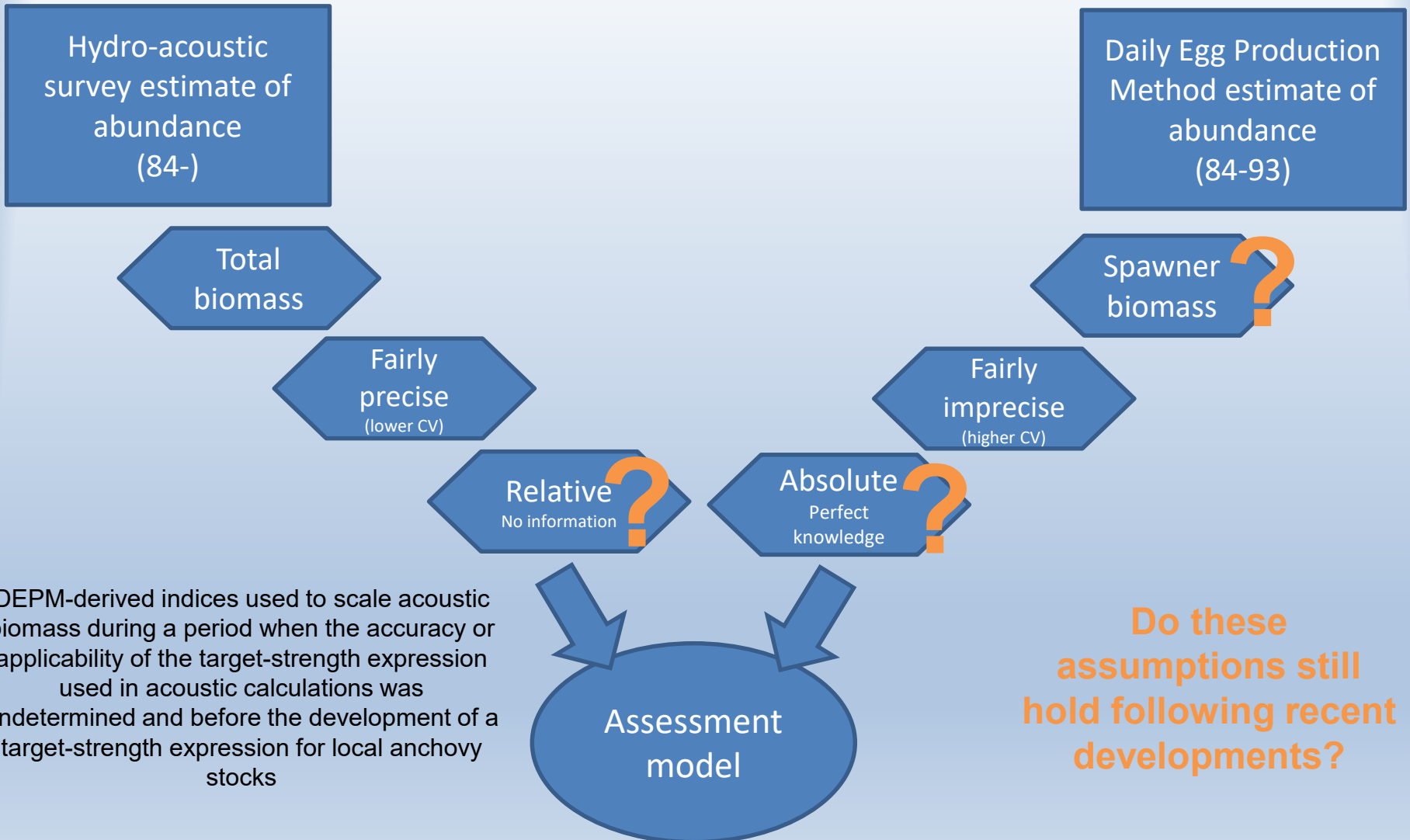
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# Indices of Anchovy Abundance



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## Recent Developments:

- Maturity ogives currently being estimated
- Assessment shown to be sensitive to alternative time-invariant maturity ogives (Doc #15 & Doc #40)
- Does this impact the derivation of the DEPM indices?

No.

- No underlying assumption of maturity by age/length during the estimation of the DEPM indices (Armstrong *et al.* 1998), so changes in maturity ogives over time do not require any re-estimation of the DEPM time-series
- Do we continue to assume that DEPM indices provide absolute estimates of anchovy **sex-aggregated spawner biomass**?

Yes.

- DEPM estimate is of total – not female only – spawning due to the inclusion of the estimated mean ratio of female to total spawning biomass

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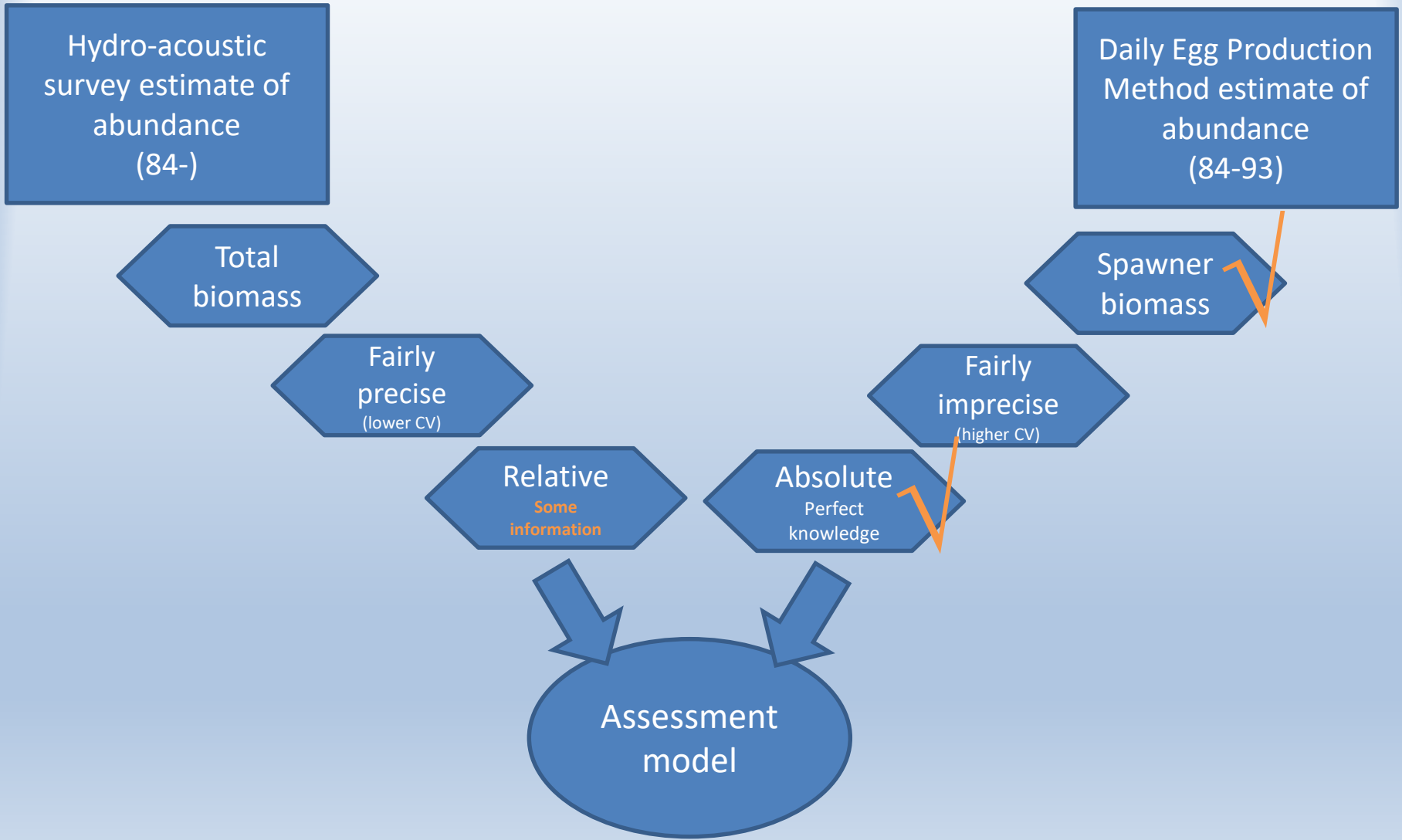
## Recent Developments:

- Informative prior distribution for relative bias of the hydro-acoustic survey estimate of abundance
- Don't *NEED* to assume DEPM-indices are absolute in order to scale anchovy biomass. Model *COULD* estimate bias for both hydro-acoustic and DEPM indices
- Do we continue to assume that DEPM indices provide **absolute** estimates of anchovy sex-aggregated spawner biomass?

Yes.

- Armstrong *et al.* (1988), Hampton *et al.* (1990), Shelton *et al.* (1993) and Hampton (1996) all assumed the DEPM estimates provide an absolute index of abundance

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**Thank you!**