

WAMSI Project 4.3.1b: West Coast demersal food web

Sarah Metcalf, Dan Gaughan, Lee Patterson

Aim: identify data gaps in the west coast demersal food web and identify key trophic components?

Data collection

- over 55 published references

Qualitative model

- 61 variables- commercially/recreationally important species, prey, predators and primary producers

- Important data gaps
 - population size of many fish species
 - population size prey species (e.g. amphipods, cumaceans, copepod, snails, polychaetes)
 - Diet information for dhufish, snapper, skippy (trevally)



Model simplification

- To identify key trophic components need to simplify model
- Large, complex models → high uncertainty
- Simplification and aggregation of species may be necessary to provide useful predictions of response to change

Simplify using logical criteria to aggregate (e.g. don't aggregate rock lobster with other invertebrates if it is of particular interest)

Management and policy

Increase understanding of the foodweb – basis for developing better understanding of how changes in species abundance may affect community structure.

Use this knowledge when developing advice for ecosystem management



Future plans

Add key exploited species (dhufish, skippy, snapper) from current and impending FRDC/WAMSI funded research

Identify key members of foodweb (variables common to many energy paths) – intermediary prey groups.

Ascertain possible directions for trophic modelling

