

Flatfishes

Flatfishes are deep bodied, laterally compressed fishes, easily recognizable by the presence of both eyes on one side in juvenile and post-metamorphic individuals.

They belong to Order Pleuronectiformes

Major families in Indian waters – Cynoglossidae, Soleidae, Bothidae, Paralichthyidae, Psettodidae, Citharidae.

Major species in commercial fishery - *Cynoglossus macrostomus*, *Psettodes erumei*, *C. arel*.

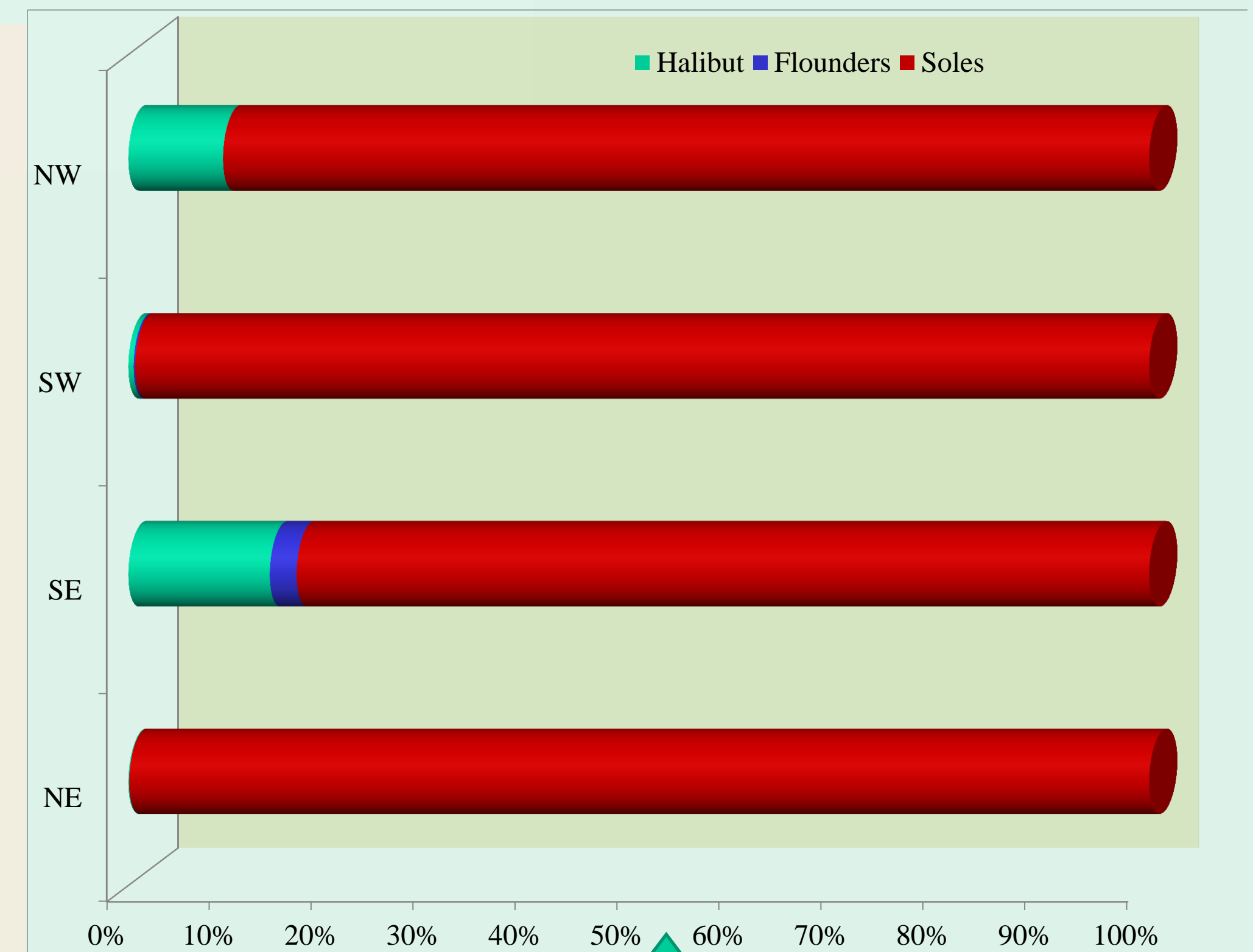
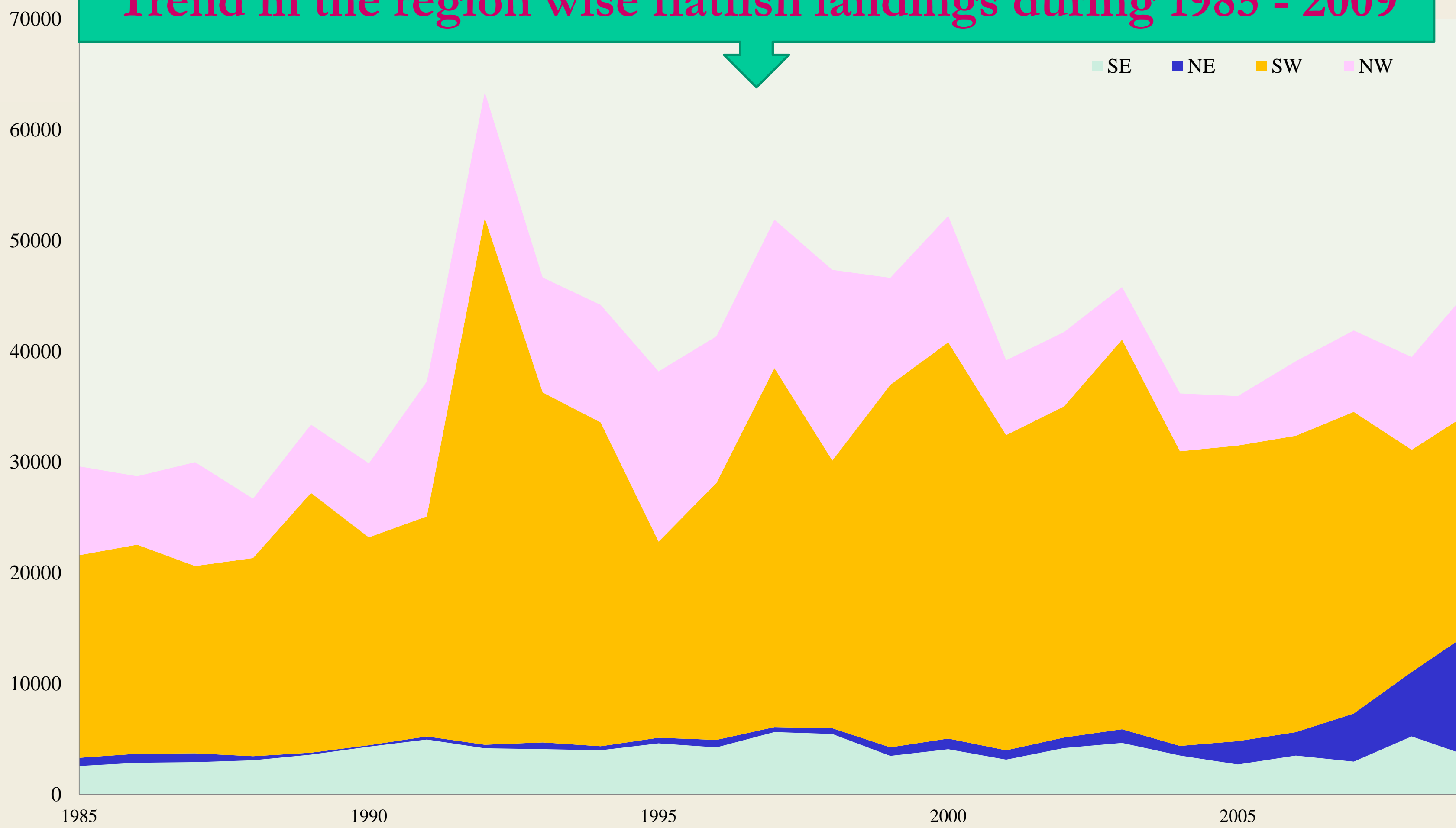
Major gear – Trawl (87%), mini trawl (8%); other gears (5%)—cast net, purse seine, bag net

Habitat – Benthic found on muddy, sandy bottom of shelf areas, some occur upto 400 m depth.

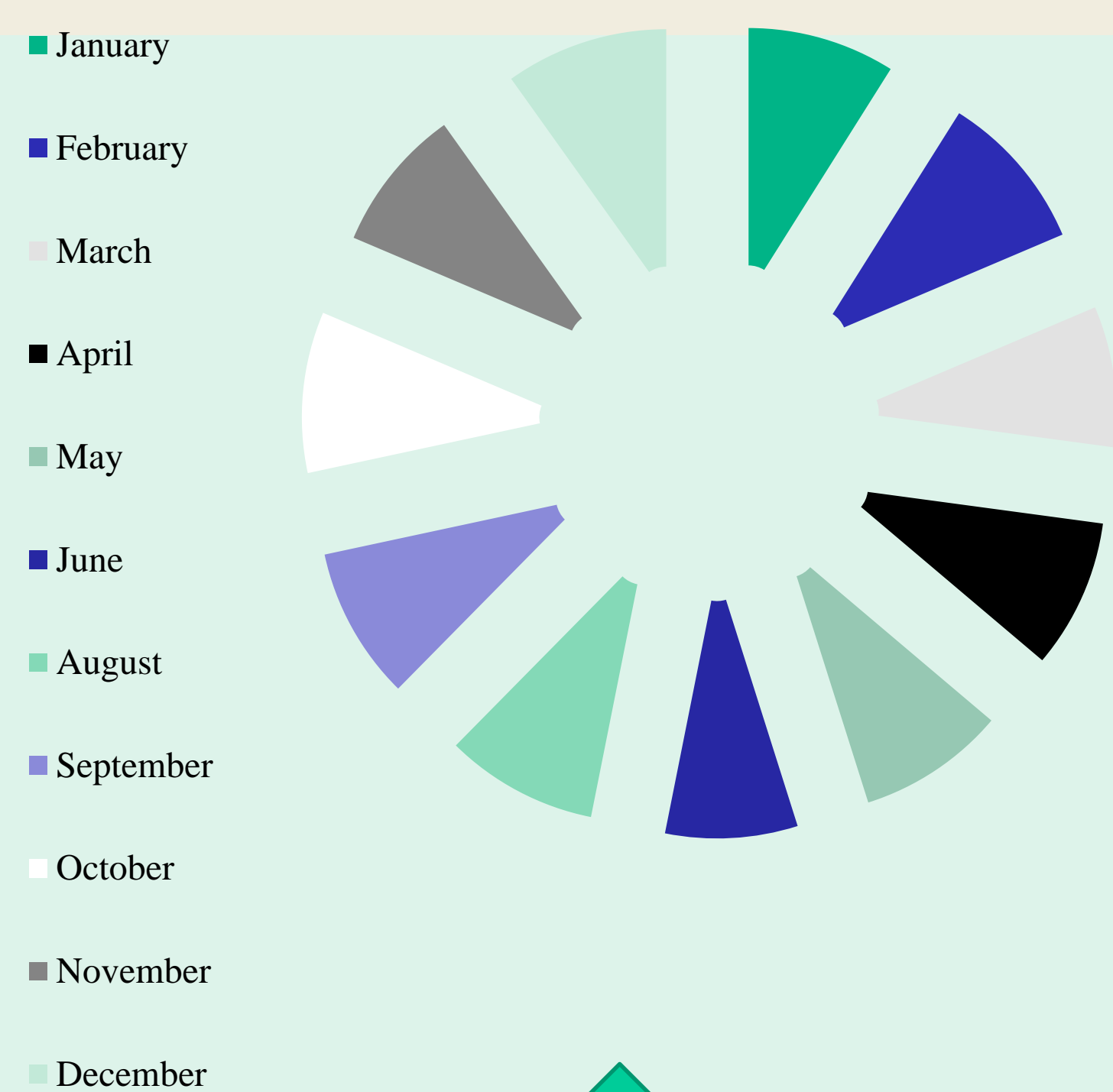
Cynoglossus macrostomus – Malabar sole



Trend in the region wise flatfish landings during 1985 - 2009



Regionwise – groupwise landings of flatfishes during 1995 - 2009



Monthwise contribution of *Cynoglossus macrostomus* to the trawl fishery at Kochi

Flatfish species occurring in the fishery in Kerala

Soles:

Cynoglossus macrostomus (99 %)
Cynoglossus arel
C. bilineatus
C. puncticeps
Synaptura commersoniana
Synaptura albomaculata

Flounders:

Pseudorhombus arsius

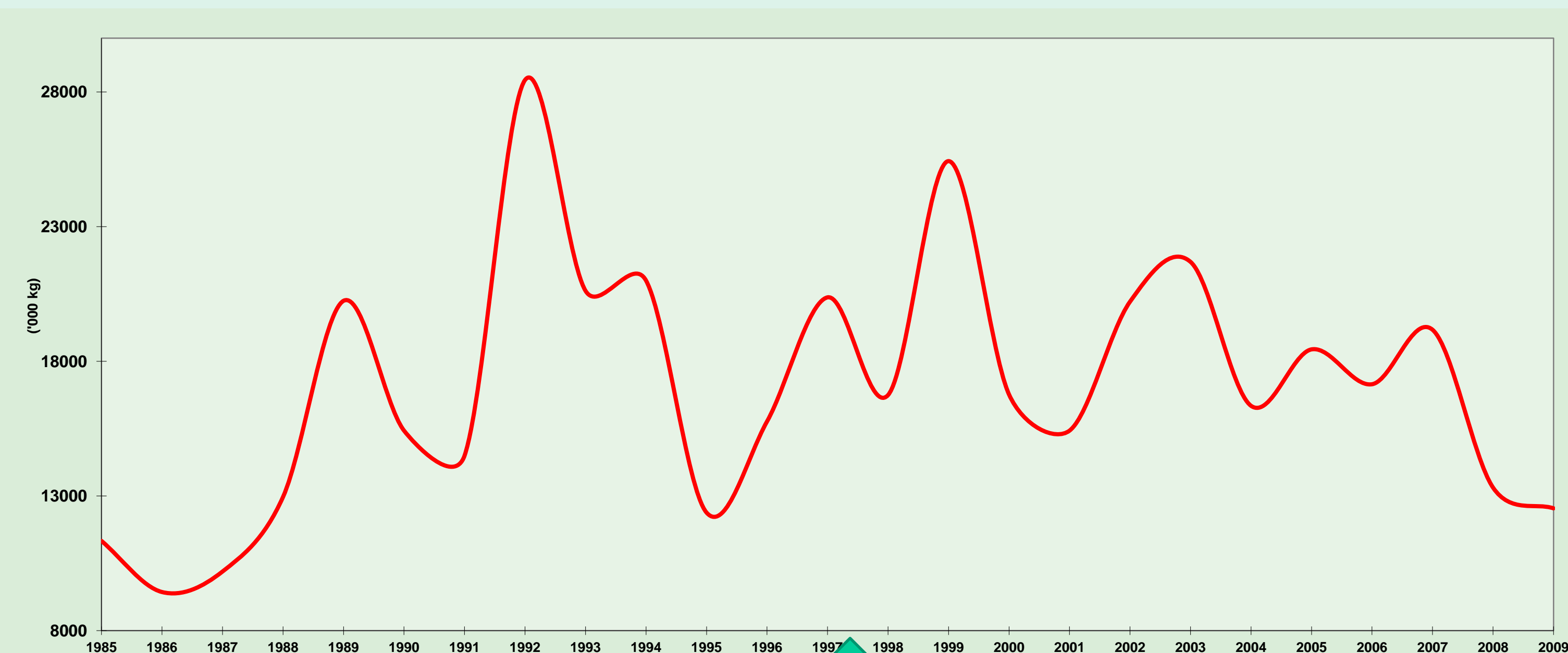
Halibut:

Psettodes erumei

Utilization: Mostly consumed fresh; also salted and sundried

Biology and population characteristics of *C. macrostomus*

Peak spawning period	Recruitment period:	Population parameters
Kochi : Aug – Sept	April - August (off Calicut)	Lc - 65 mm
Calicut : Dec– April.	August – September (off Kochi)	L _∞ - 180 mm
Mangalore: Oct – Dec	<u>Mean size in the fishery</u>	K/yr - 0.85
Trophic level: 3.28	Calicut – 94.7 mm	T _{max} - 3.8
Vulnerability: low	Kochi – 119 mm	Z - 7.67
Fishery: zero year class	<u>Food</u>	M - 0.85
	Polychaetes, amphipods, small bivalves	E - 0.45 (below optimum level)



Trend in the flatfish landings in Kerala during 1985 - 2009

