



**Northern  
Territory  
Government**

**DEPARTMENT OF REGIONAL DEVELOPMENT,  
PRIMARY INDUSTRY, FISHERIES AND RESOURCES**

# **The Northern Territory Coastal Line Fishery: Recent History and Future Challenges**



**Mark Grubert,  
Fisheries Group,  
DRDPIFR**

[www.nt.gov.au/d/Fisheries](http://www.nt.gov.au/d/Fisheries)

## Overview

- Coastal Line Fishery multi-sector, multi-species operates within 15 nm of the NT coastline
- Commercial
- Recreational
- Indigenous
- Fishing Tour Operators

## Commercial fishery

- Commercial operators primarily target black jewfish (*Protonibea diacanthus*) but a range of other reef species are taken
- Primary method is handlines; droplines are used occasionally and fish traps very rarely
- In some years, handlines are the only method used

## Commercial fishery

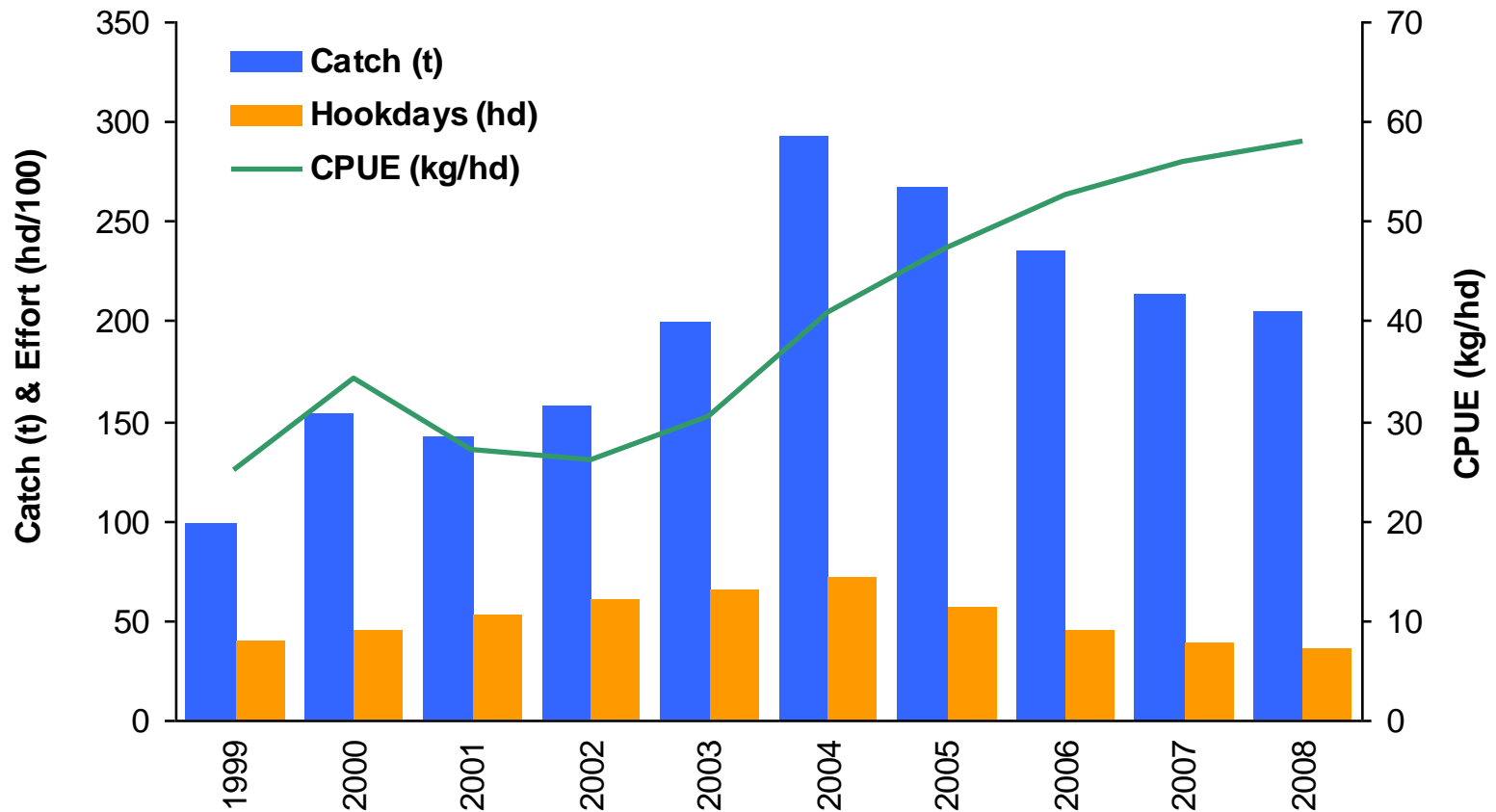
- Number of lines, hooks and traps are limited
- Effort estimates are based on the handline only component as <5 operators use droplines or traps in any given year
- Effort has been traditionally expressed in fishery status reports as hook days
  - =  $\Sigma$  no. lines x no. hooks x grid days

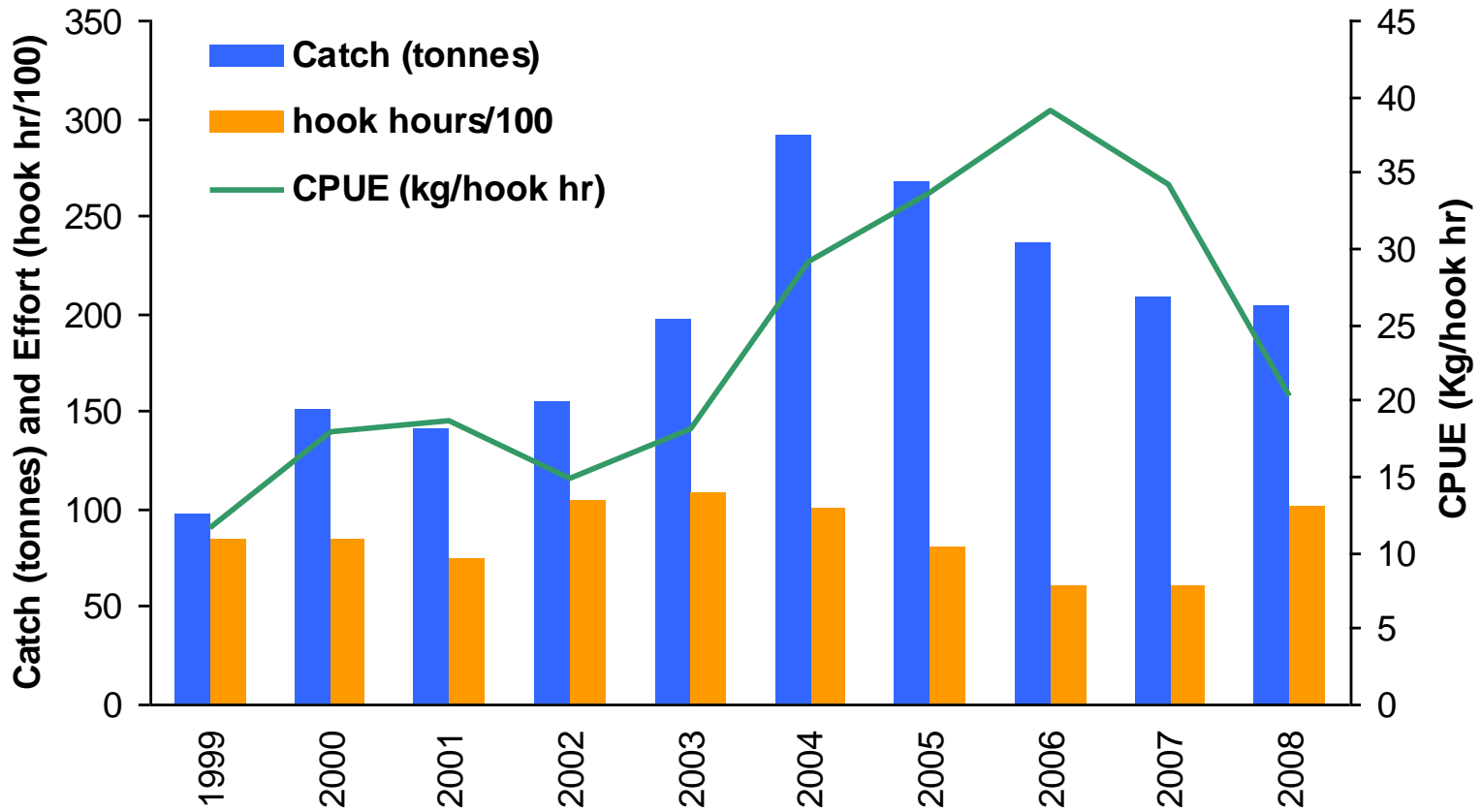
## Commercial fishery

- However, a hook can be set for 1 minute or 24 hours and still constitute a hookday
- Clearly not a good indicator of effort
- Confounds CPUE estimates
- In this fishery CPUE treated as a catch statistic only. It cannot be used to infer abundance of an aggregating species such as black jewfish

## Commercial fishery

- Now expressing effort in terms of hook hours  
=  $\Sigma$  no. lines x no. hooks x hours fished (per trip)
- Much more accurate indicator of effort
- More relevant CPUE estimates
- Comparisons of effort (and CPUE) expressed as hook days and hook hours over the last decade show very different trends





## Commercial fishery

### Monitoring and research requirements:

- Regular catch sampling to -
- Follow potential changes in the size frequency distribution of key species
- Collect otoliths for ageing and microchemistry studies
- Collect DNA for genetic studies of stock structure

## Commercial fishery

### Future management options:

- Regionalisation
- Effort redistribution (in conjunction with above)
- Reduction in latent effort
- Review of allowable gear
- Restricting effort through seasonal/area closures

## Recreational fishery

- Primary target species include black jewfish and golden snapper
- Current recreational harvest significant but unknown
- No recreational fishing licenses or boat registration in the NT
- One indication of the increase in recreational coastal line fishing comes from boat trailer registrations (MVR), particularly those  $\geq 5$  m

## Recreational fishery

- 2000 figure was 1912 trailers ( $\geq 5$  m)
- 2008 figure was 4730 trailers ( $\geq 5$  m)
- Almost 150% increase (but not all used for carrying recreational fishing vessels)
- Population growth over this period was  $\sim 12\%$
- Harvest by commercial coastal line fishers increased by 35% over the same period

## Recreational fishery

- NT recreational fishing currently underway, results expected late 2010 or early 2011
- Will quantify resident and visitor catch, harvest, effort and expenditure
- Compare data from the NRIFS in 2000-2001 with that of the commercial harvest at the time
- Using estimate of 12 kg per fish for black jewfish, the  $Rec_{catch} - Rec_{harvest}$  in 00/01 was 133 tonnes

## Recreational fishery

- This equates to 22-32% more than the commercial coastal line catch in those years
- At that point in time, the recreational release tonnage for black jewfish equaled (and may have exceeded) the commercial harvest tonnage
- Unfortunately, we now know that all black jewfish caught from >15 m suffer fatal injuries as a result of barotrauma
- Hence, many of the released fish will have died

## Recreational fishery

### Monitoring and research requirements:

- Similar to that for the commercial fishery but with the added need for spatial and temporal recreational catch and effort data
- Reliant on more funding to expand all forms of monitoring of the fishery

## Recreational fishery

### Future management options:

- Reduction in the recreational possession limit for black jewfish
- Increased public awareness regarding barotrauma and the need to protect spawning aggregations
- Restricting effort through seasonal/area closures