

FISH RECRUITMENT



FIVE FAST FACTS

1. Fish recruitment is an indicator of Environmental health in the Gladstone Harbour Report Card.
2. Fish recruitment is one of the key dynamic functions that affects a fish population.
3. The fish recruitment score is based on the total catch of juveniles of two bream species and is defined as the annual production of juvenile fish entering the mature fish population.
4. Pikey bream and yellow-finned bream are the two species used to determine the Gladstone Harbour Report Card score.
5. Data was collected from **26 SITES** across 12 harbour zones between December 2020 and February 2021.

THE GRADES

| 2020 | 2021 | Grading system |
|--|---|-------------------------------------|
|  |  | A Very good (0.85 - 1.00) |
| | | B Good (0.65 - 0.84) |
| | | C Satisfactory (0.50 - 0.64) |
| | | D Poor (0.25 - 0.49) |
| | | E Very poor (0.00 - 0.24) |

HOW IS FISH RECRUITMENT MEASURED?

Fish recruitment surveys in Gladstone Harbour were conducted using cast nets.

All zones except the Outer Harbour were surveyed between December and April. Where possible within each zone, a minimum of two sites were selected to cover the upper tidal limit and another within the daily tidal influence.

The abundance of **TWO BREAM SPECIES** was used to determine the recruitment score in the report card. However the cast netting also collected other species of fish and prawns.

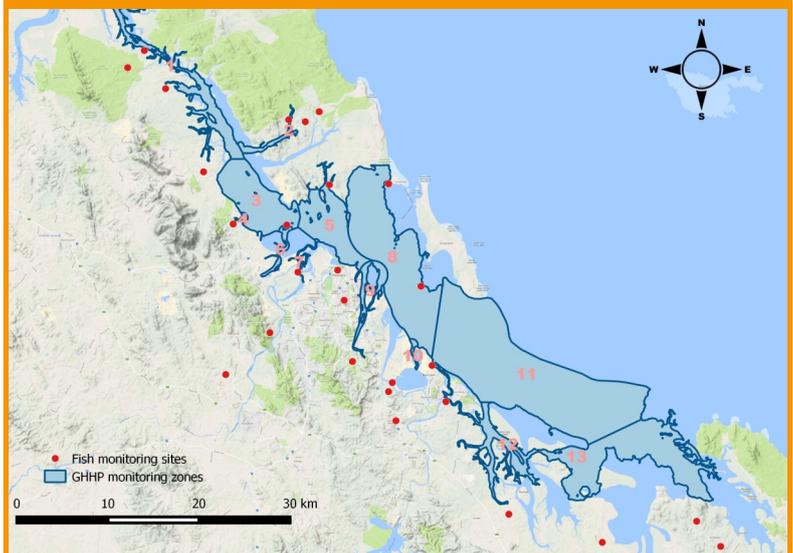
To determine fish recruitment scores, a statistical model was developed that relates previous results (2015 – 2020) to the annual catch rate per trip and per site and incorporates seasonal and other relevant environmental variables. The recruitment indicator scores are determined from this model, which is updated on an annual basis.

WHAT DO THE GRADES MEAN?

The fish recruitment grade in 2021 was 0.62 (C), indicating a **SATISFACTORY** result. A similar score to that recorded in 2020 (0.64).

This satisfactory result indicates that the 2020 catch rate was close to the long-term average (2011 – 2020). The total number of bream caught in the 2021 reporting year was 626, 329 yellow-finned bream and 297 pikey bream.

FISH RECRUITMENT SITES IN THE GLADSTONE HARBOUR



Fish recruitment is monitored in 26 sites across 12 harbour zones.