Report on Ecosystem Sustainability of Catches

Scientific Council responded:

Since 2005 the Grand Bank (3LNO) and the Flemish Cap (3M) Ecosystem Production Units (EPUs) have shown aggregate catch levels by functional guild which are consistent with the productivity of the EPUs and the avoidance of a high risk of ecosystem overfishing.

Scoped catch levels for 2025-2026 remain below the 2TCI Ecosystem Reference Point for the Grand Bank. However, piscivore guild catches in the Flemish Cap (3M) are scoped to exceed the 2TCI boundary in 2026, indicating a high risk of ecosystem overfishing.

Approach:

Total Catch Index (TCI): This index is an indicator of the level of aggregated catch for a given functional guild (aggregate of species) that is consistent with the current productivity of the ecosystem (ecosystem sustainability). The comparison of aggregate catches with TCI is informative of the risk of ecosystem overfishing (EO).

NAFO has adopted 2TCI as an ecosystem reference point to inform on ecosystem overfishing.

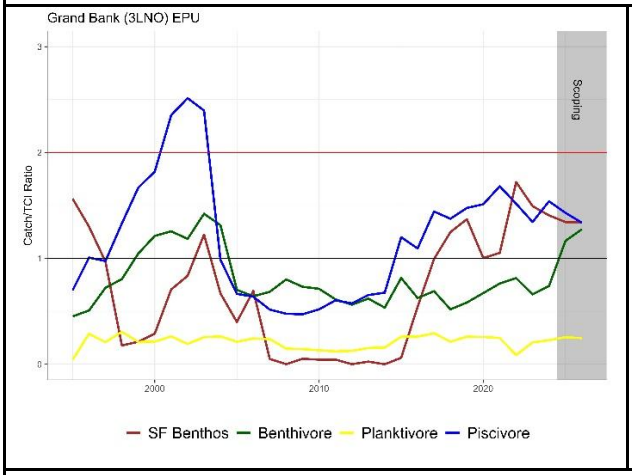
Analysis includes reported catches up to 2024, and scoping of likely catches for 2025-2026. To be consistent with the new PA, the following adjustments were made to the established scoping protocol for stocks where new advice is provided in 2025 and for use going forward:

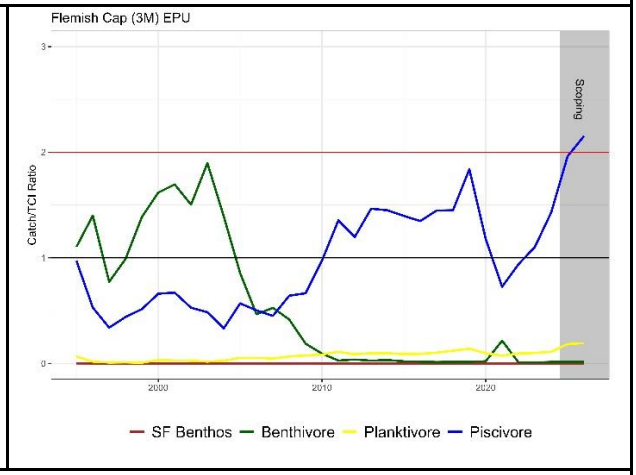
Generally,

- for stocks in the Heathy zone, catch is assumed at F_{target},

- for stocks in the Cautious zone, catch is assumed at $F_{upper\ leaf}$,

- for stocks where SC recommended catches differ from these definitions, it is assumed the recommendation is followed.





Summary:

During the 1960-1995 period, Ecosystem Production Units (EPUs) in the Newfoundland and Labrador, and Flemish Cap bioregions experienced sustained catch levels consistent with ecosystem overfishing.

Since 2005 aggregated catches for all functional guilds have been below the 2TCI Ecosystem Reference Point in the Grand Bank (3LNO) and the Flemish Cap (3M) EPUs.

The catch levels for 2024 indicate an intermediate risk of ecosystem overfishing on both the Flemish Cap (3M) and the Grand Bank (3LNO) EPUs.

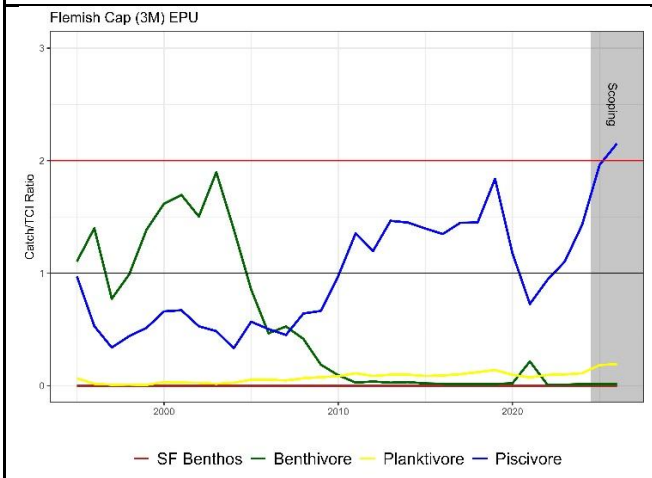
The scoping exercise indicates that catch levels in 2025-2026 would be below 2TCI, and consistent with an intermediate risk of ecosystem overfishing, for the Grand Bank (3LNO) EPU.

However, the piscivore guild catches in the Flemish Cap (3M) are scoped to exceed the 2TCI Ecosystem Reference Point in 2026, indicating a high risk of ecosystem overfishing in this EPU.

Risk of ecosystem overfishing:

Catch > 2TCI: high risk of ecosystem overfishing
Catch between 1 and 2 TCI: intermediate risk of ecosystem overfishing
Catch < TCI: low risk of ecosystem overfishing

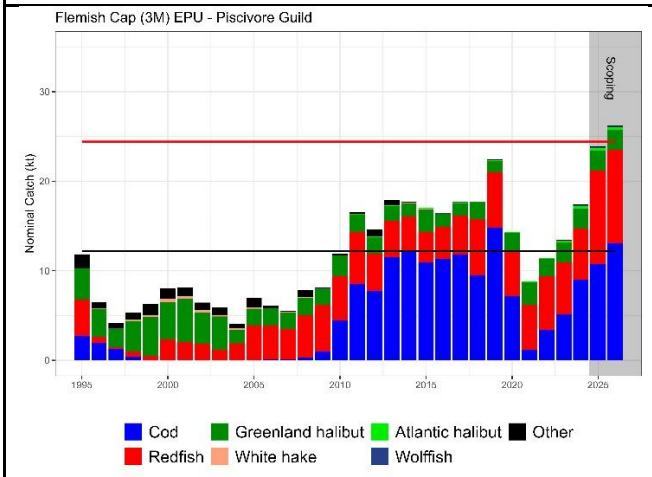
Flemish Cap (3M) Ecosystem Production Unit (EPU)



Overview

2024 catches for all functional guilds were below 2TCI, indicating that fishing levels have been consistent with preventing a high risk of ecosystem overfishing.

Piscivore guild catches for 2025-2026 are scoped to exceed the 2TCI Ecosystem Reference Point in 2026, indicating a high risk of ecosystem overfishing.



Piscivores Guild: intermediate risk of EO

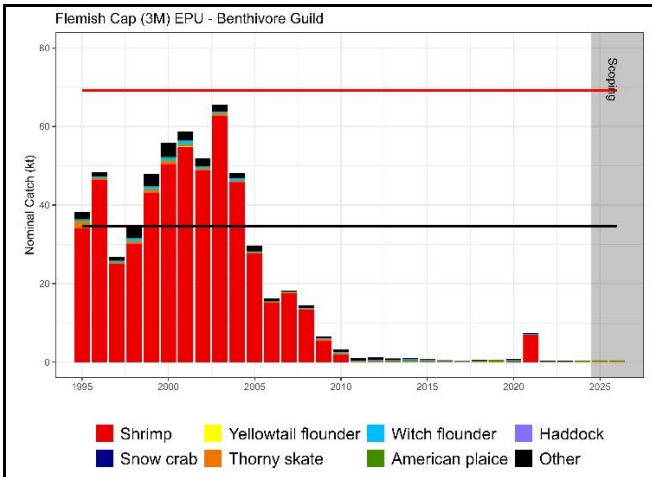
Current 2TCI=24kt

Catches are dominated by redfish, Greenland halibut and Atlantic cod.

Redfish (3M), Greenland halibut (2+3KLMNO) and Atlantic cod (3M) stocks are managed by NAFO.

The scoped catch of Div. 3M cod for 2026 assumes the F that had a 50% probability of maintaining this stock in the Healthy Zone. This F is below F_{target}.

Catches are scoped to be near 2TCI in 2025 and exceed the 2TCI Ecosystem Reference Point in 2026.



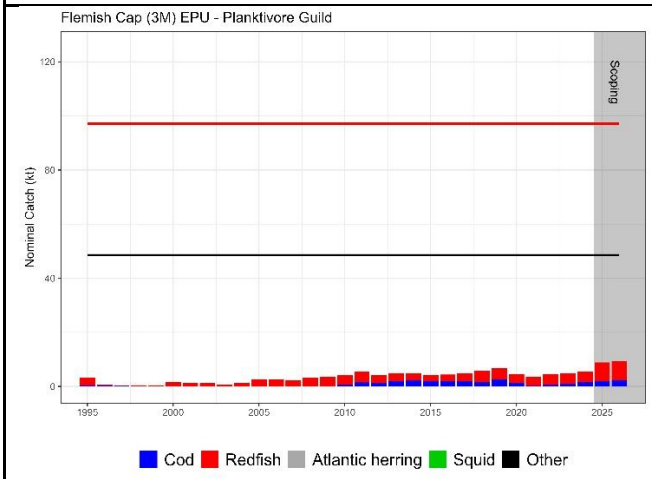
Benthivores Guild: low risk of EO

Current 2TCI=69kt

Catches are dominated by shrimp.

Shrimp (3M) stock (moratorium) is managed by NAFO.

Catches for 2025-2026 are scoped to be below TCI.



Planktivore Guild: low risk of EO

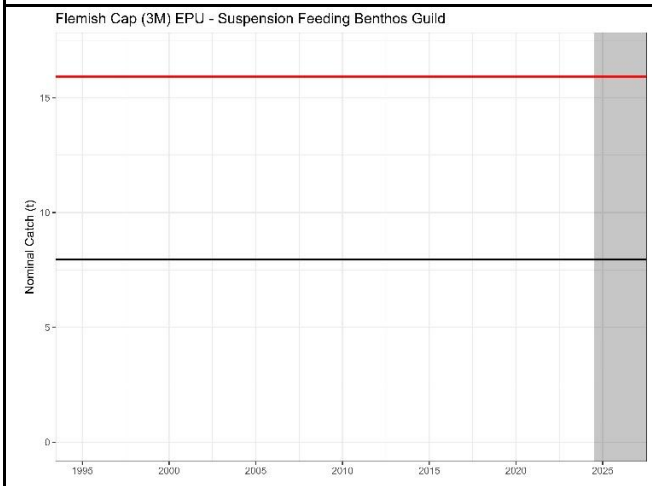
Current 2TCI=97kt

There are no fisheries directed to planktivores in this EPU.

Catches are dominated by younger ages of Atlantic cod and redfish.

A fraction of Atlantic cod and redfish catches is assigned to this functional guild to account for the planktivore production of these stocks during the early part of their life histories.

Catches for 2025-2026 are scoped to be below TCI.



Suspension Feeding Benthos Guild: low risk of EO

Current 2TCI=159kt

There are no fisheries directed to Suspension Feeding Benthos in this EPU.