

#### **West Greenland Commission**

WGC(20)10

Presentation of the ICES Advice on Atlantic Salmon to the West Greenland Commission



### **Terms of Reference**



#### 4. With respect to Atlantic salmon in the West Greenland Commission area:

- 4.1 describe the key events of the 2019 fisheries;
- 4.2 describe the status of the stocks;



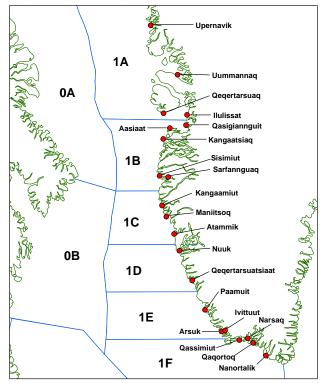
- ICES advises that when the Framework of Indicators (FWI) was applied in early 2020, a full reassessment was not required and the 2018 ICES advice remains valid
- no mixed-stock fishery options at West Greenland for the fishing year 2020
- 2020 marks the final year of NASCO's three-year multi-annual regulatory measure for fishing Atlantic salmon at West Greenland

## 4.1 Key Events 2019 Fishery

Figure 1: sal.wgc.all

ICES CIEM

- 2019 quota was 19.5 t, reduced from 30 t due to overharvest in 2018
- No sales to factories permitted
- All fishers required to have a license and mandatory reporting requirements
- Fishing season: 15 August to 31 October



## 4.1 Key Events 2019 Fishery: Catch



• fishery closed on 25 September as 19.5 t of landings had been registered

1988

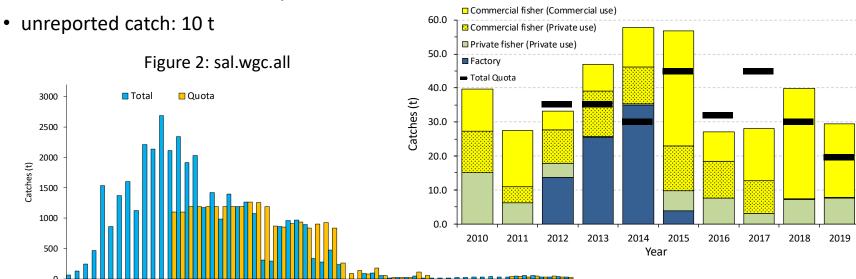
catch later revised to 29.8 t, resulting in an overharvest of approximately 10.3 t

• 74% commercial use 26% private use

1960

1967

1974



2002

2009

2016

## 4.1 Catch: Continent of Origin

ICES CIEM

- International sampling programme continued in 2019
  - 1119 samples collected
  - 71.5% North American (~6800 salmon)
  - 28.5% European (~2600 salmon)

Figure 4: sal.wgc.all

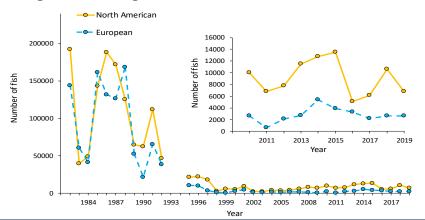
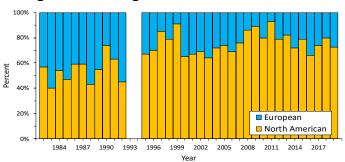


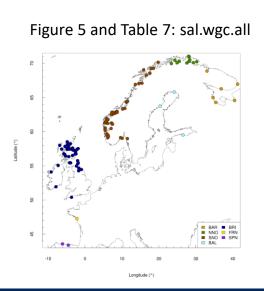
Figure 3: sal.wgc.all

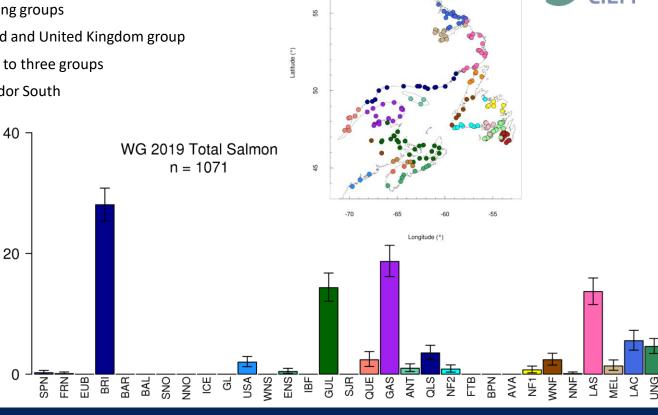




# 4.1 Catch: Region of Origin

- Genetic Baseline: 31 reporting groups
- European origin: 99% Ireland and United Kingdom group
- North American origin: 65% to three groups
  - Gulf, Gaspe and Labrador South

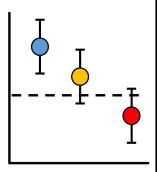




### 4.2 Status of Stocks: Risk Assessment Framework

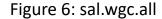


- Management advice for West Greenland fishery based on <u>non-maturing 1SW</u> salmon (return as 2SW/MSW) from North America (NAC) and Southern-Northeast Atlantic (S-NEAC)
  - Pre-Fishery Abundance (PFA) relative to Spawner Escapement Reserve (SER)
    - SERs CLs adjusted for natural mortality (3% per month at sea)
  - Spawners (2 SW NAC and MSW S-NEAC) relative to Conservation Limits (CLs)
- Full Reproductive Capacity:
  - lower bound of the 90% confidence interval of the estimate above reference point
  - equivalent to a probability of at least 95% of meeting reference point
- At Risk of Suffering Reduced Reproductive Capacity:
  - lower bound of the confidence interval is below reference point, but the midpoint is above
- Suffering Reduced Reproductive Capacity:
  - midpoint is below reference point



# 4.2 Status of Stocks: Pre-Fishery Abundance (PFA)





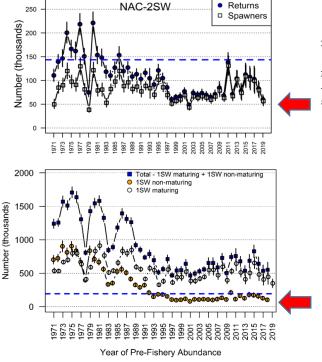
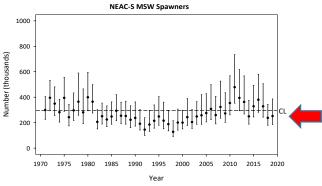
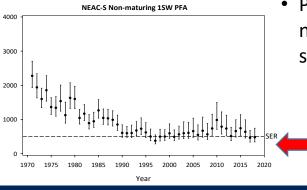


Figure 7: sal.wgc.all





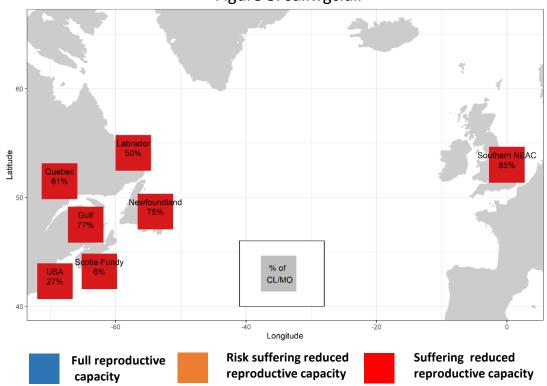
- PFA estimates of non-maturing 1SW salmon suggest continued low abundance
  - North America: suffering reduced reproductive capacity
  - Southern-NEAC: suffering reduced reproductive capacity

## 4.2 Status of Stocks: Spawners



Figure 8: sal.wgc.all

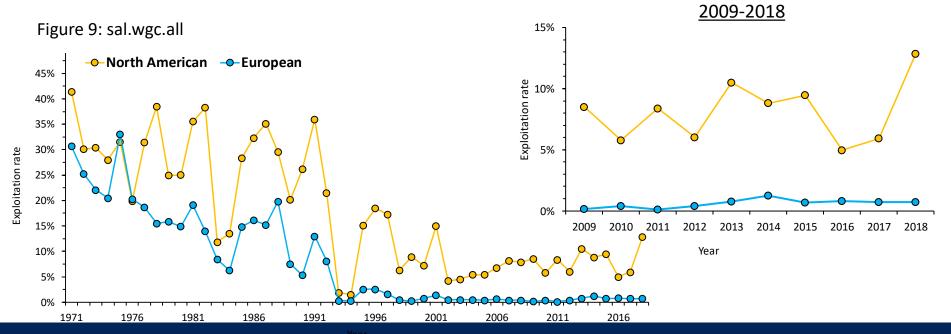
- 2019 Spawners
- Median estimate < CLs</li>
  - 6 of 6 North American 2SW stocks
  - Southern-NEAC MSW stock



## **4.2 Status of Stocks: Exploitation Rate**



- Exploitation rate = Greenland Catch ÷ Pre-Fishery Abundance (PFA)
  - North America: 12.9%
    Southern NEAC: 0.7%



## 4.2 Status of Stocks: Summary

- Despite major changes in fisheries management in the past few decades and increasingly more restrictive fisheries measures, salmon returns have remained near historical lows
- It is likely, therefore, that other factors besides fisheries are constraining production.

