

North–East Atlantic Mackerel

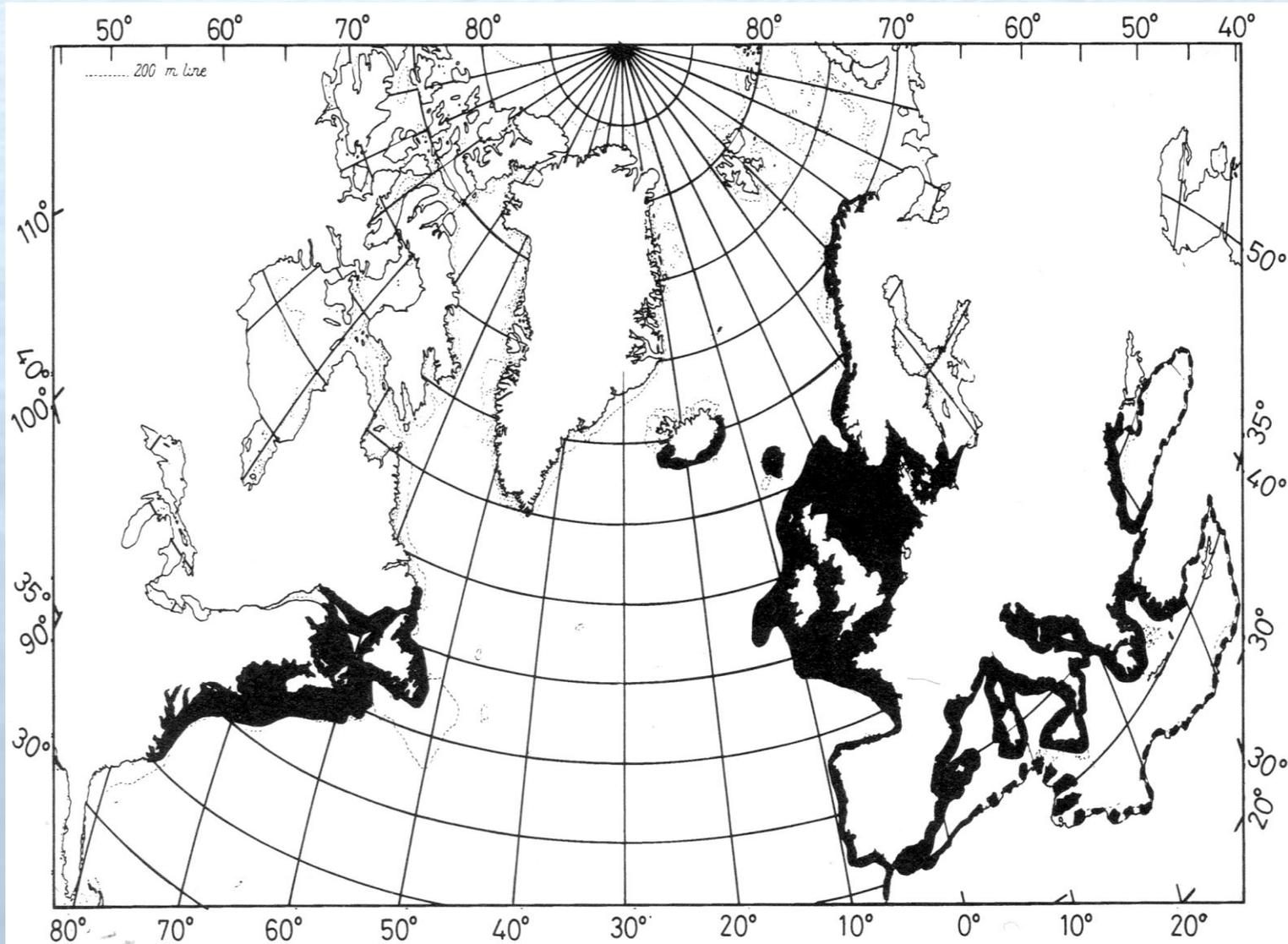
A satellite-style map of the North-East Atlantic Ocean, showing the British Isles, Iceland, and the European continent. The text is overlaid in yellow on the blue water.

A Review of Stock Status & Prognosis

Stephen J Lockwood

Coastal Fisheries Conservation
&
Management

Global Distribution of Mackerel (*Scomber scombrus*) from Historic Records



First
North Sea
Assessment

Norwegian
Tagging
in Northern
North Sea

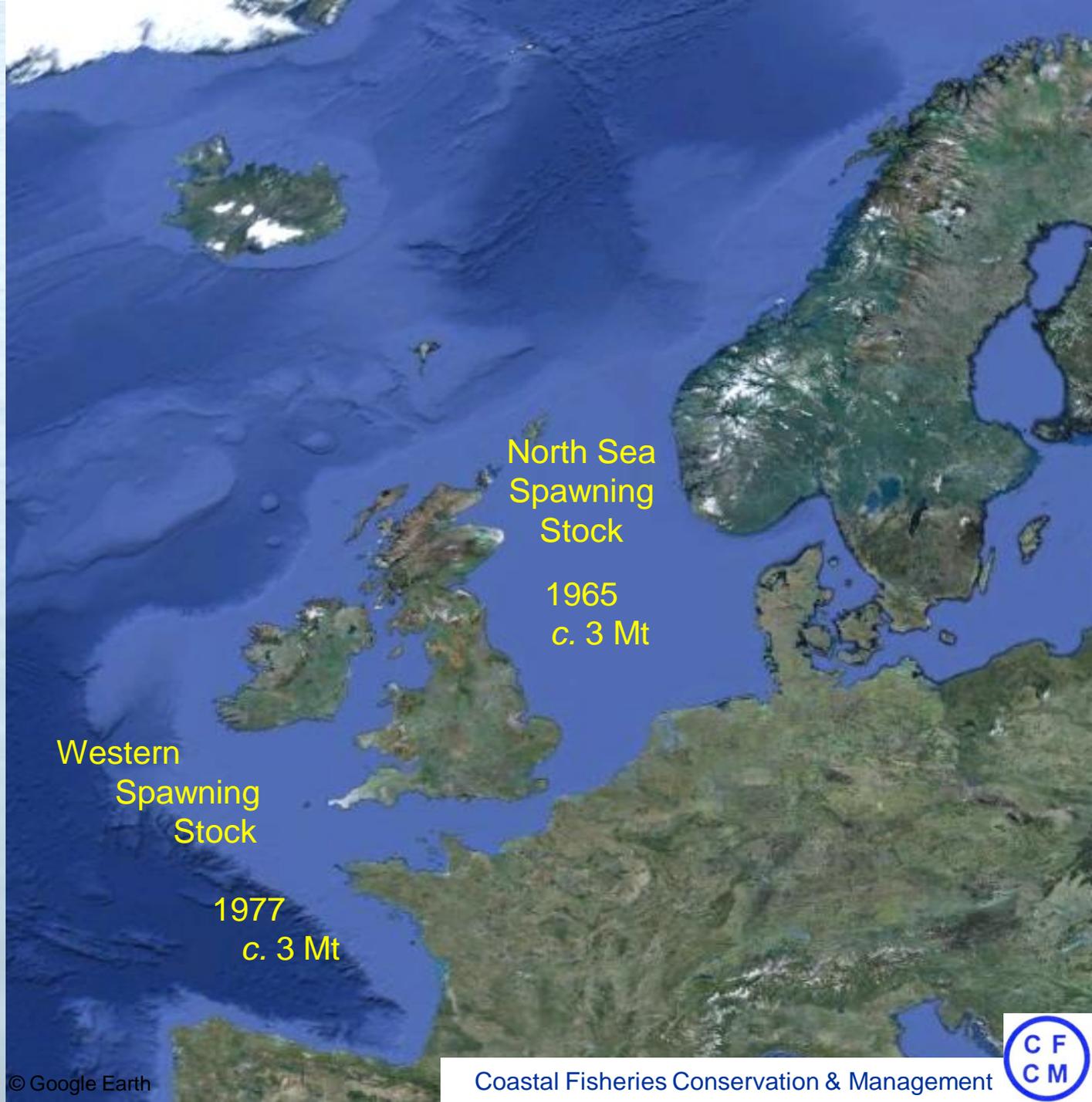


North Sea
Spawning
Stock

1965
c. 3 Mt

First Western Stock Assessment

English
Plankton
Survey Biscay
to
Porcupine
Bank



North-East Atlantic Mackerel

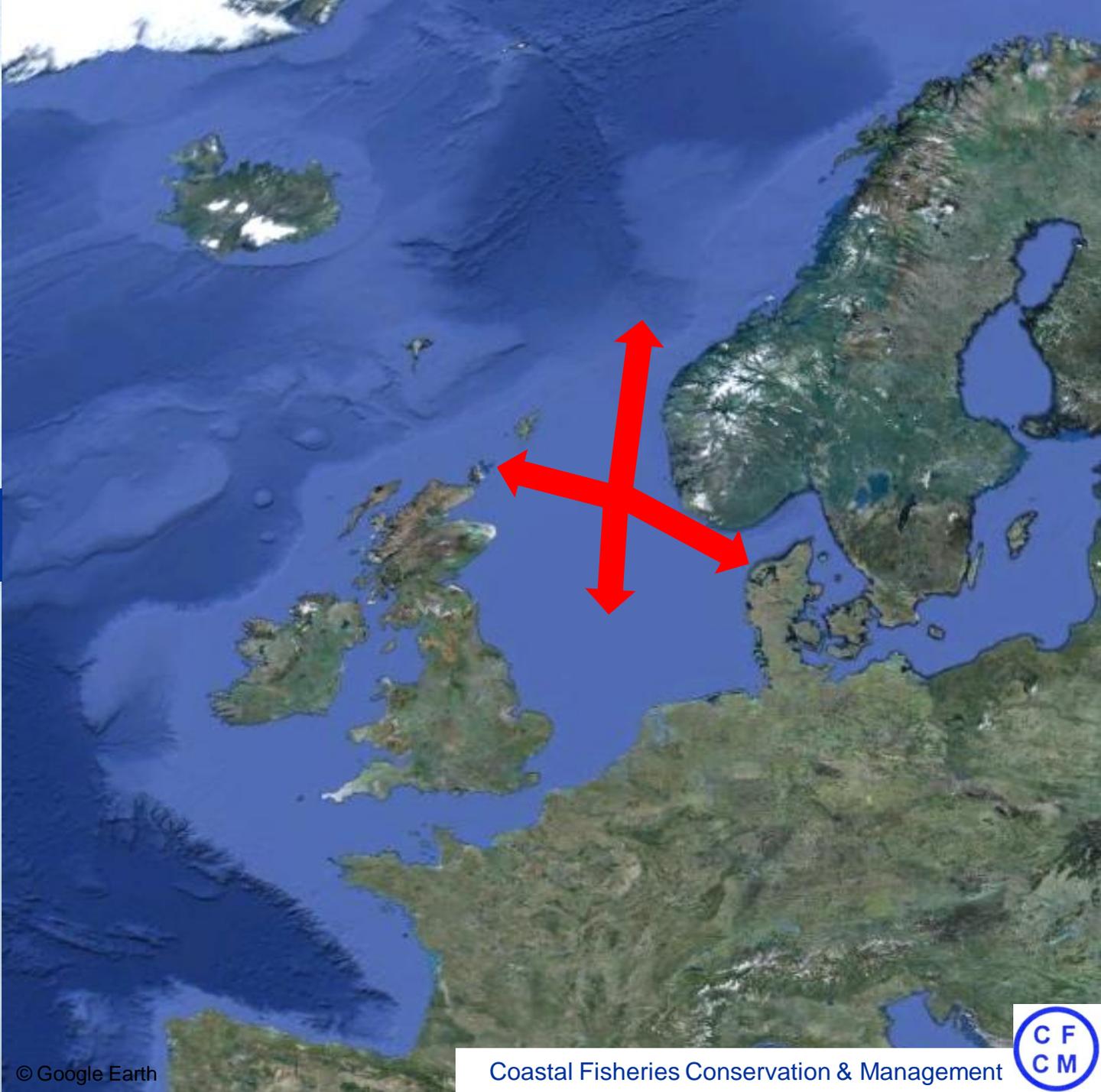
Spawning Grounds



**North-East Atlantic
Mackerel**

**North Sea
Spawning
component
Spring–Summer
Migration**

**North Sea spawning
component** 

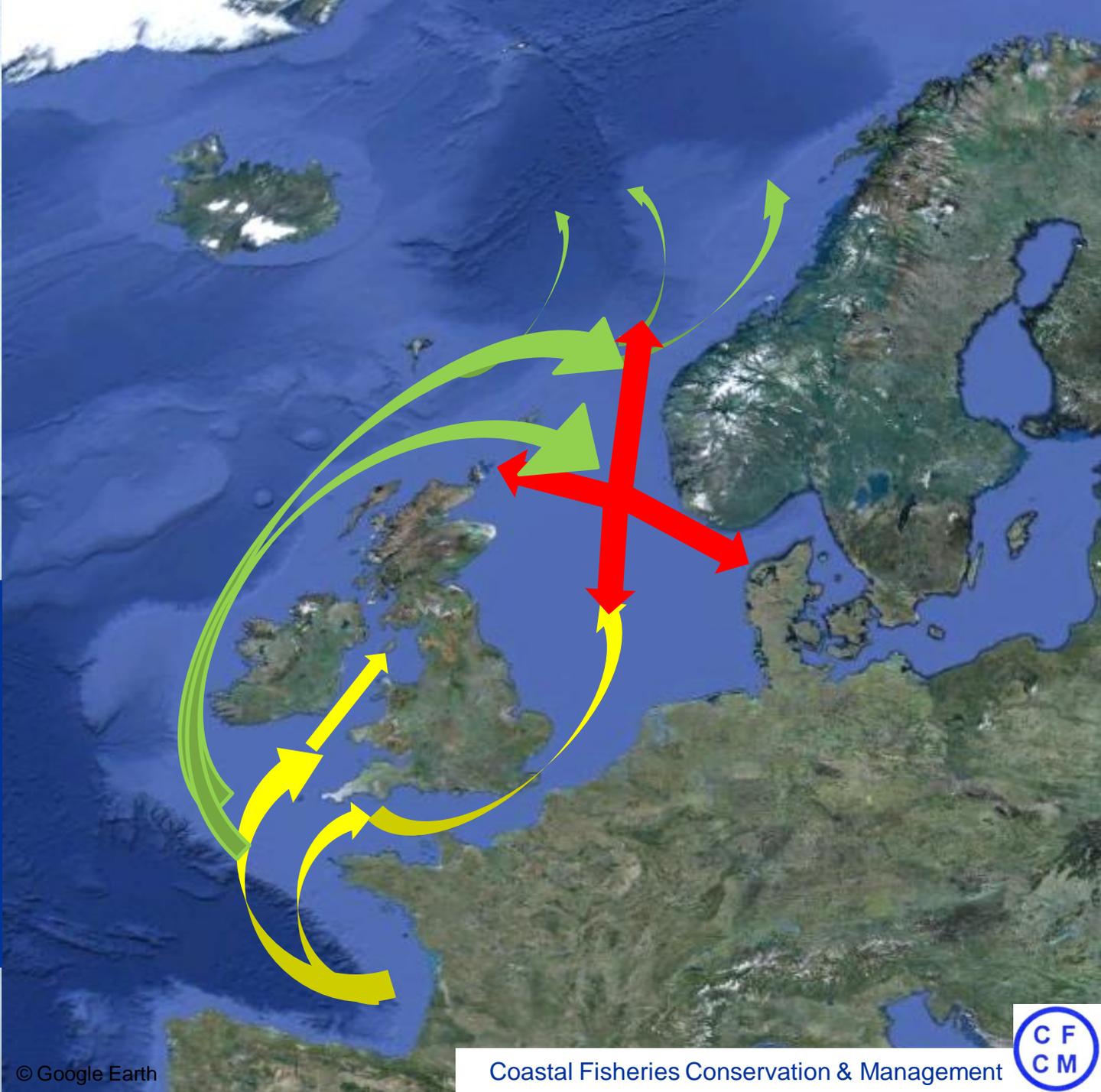


North-East Atlantic Mackerel

Western & Southern Spawning components

Spring–Summer Migration Pre~2007

- North Sea spawning component 
- Southern spawning component 
- Western spawning component 



**North-East Atlantic
Mackerel**

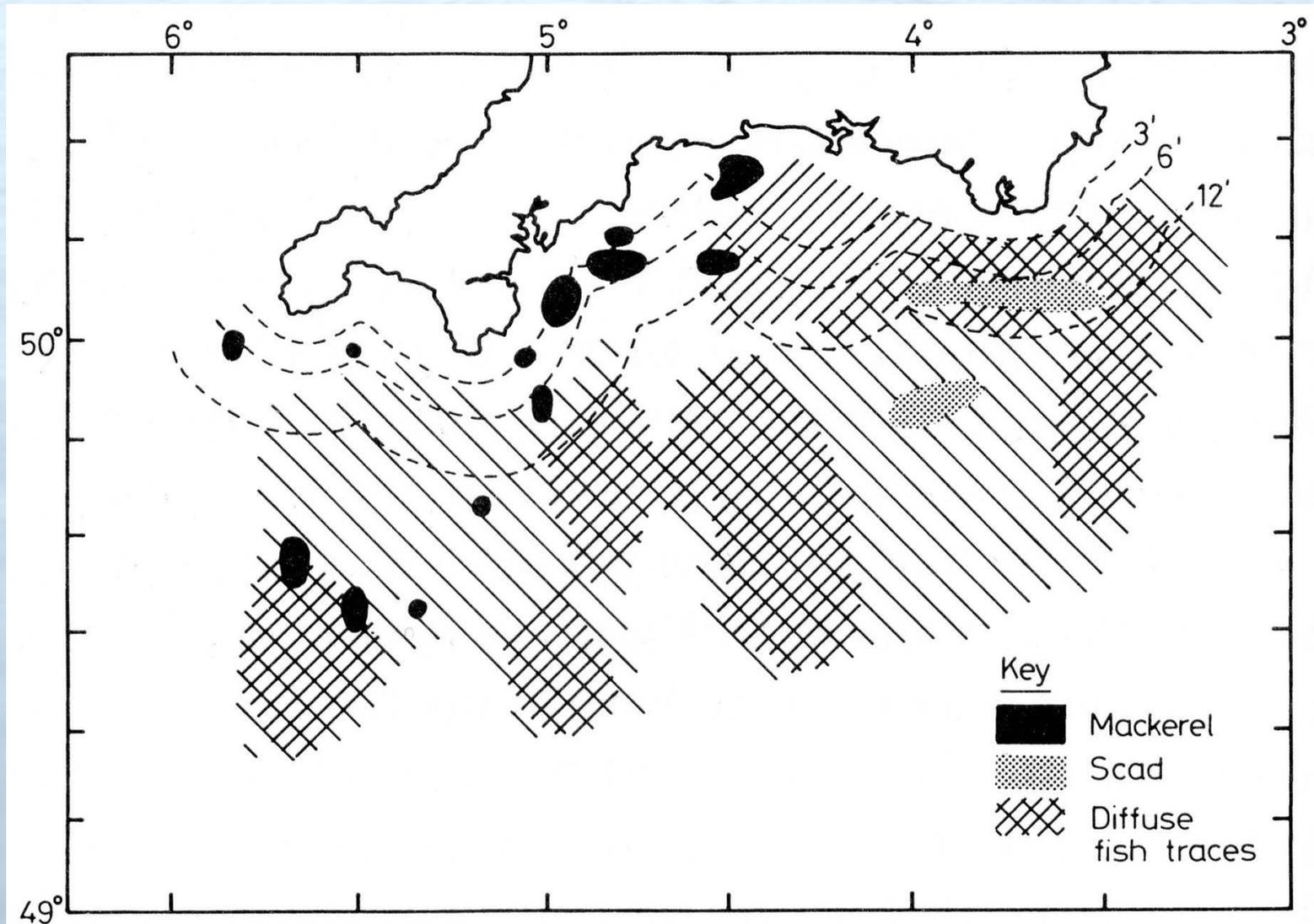
**Western spawning
component**

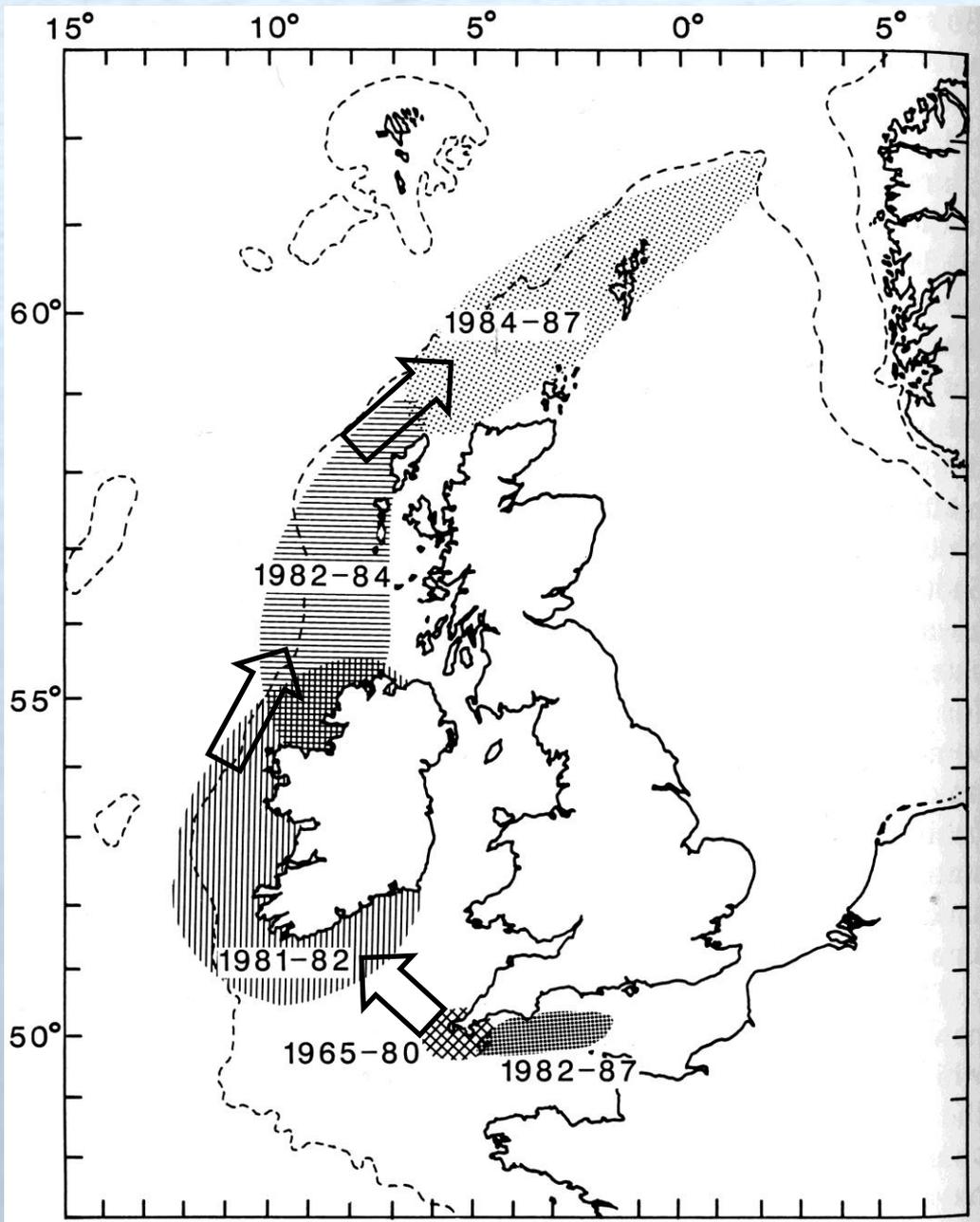
**Spring Migration
Post~2006**

**Western spawning
component** 



Typical Winter Mackerel Shoal Distribution in the Western English Channel in the 1970s



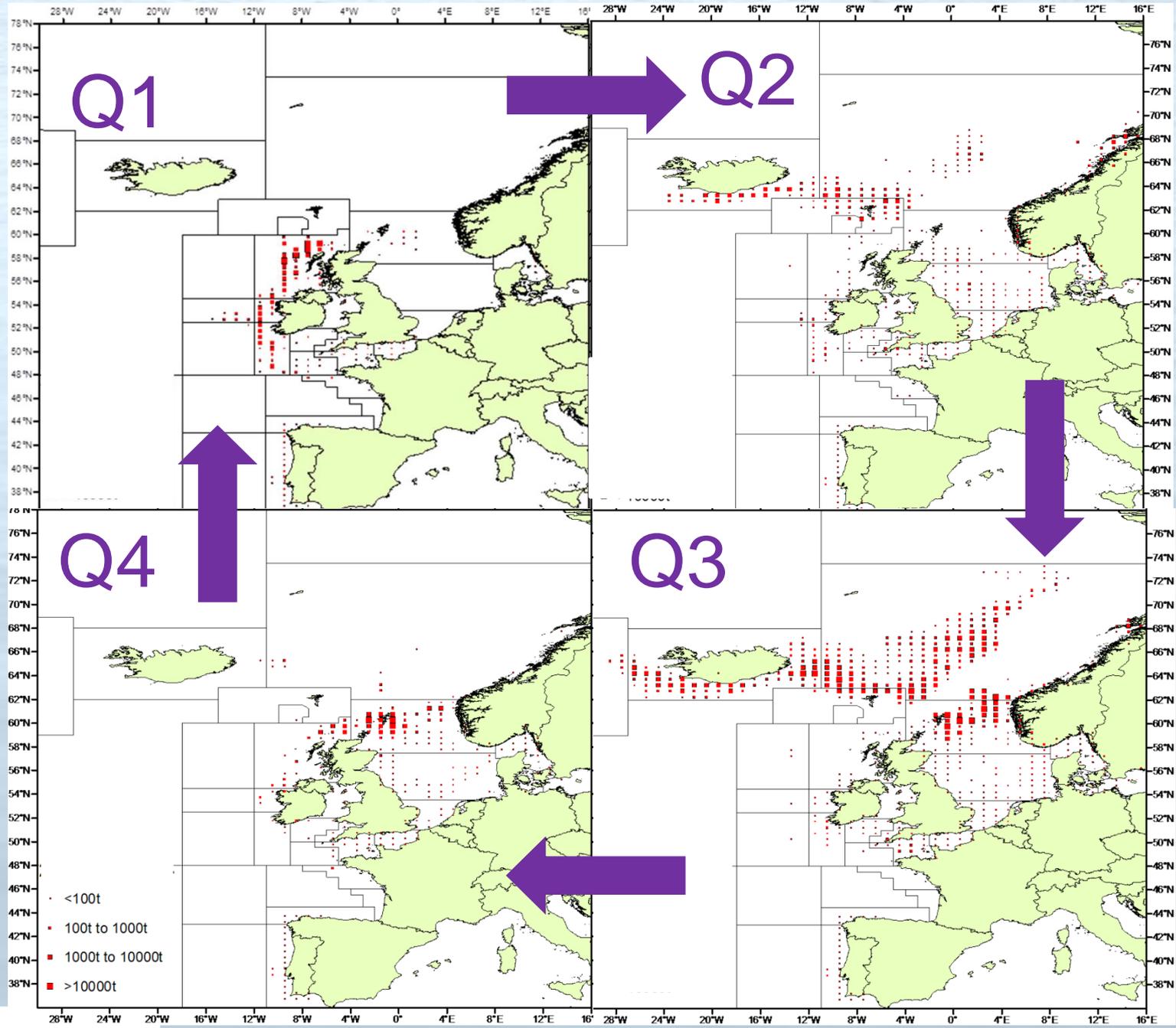


Progressive Northward Shift in Winter Mackerel Shoal Distribution through the 1980s

Current winter distribution is similar to that first described in 1950s

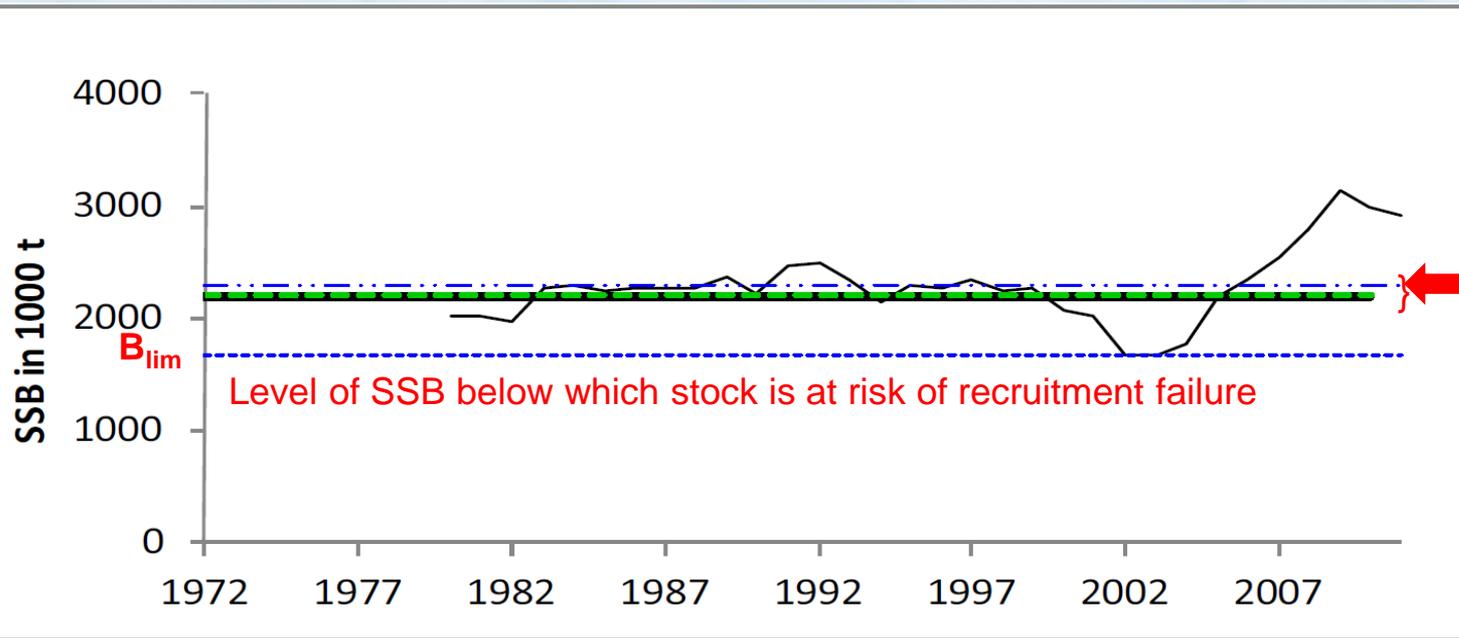
NE Atlantic Mackerel

Quarterly Fishing Distribution 2011



North-East Atlantic Mackerel Stock

Spawning Stock Biomass

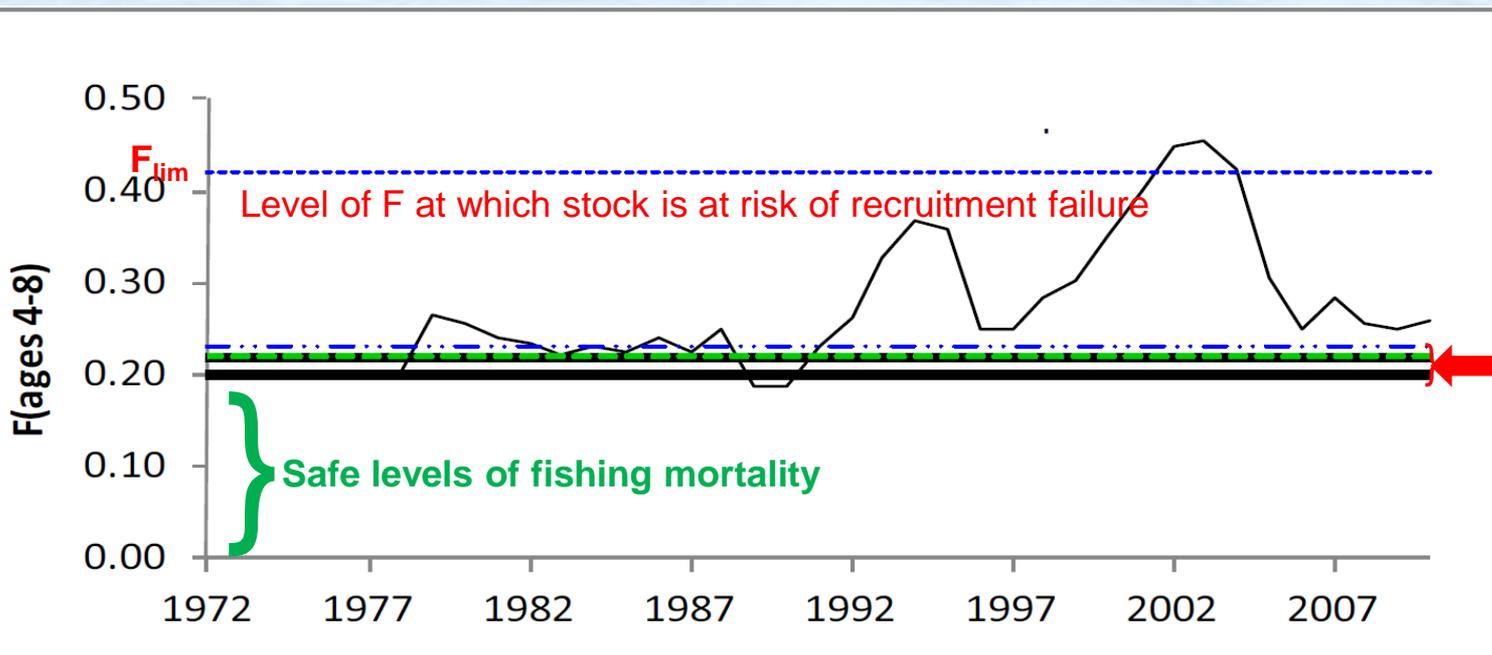


The level of spawning stock biomass below which remedial action is required by the coastal states' management plan

ACOM (Mackerel) 2012

North-East Atlantic Mackerel Stock

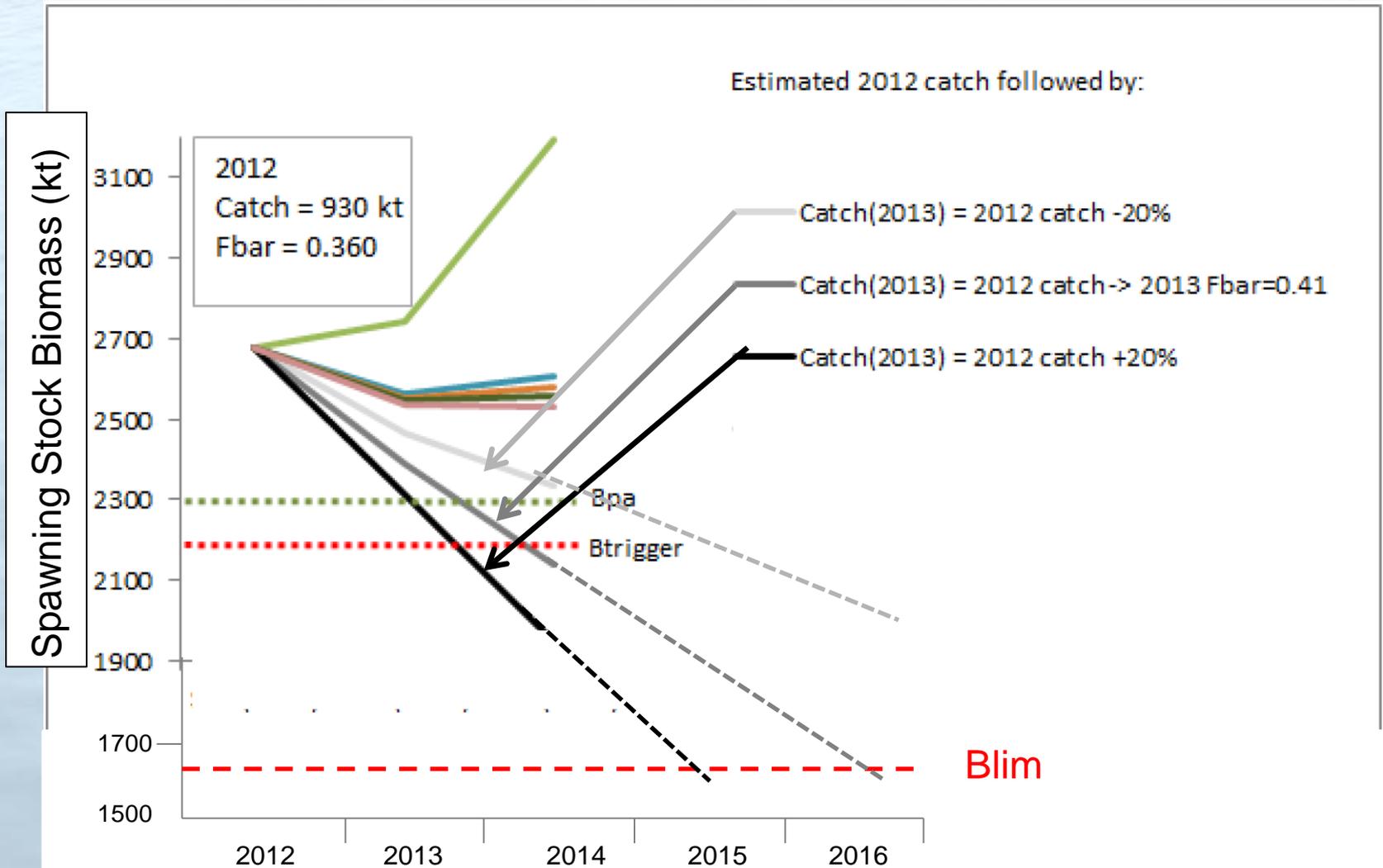
Fishing Mortality Rate



The level of fishing mortality above which remedial action is required by the coastal states' management plan

ACOM (Mackerel) 2012

NE Atlantic Mackerel Short-term Prognosis



A satellite-style map of the North Atlantic Ocean, showing the eastern coast of North America on the left and the western coast of Europe and Africa on the right. The ocean is a deep blue, and the landmasses are shown in shades of green and brown. The text is overlaid on the ocean area.

The NE Atlantic mackerel fishery management was a shambles throughout the 1970s & '80s but the industry managed to sort it out before irreversible harm was done.

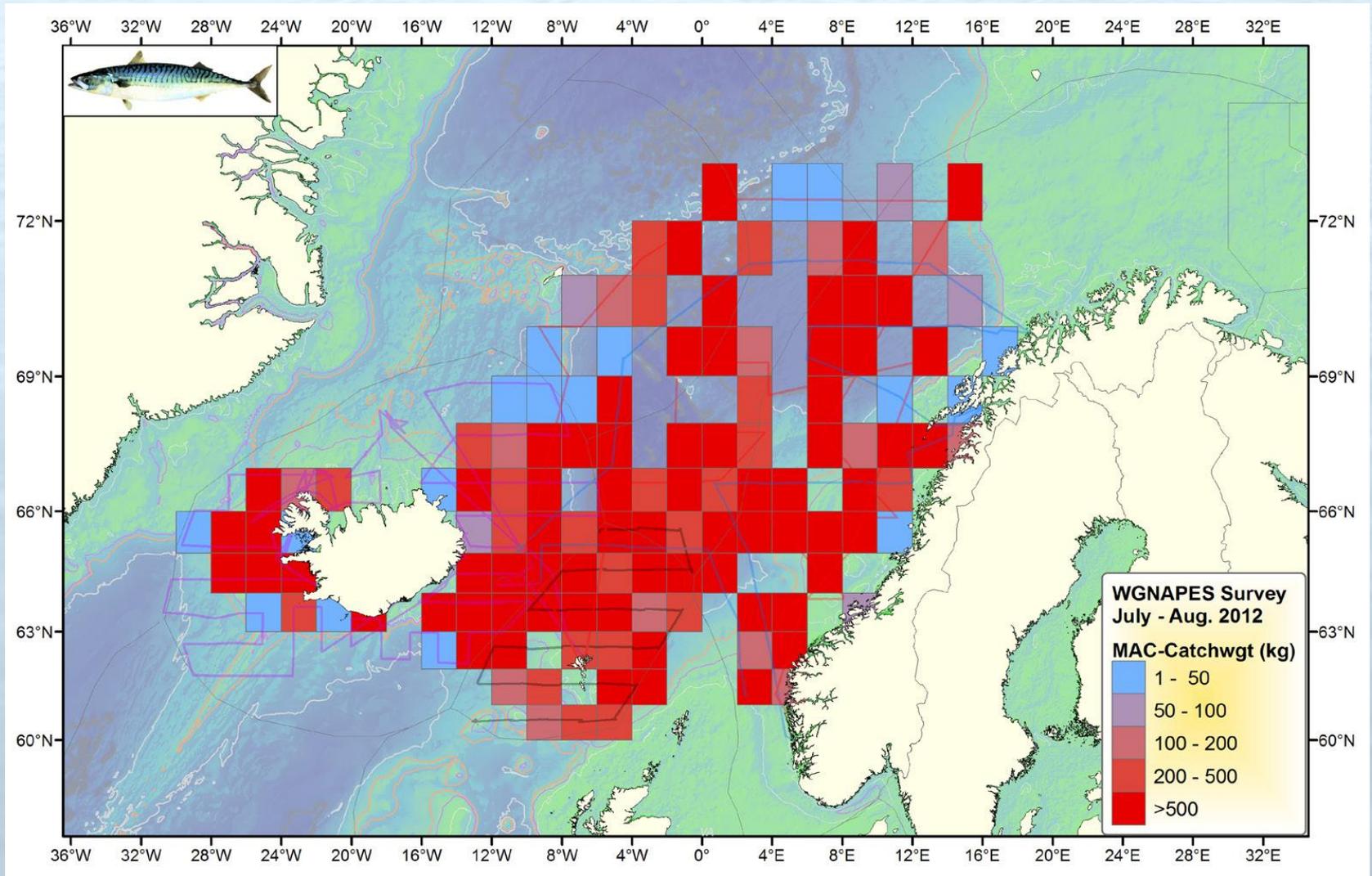
The question is – can it do it again before it is too late?

The clock is ticking.

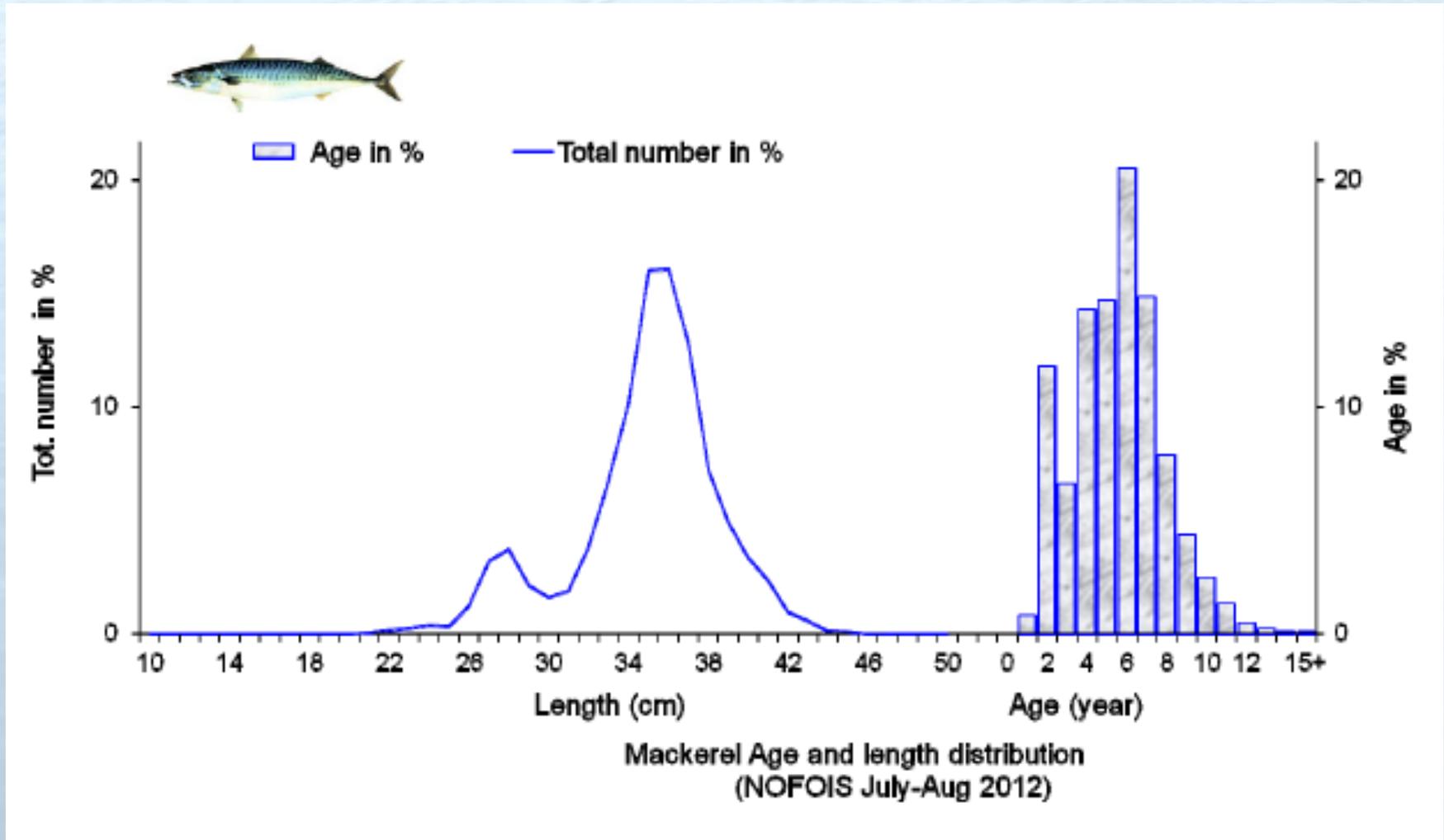
Annexe Figures

NE Atlantic Mackerel Summer Distribution 2012

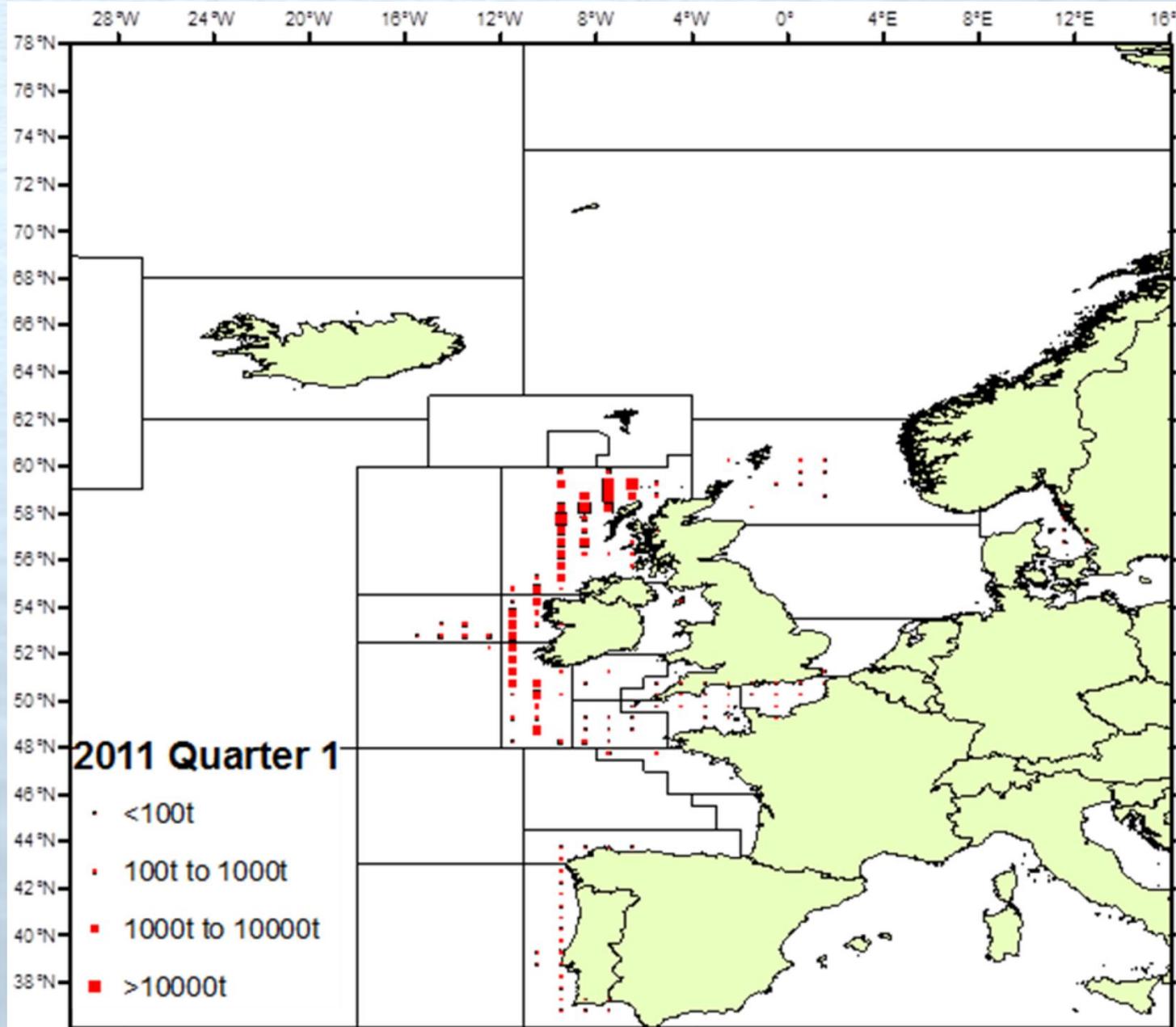
Nordic Tri-nation Research Vessel Trawl Survey

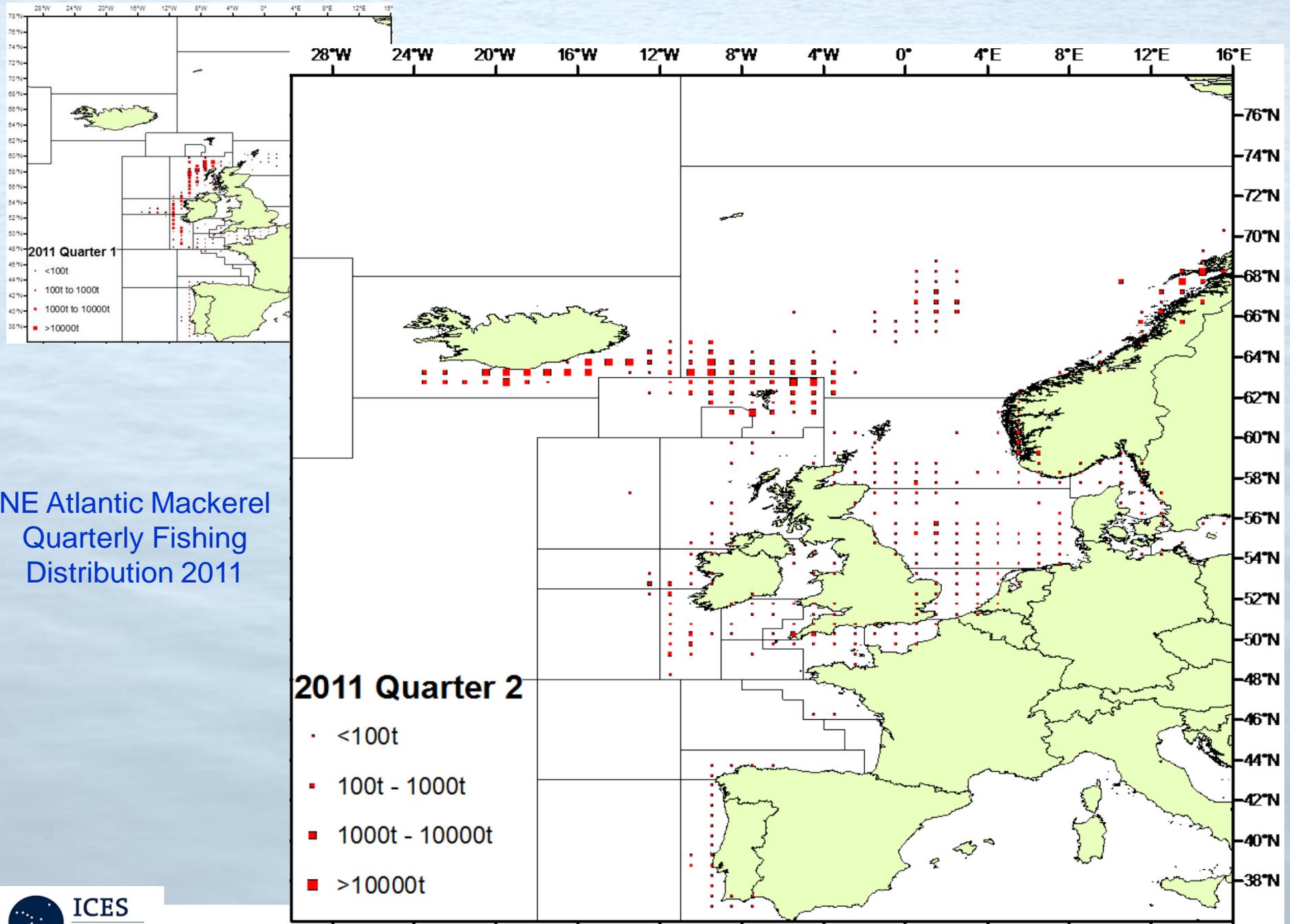


NE Atlantic Mackerel Length & Age-frequency Distributions 2012 Nordic Tri-nation Research Vessel Trawl Survey



NE Atlantic Mackerel Quarterly Fishing Distribution 2011



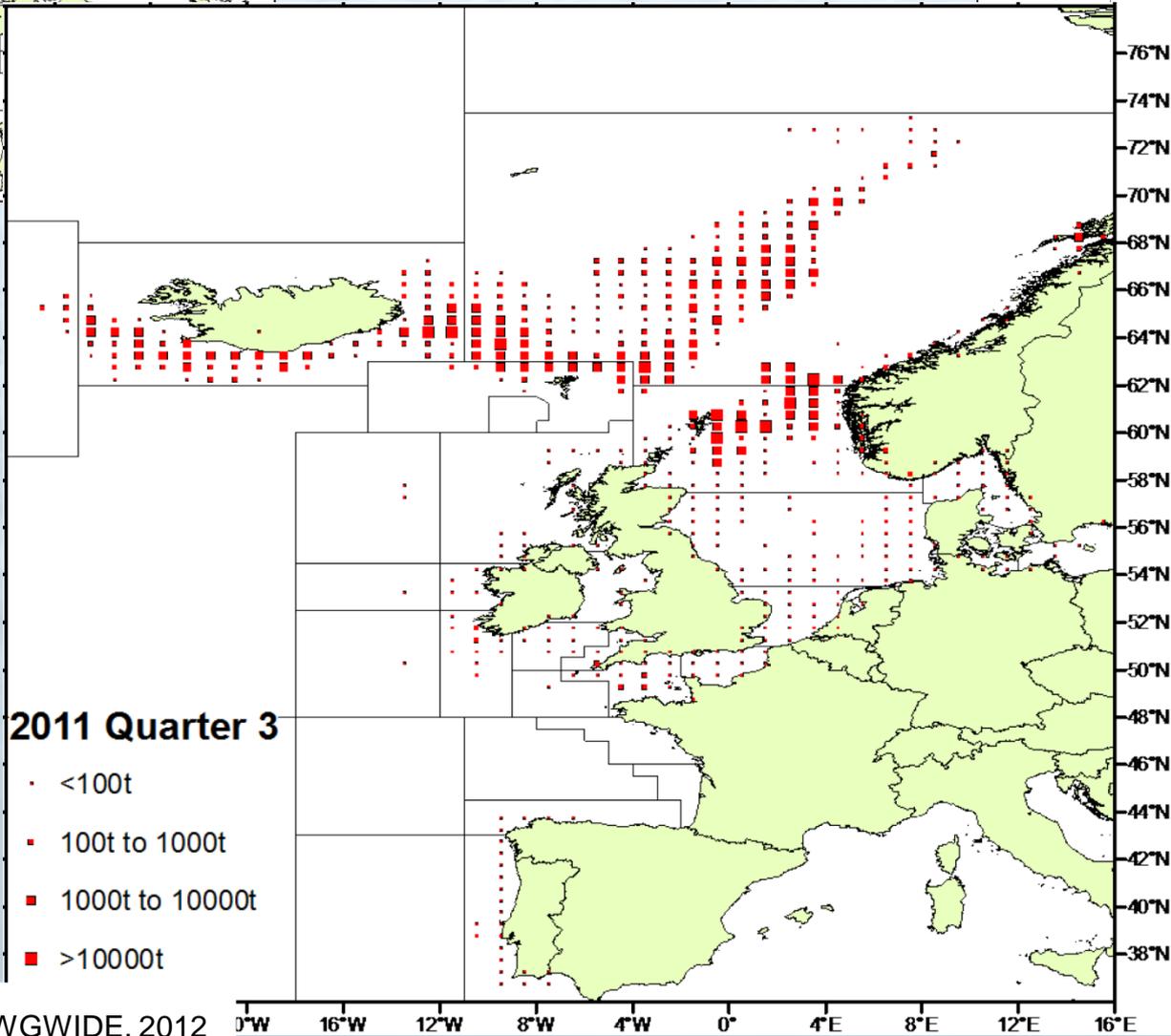
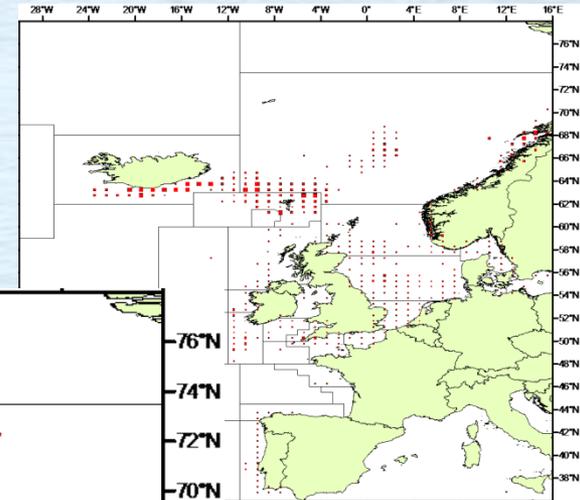
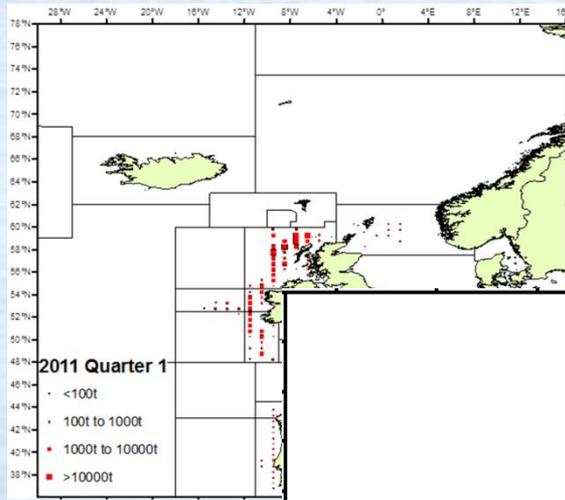


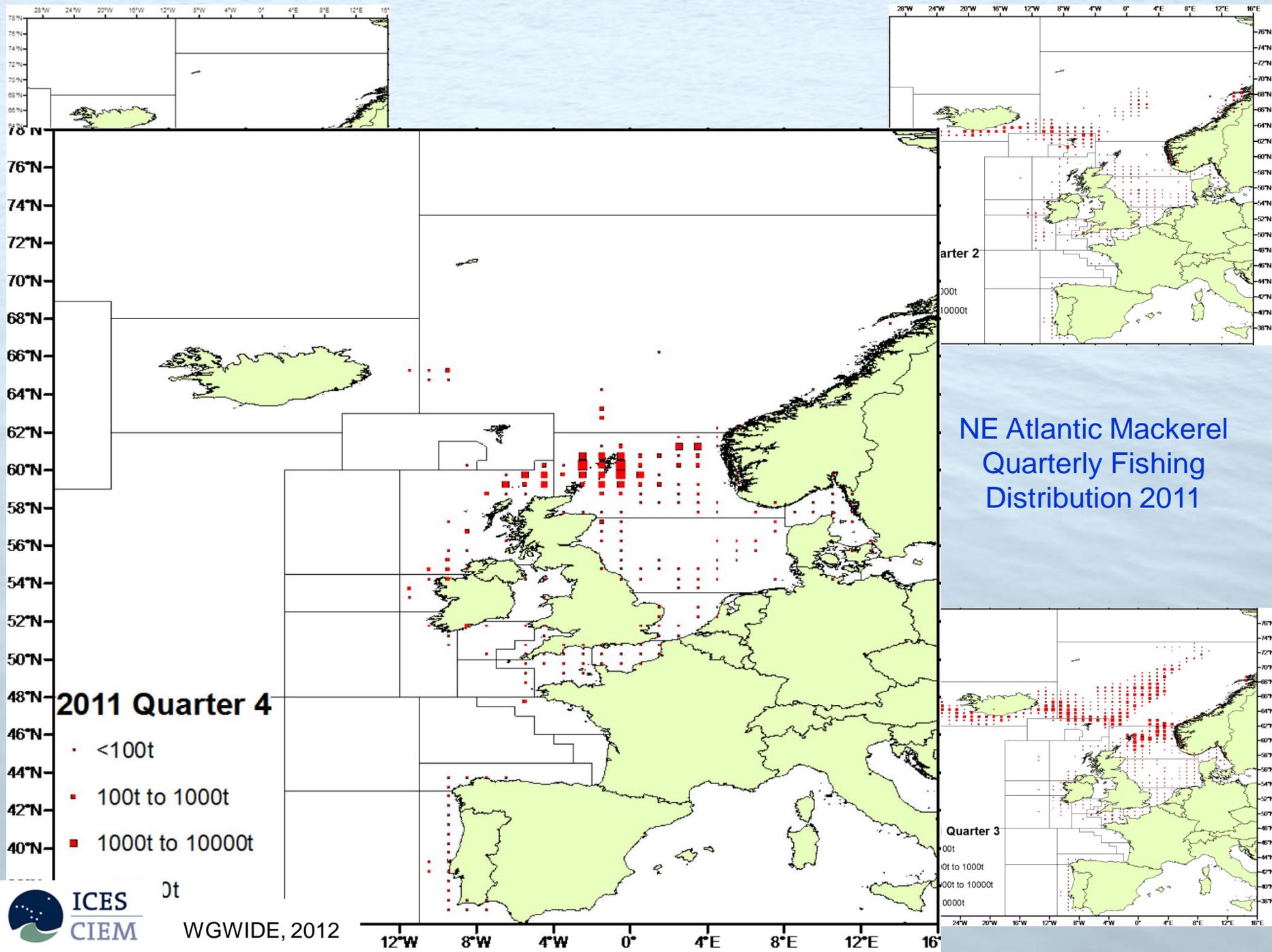
NE Atlantic Mackerel
Quarterly Fishing
Distribution 2011

2011 Quarter 2

- <100t
- 100t - 1000t
- 1000t - 10000t
- >10000t

NE Atlantic Mackerel Quarterly Fishing Distribution 2011





2011 Quarter 4

- <100t
- 100t to 1000t
- 1000t to 10000t



WG WIDE, 2012

NE Atlantic Mackerel
Quarterly Fishing
Distribution 2011

Quarter 2

Quarter 3