Redfish in Division 3O

Advice June 2013 for 2014-16

Recommendation for 2014-2016

There is insufficient information on which to base predictions of annual yield potential. Stock dynamics and recruitment patterns are also poorly understood. Catches have averaged about 13 000 t since the 1960s and over the long term, catches at this level appear to have been sustainable. Scientific Council is unable to advice on a more specific TAC level.

Management objectives

No explicit management plan or management objectives defined by Fisheries Commission. General convention objectives (NAFO/GC Doc 08/3) are applied. Advice is based on survey indices and catch trends (the observation of a period of stable catches since the 1960s).

Convention objectives	*Status*	*Comment/consideration*
Restore to or maintain at B_{msy}	○	B_{msy} unknown, stock increasing since the 2000s
Eliminate overfishing	●	Fishing mortality low
Apply Precautionary Approach	○	Reference points not defined
Minimise harmful impacts on living marine resources and ecosystems	●	VME closures in effect, low bycatch rates reported
Preserve marine biodiversity	○	Cannot be evaluated

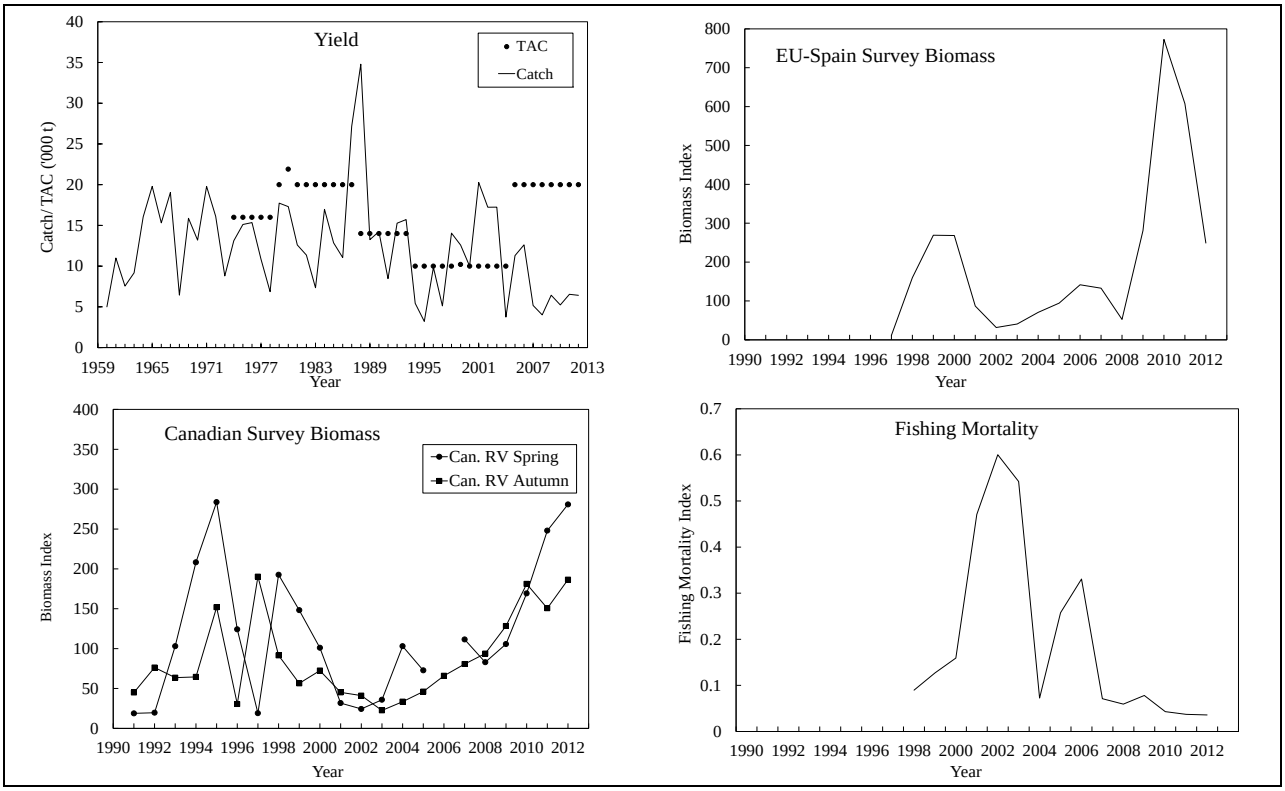
● OK
● Intermediate
● Not accomplished
○ Unknown

Management unit

The management unit is confined to NAFO Div. 3O.

Stock status

The stock appears to have increased since the early 2000s. Current fishing mortality appears low and recent recruitment is unknown.



Reference points

Not defined.

Projections

Quantitative assessment of risk at various catch options is not possible for this stock at this time.

Assessment

Based upon a qualitative evaluation of trends in stock biomass, fishing mortality proxy and recruitment. The assessment is considered data limited and as such associated with a relatively high uncertainty. Input data are research survey indices and fishery data (STACFIS 2013). The next full assessment is planned for 2016.

Human impact

Mainly fishery related mortality has been documented. Mortality from other human sources (e.g. pollution, shipping, oil-industry) are undocumented.

Biology and environmental interactions

The zooplankton index for the area peaked in 2010 and has remained above normal in recent years indicating favourable feeding conditions for redfish in their early life stages. Variation in stock size seems to some degree to be associated with atmospheric and temperature drivers. Water temperatures across Div 3LNO have been generally stable and above the long-term mean since the mid-1990's and prolonged cooling has not occurred in nearly two decades.

Fishery

Redfish is caught primarily in bottom trawl fisheries, but some landings are reported from mid-water trawl fisheries. The fishery is regulated by minimal mesh size and quota. Cod, American Plaice, witch flounder and other species are landed as bycatch. In turn, redfish are also caught as bycatch in other fisheries.

Recent catch estimates and TACs are:

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
TAC[1]	10	20	20	20	20	20	20	20	20	20
STATLANT 21	6.4	11.9	11.0	7.5	5.1	6.3	6.5	6.5	6.4	
STACFIS	3.8	11.3	12.6	5.2	4.0	6.4	5.2	6.5	6.4	

[1] 2004 only applied within Canadian fishery jurisdiction.

Effects of the fishery on the ecosystem

No specific information is available. General impacts of fishing gears on the ecosystem should be considered. A large area of Div. 3O has been closed to protect corals.

Special comments

Length frequencies suggest that the Div. 3O redfish fishery takes predominantly immature fish.

Sources of Information

SCR Doc. 13/09, 18, 36, SCS Doc. 13/05, 07, 09.