Stock Annex for Sole in Divisions VIIh–k (Southwest of Ireland)
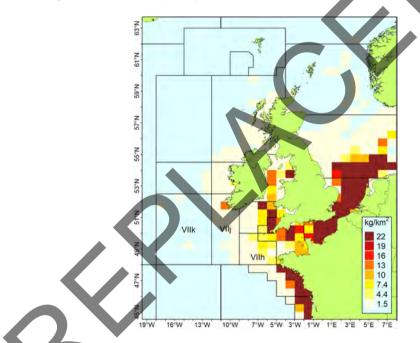
Stock	Sole in Divisions VIIh–k (Southwest of Ireland)
Working Group	WGCSE
Date	May 2014
Revised by	WGCSE / Hans Gerritsen

A. General

A.1. Stock definition

Sole landings occur near the Irish coast (VIIj) and in the north of VIIh. There is no evidence to suggest that fish from these two areas belong to the same stock. The assessment is performed for VIIjk only.

The spatial distribution of International landings of Plaice (2012 data, all gears combined; data from STECF).

A.2. Fishery

Sole in VIIj are mainly caught by Irish vessels on sandy grounds off counties Kerry and west Cork. Sole catches in VIIk are negligible.

A.3. Ecosystem aspects

B. Data

B.1. Commercial catch

Landings data are available for VIIh,j and k. Discards are known to be negligible.

B.2. Biological

CNAA and CWAA are sampled from the Irish landings which are nearly exclusively from VIIj. No sampling data are available for VIIh.

B.3. Surveys

The IGFS-WIBTS-Q4 covers VIIj but the gear is not well suited for flatfish and catchability is very variable.

B.4. Commercial cpue

A VMS-based lpue time-series for Irish OTB vessels in part of VIIj is used to tune the assessment.

B.5. Other relevant data

C. Assessment: data and method

A trends-only assessment is performed on the VIIjk part of the stock only (because no biological data are available for VIIh and because it is not clear that VIIh is part of the same stock).

Model used: XSA

Software used: Lowestoft vpa95.exe and FLR with R version 2.15.3 and packages FLCore 2.5.0; FLEDA 2.5 and FLAssess 2.5.0

The model was applied to catch numbers for ages 2–10+ for the years 1993–2013. The tuning fleet included ages 3–9 for the years 2006–2013.

Model Options:

OPTION	SETTING
Ages catch dep stock size	None
Q plateau	7
Taper	No
F shrinkage SE	1.5
F shrinkage year range	5
F shrinkage age range	5
Fleet SE threshold	0.2
Prior weights	No

The diagnostics of the final XSA assessment are given in Table 7.14.6. Figure 7.14.9 shows the residuals. There are some year effects but the absolute values are small. Because the catch and the tuning fleet have nearly identical age compositions, the year effects result from the lpue estimate of the tuning fleet.

Input data types and characteristics:

TYPE	NAME	YEAR RANGE	AGE RANGE	VARIABLE FROM YEAR TO YEAR
Caton	Catch in tonnes	1993–present		Yes
Canum	Catch-at-age in numbers	1993–present	2–10+	Yes
Weca	Weight-at-age in the commercial catch	1993–present	2–10+	Yes
West	Weight-at-age of the spawning stock at spawning time. Weca is used	1993–present	2–10+	Yes
Mprop	Proportion of natural mortality before spawning	all	2–10+	No
Tun	VMS Irish OTB tuning fleet	2006-present	3–9	Yes

Maturity ogive: (based on WG maturityogive for sole in VIIfg)

AGE	1	2	3	4	5	6	7+
PropMat	0	0	0.14	0.45	0.88	0.98	1

D. Short-term projection

None.

E. Medium-term projections

None.

F. Long-term projections

None.

G. Biological reference points

	TYPE	VALUE	TECHNICAL BASIS
MSY	**MSY B$_{trigger}$**	Not defined	
Approach	F$_{MSY}$	0.25	WKFRAME (2011) performed a metaanalysis on sole MSY reference points and concluded that for most stocks an F target (ages 3–8) of 0.25 is a good choice.
	B$_{lim}$	Not	
Precautionary	B$_{PA}$	Not	
Approach	F$_{lim}$	Not	
	F$_{PA}$	Not	

H. Other issues

None.

I. References

None.