

SW Sumwing (Brixham)

Fisheries Management and Innovation group

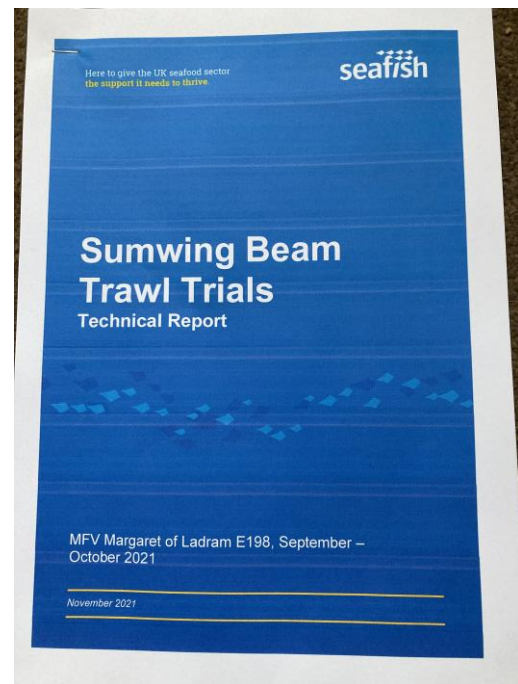
Thu 29th September



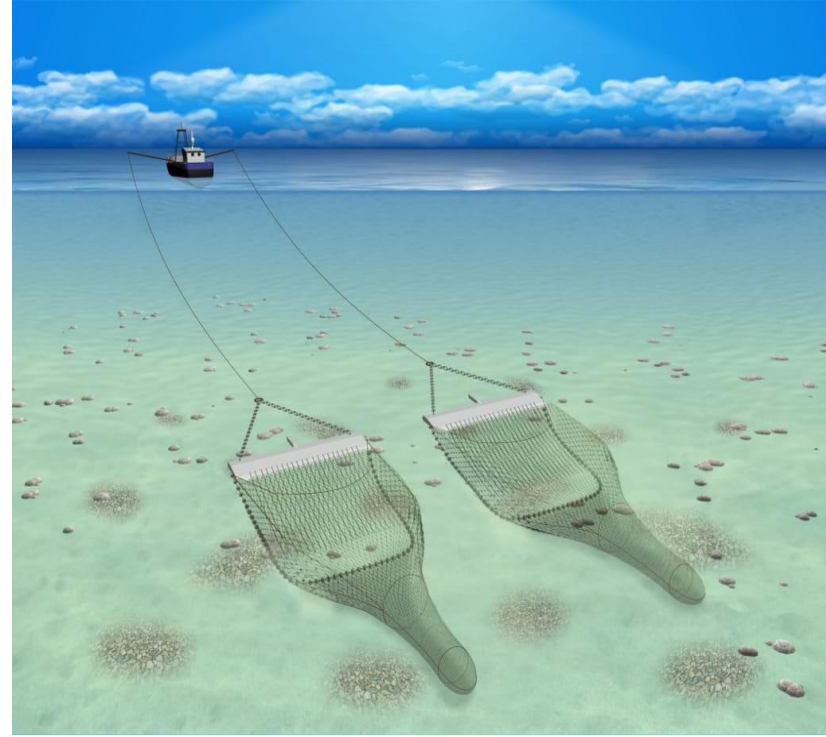
Here to give the UK seafood sector
the support it needs to thrive.

Sumwing gear trial

- Western Fish Producers Organisation (WFPO), asked Seafish to provide technical support during a sea trial of an innovative Sumwing beam trawl.
- Short sea trial carried out over the course of three days on the MFV Margaret of Ladram (E 198). A 30m beam trawler fish fishing from the port of Brixham on the South coast of Devon.
- Stage 1 Sumwing. Vessel rigged with a Sumwing beam on both sides.
- Stage 2 Traditional Beam. Vessel rigged both sides with a traditional beam trawl.
- Stage 3 Sumwing vs Traditional. Vessel rigged with a traditional beam trawl one side and the new design of Sumwing on the other side.



Sumwing



Margaret of Ladram



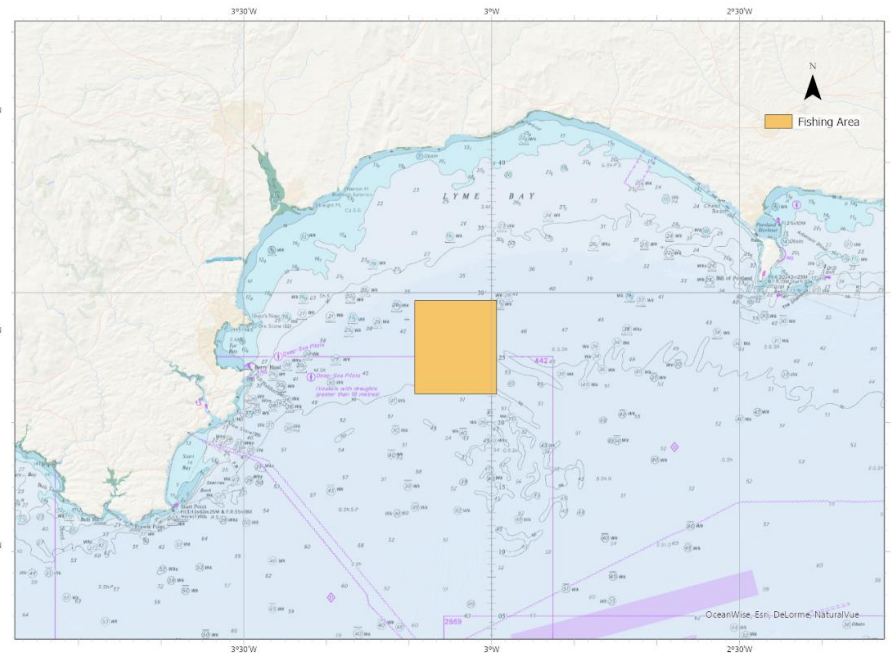
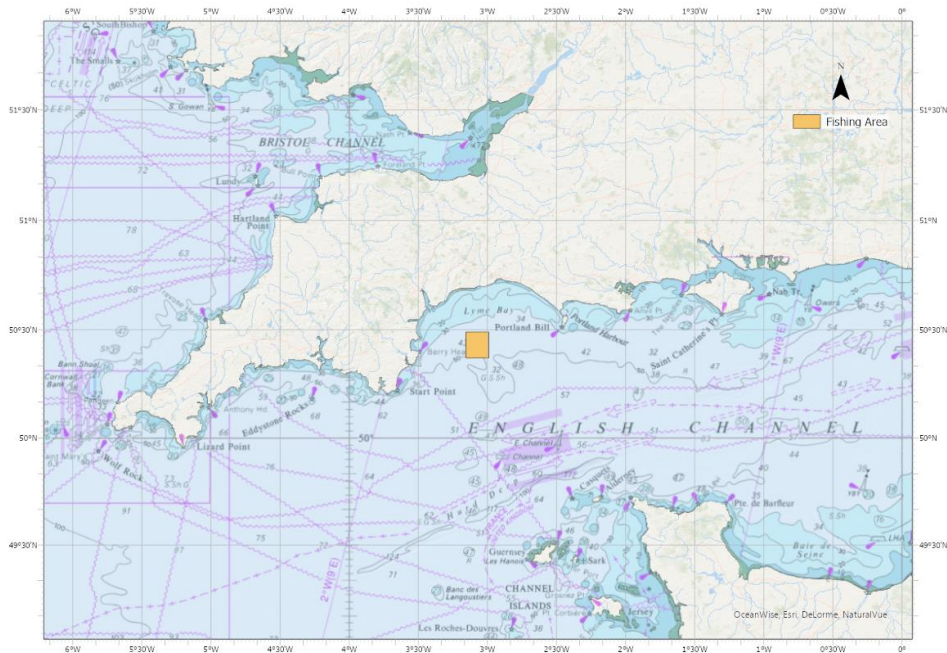
Standard Open Gear vs Sumwing



Sea Trial (September 2021)

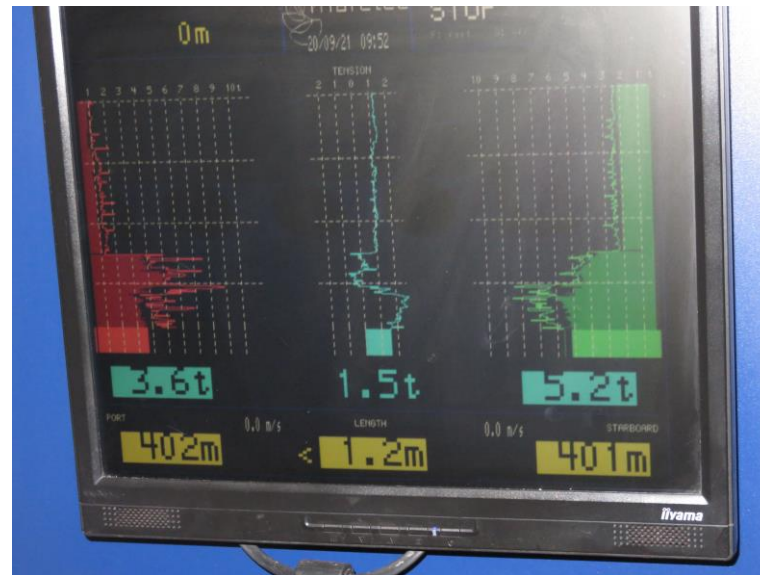


Trial Area



Skipper log book & Tension & fuel flow meters


VESSEL NAME		Margaret of Ladram								
Time/Date Leave Harbour		29.09.21								
Time/Date of Landing										
Total Hauls for Trip										
Fuel meter reading on Sailing										
Fuel meter reading on Landing										
Modifications since last trip - to gear or vessel (gear change, new net, antifoul, oils change etc)										
<div style="display: flex; justify-content: space-around;"> START STOP </div>										
Gear Type (Sumwing, Traditional or Mix)	TIME	Flow Meter Reading	TIME	Flow Meter Reading	Fuel Consumption Reading l/hr	Towing Tension reading	Revs	SOG	Tide +/- knots	Sea State
Sumwing	6 21.20	138				3.8	790	5.1	X 0.4	WSW 4/6
"	6 22.50	130				3.7	780	5.1	X 0.2	"
"	7 23.20	124				4.0	720	5.0	X 0.1	"
"	7 23.50	114				3.8	760	5.5	X 0.1	"
"	7 00.20	143				4.5	790	5.1	X 0.2	"
"	8 00.50	125				3.7	780	5.4	-0.3	"
"	8 01.20	130				4.0	780	5.0	-0.3	"
"	8 01.50	160				4.3	830	5.1	-0.5	"
OPEN GEAR	1 08.35	221				6.0	920	5.1	+0.5	SW 5-7
Traditional	1 09.05	208				5.5	900	5.1	+0.6	"
"	1 09.35	206				5.5	900	5.0	+0.6	"
"	2 09.50	202				5.8	840	5.2	+0.6	"
"	2 10.20	210				5.2	900	4.7	+0.5	"
"	2 10.40	224				5.2	910	4.5	+0.4	"
"	6 11.05	211				4.9	900	4.7	X 0.3	"



	Average Flow Meter Reading L/hr	Average Warp/Towing Tension (tonnes)	Average Revs	Average SOG
Sumwing Trawl	126	3.8	767	5.1
Traditional Trawl	216	5.5	904	4.7

Fuel Calculation

Calculation

- Saving of 90 litres per hour
- Average towing time of 18 hrs per day,
- Potential saving totals 1,620 litres per day.
- Given a fuel price of £0.60 (Sept 2021) per litre the saving per day is £972.00.
- On average, if a SW beam trawler carries out 200 fishing days per year, the potential saving per year is £194,400.
- Sumwing beams is £30,000 more expensive than a set of traditional beams.
- Equates to 31 days fishing.
- Since trial, saving of 60-70 litres per hour (£600-700 per day Sept 2022) 

Benthic Impact



**Average
Discards**

**Open gear
14.5 baskets**

**Sumwing
4.5 baskets**

Fish Quality

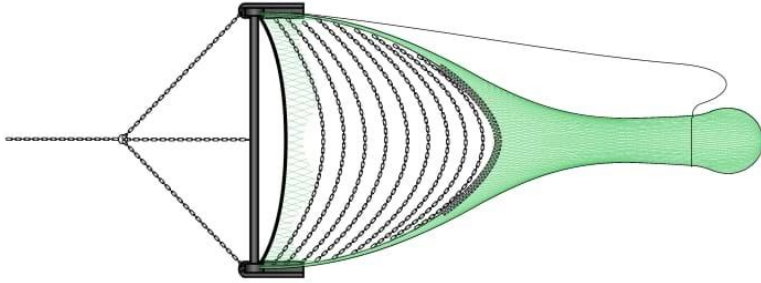


Margaret of Ladram Brixham Port Record £155,000 (March 2022)

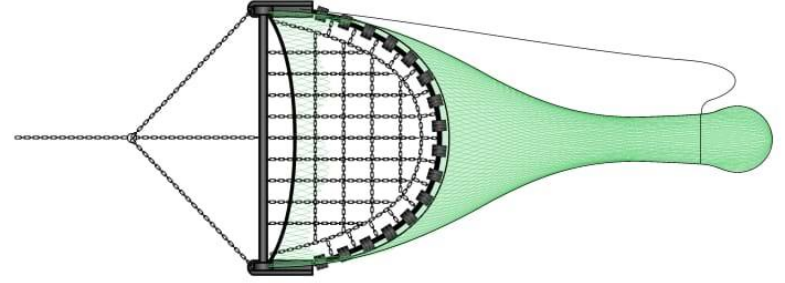


Sumwing II – Dutch trip

Open Gear & Chain Mat Beam trawls



3-4 SW Beam Trawlers



40-45 SW Beam Trawlers

SW Industry trip - VCU Holland



Harmen – Sumwing designer



SW Industry trip – Texel Holland



Jaap de Vis (Owner Jan Van Toon)



Next Steps

- Project application
- Modify Sumwing design
- Build full scale Sumwing
- Commission vessel
- Carry out Sea trials



Thank you

Any Questions?



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