

BELGICA – CAMPAIGN REPORT

1. Campaign no.: 2009/32a,b

2. Date: VTV : 24/11/2009 at 09:15
VTA : 04/12/2009 at 08:00

3. Objectives:

ILVO-Polet – Testing the performance of an alternative beam trawl.

The Belgian fishing fleet consists mainly of beam trawlers. This fishing method has some serious drawbacks like high fuel and material consumption, high discard levels and a significant environmental impact. ILVO-Fishery (Oostende) is developing an alternative beam trawl in close cooperation with the fishery sector in order to reduce these drawbacks. Several alterations are being tested and are already used on board of some commercial beam trawlers on an experimental and voluntary basis.

This alternative beam trawl is being developed in the frame of:

- the biodiversity directives of the European Commission (background: the Johannesburg Declaration),
- the “North Sea Cod Recovery Plan” and other management plans to protect commercial fish stocks,
- the EU-project DEGREE and an on-going cooperation with the fishing industry,
- the IWT-project CIVIS,
- the European Fishery Fund project ADVIS,
- a general concern in ILVO-Fishery about the quality of the marine environment and
- an increased profitability of the Belgian fishing sector.

The present Belgica voyage was dedicated to the following objectives:

- The development of 1) a benthic threshold and 2) a selective horizontal separator panel

In addition to this work, two more task are being carried out, i.e.:

- Survival study of discarded fish in a 4m beam trawl
- Monitoring of the sole, plaice, turbot, brill and cod populations.

4. Coordinator:

H. POLET (ILVO-Fishery) Week 1

B. VERSCHUEREN (ILVO-Fishery) Week 2

5. Fishing Area:

Areas in the Southern North Sea: Wenduine Bank, Shipwash, Orfordness, Lowestoft, Southland.

6. Researchers:

Name	Institute
1. H. POLET	ILVO Visserij Oostende
2. B. VERSCHUEREN	ILVO Visserij Oostende
3. F. DELANGHE	ILVO Visserij Oostende
4. K. VANHALST	ILVO Visserij Oostende
5. C. VANDEN BERGHE	ILVO Visserij Oostende
6. J. DEPESTELE	ILVO Visserij Oostende
7. N. VANCRAEYNEST	ILVO Visserij Oostende
8. D.VERHAEGHE	ILVO Visserij Oostende
9. M. DESENDER	UGent
10. J. BOSSAERT	ILVO Visserij Oostende
11. C. DEPUTTER	ILVO Visserij Oostende

7. Departure and arrival:

Departure: Tuesday 24 November 2009 at 09:15

Arrival: Friday 04 December 2009 at 08:00

8. Programme:

Fishing gear : 8 meter 120mm twin beam trawl with standard cod-ends (80 mm, week 1) and small mesh cod-ends (40mm, week 2).



Following selective devices were tested:

- a benthos threshold
- a selective horizontal separator panel

Catch sampling: After each haul the total weight of the catch of each cod-end was determined and after sorting, the weight of the benthos and trash fraction. All commercial fish species were sorted out and measured to the cm below. For all selected hauls, a benthos sample was taken for further analysis in the laboratory and for selectyed hauls, the total catch was analysed. The catch comparison of starboard and port side allows determining the catchability of the experimental net in comparison with a standard commercial beam trawl.

Survival tests: For a selection of hauls several commercial and non-commercial fish and invertebrates were collected from the cod-end, the catch processing was simulated and the animals were then stored in survival tanks. The animals were monitored for about 3 days and the survival was assessed. The condition of the fish was assessed with IIM (Injury Index Method).

Monitoring: Sole, plaice, turbot brill and cod were taken from the catch, measured and otoliths were collected.

9. Report of Activities:

Monday 23 November 2009:

- **09:00 – 12:00:** Embarkment and rigging of the fishing gear.

Tuesday 24 November 2009:

- **09:15:** Departure Zeebrugge and steaming to the fishing grounds.
- **11:00:** Arrival on fishing grounds: “Wenduine Bank” and preparing the fishing gear.
- **11:20:** Start of the fishery.
- **11:20 – 13:50** haul 01
start position: N 51° 15.830' E 02° 53.280'
end position: N 51° 15.960' E 02° 55.710'
- **14:05 – 15:05** haul 02
start position: N 51° 15.420' E 02° 54.360'
end position: N 51° 16.640' E 02° 56.490'
- **16:00:** Steaming at the mouth of the Thames. After aproximatly ½ hour, the wheather became so bad, the commandant decide to return at Zeebrugge.

- **19:30:** Arrival at Zeebrugge.

Wednesday 25 November 2009:

- **18:45:** Departure Zeebrugge and steaming to the fishing grounds.(Mouth of the Thames).

Thursday 26 November 2009:

- **05:30:** Arrival on fishing grounds: “Shipwash” and preparing the fishing gear.
- **06:00:** Start of the fishery.
- **06:00 – 07:30:** haul 03
start position: N 51° 58.270' E 01° 45.250'
end position: N 52° 03.820' E 01° 46.040'
- **08:20 – 09:20:** haul 04
start position: N 52° 05.170' E 01° 46.600'
end position: N 52° 10.530' E 01° 46.240'
- **09:35 – 11:05:** haul 05
start position: N 52° 11.520' E 01° 47.000'
end position: N 52° 09.860' E 01° 46.820'
- **11:20 – 12:50:** haul 06
start position: N 52° 09.760' E 01° 46.750'
end position: N 52° 12.900' E 01° 47.020'
- **13:05 – 14:35:** haul 07
start position: N 52°12.200' E 01° 47.030'
end position: N 52° 14.470' E 01° 49.370'
- **14:55 – 16:25:** haul 08
start position: N 52°15.150' E 01° 50.050'
end position: N 52° 20.260' E 01° 52.770'
- **16:40 – 18:10:** haul 09
start position: N 52° 20.900' E 01° 53.110'
end position: N 52° 22.450' E 01° 53.540'
- **18:30 – 20:00:** haul 10

start position: N 52° 21.640' E 01° 52.840'
end position: N 52° 22.210' E 01° 53.990'

- **20:15 – 21:45:** haul 11
start position: N 52° 21.860' E 01° 53.340'
end position: N 52° 21.820' E 01° 52.100'
- **22:00:** Steaming to Lowestoft.
- **23:00:** End of activities.

Fryday 27 November 2009:

- **05:00:** Arrival at Lowestoft.
- **18:00:** Military dinner.

Saterdag 28 November 2009: Hollyday.

Sunday 29 November 2009: Hollyday.

Monday 30 November 2009:

- **09:00:** Departure Lowestoft and steaming to the fishing grounds.
- **09:30:** Arrival on fishing grounds: “Shipwash” and preparing the fishing gear.
- **09:45:** Start of the fishery.
- **09:45 – 11:15:** haul 12
start position: N 52° 18.730' E 01° 49.340'
end position: N 52° 13.540' E 01° 47.620'
- **11:30 – 13:00:** haul 13
start position: N 52° 12.930' E 01° 47.240'
end position: N 52° 12.230' E 01° 47.000'
- **13:15 – 14:45:** haul 14
start position: N 52° 11.560' E 01° 47.000'
end position: N 52° 12.300' E 01° 47.140'
- **15:00 – 16:30:** haul 15
start position: N 52° 11.620' E 01° 47.320'
end position: N 52° 12.230' E 01° 48.340'

- **16:45 – 18:15:** haul 16
start position: N 52° 12.730' E 01° 48.090'
end position: N 52° 12.050' E 01° 47.140'
- **18:30 – 20:00:** haul 17
start position: N 52° 12.490' E 01° 47.090'
end position: N 52° 11.670' E 01° 47.120'
- **21:30:** End of activities.

Tuesday 01 December 2009:

- **05:50 – 07:30:** haul 18
start position: N 52° 15.390' E 01° 47.820'
end position: N 52° 09.060' E 01° 46.280'
- **07:50 – 09:20:** haul 19
start position: N 52° 07.980' E 01° 46.080'
end position: N 52° 09.380' E 01° 48.200'
- **09:40 – 11:10:** haul 20
start position: N 52° 09.030' E 01° 47.070'
end position: N 52° 11.960' E 01° 47.400'
- **11:25 – 12:55:** haul 21
start position: N 52° 11.220' E 01° 47.410'
end position: N 52° 09.250' E 01° 46.260'
- **13:10 – 14:40:** haul 22
start position: N 52° 10.270' E 01° 46.900'
end position: N 52° 11.880' E 01° 47.460'
- **14:55 – 15:10:** haul 23
start position: N 52° 11.650' E 01° 47.460'
end position: N 52° 10.600' E 01° 47.480'
- **15:25 – 16:55:** haul 24
start position: N 52° 10.290' E 01° 47.390'
end position: N 52° 10.820' E 01° 47.460'
- **17:10 – 18:55:** haul 25
start position: N 52° 11.470' E 01° 47.560'
end position: N 52° 08.100' E 01° 45.980'
- **19:10 – 21:00:** haul 26
start position: N 52° 07.530' E 01° 45.680'

end position: N 52° 10.890' E 01° 47.150'

- **23:00:** End of activities.

Wednesday 02 December 2009:

- **05:50 – 07:30:** haul 27
start position: N 52° 20.600' E 01° 59.900'
end position: N 52° 21.190' E 01° 00.130'
- **07:50 – 09:20:** haul 28
start position: N 52° 21.920' E 02° 00.550'
end position: N 52° 16.820' E 01° 58.060'
- **09:40 – 11:10:** haul 29
start position: N 52° 15.850' E 01° 57.880'
end position: N 52° 11.600' E 01° 51.230'
- **12:35 – 13:55:** haul 30
start position: N 52° 12.450' E 01° 47.360'
end position: N 52° 12.460' E 01° 47.310'
- **14:15 – 15:45:** haul 31
start position: N 52° 13.590' E 01° 47.740'
end position: N 52° 09.460' E 01° 45.840'
- **16:05 – 17:35:** haul 32
start position: N 52° 10.780' E 01° 47.270'
end position: N 52° 10.320' E 01° 47.330'
- **17:55 – 19:25:** haul 33
start position: N 52° 09.870' E 01° 47.320'
end position: N 52° 11.200' E 01° 47.150'
- **19:40 – 21:00:** haul 34
start position: N 52° 10.540' E 01° 47.080'
end position: N 52° 11.360' E 01° 47.720'
- **23:45:** End of activities.

Thursday 03 December 2009:

- **05:45 – 07:30:** haul 35
start position: N 52° 10.380' E 01° 47.110'
end position: N 52° 10.500' E 01° 47.290'

- **07:45 – 09:15:** haul 36
start position: N 52° 09.810' E 01° 47.400'
end position: N 52° 11.230' E 01° 47.440'
- **07:35 – 11:05:** haul 37
start position: N 52° 10.700' E 01° 47.050'
end position: N 52° 10.550' E 01° 47.890'
- **11:20 – 12:20:** haul 38
start position: N 52° 10.080' E 01° 47.650'
end position: N 52° 10.840' E 01° 47.970'
- **13:05 – 14:35:** haul 39
start position: N 52° 10.050' E 01° 47.880'
end position: N 52° 11.320' E 01° 47.990'
- **15:05 – 16:35:** haul 40
start position: N 52° 10.050' E 01° 48.040'
end position: N 52° 12.040' E 01° 47.830'
- **15:45 – 18:30:** haul 41
start position: N 52° 11.540' E 01° 47.840'
end position: N 52° 06.090' E 01° 51.720'
- **23:45:** End of activities.

Friday 04 December 2009

- **07:45:** Arrival at Zeebrugge
- **08:00 – 13:00:**
Disembarkment of apparatus and personal material.

Disembarkment of the fishing gear.

Disembarkment of the fish for survival experiments.

Remarks

The ILVO-Fishery team would like to thank the Cdt and crew of RV Belgica for the good cooperation.

Oostende, 14/12/2009.

Hans POLET and Bart VERSCHUEREN

Chiefs Scientist.