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The Norwegian fishery for northern shrimp (*Pandalus borealis*) in the Barents Sea and round Svalbard 1970-2014

by

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Abstract

The resource of northern shrimp (*Pandalus borealis*) in the Barents Sea is considered as one stock unit. The fishery is multinational. Catches have ranged between 18 and 128 ktons since the mid 1970s. Historically Norway has accounted for the major part (~75-95%) of the landings, however, in the recent 5-year period the Norwegian proportion has decreased to ~50%. The fishery is managed by effort control. Discard of small shrimp and by-catch of other species is believed to be low.

Overall catches have declined from 83 ktons in 2000 to 19 ktons in 2013 partly due to reduced market prices for shrimp products, and a major restructuring of the fleet has taken place. The bulk of the landings have been taken more easterly recent years than seen earlier in the 2000s and the recent decreases in catches can also be attributed to the displacement of shrimp biomass eastwards requiring new fishing grounds to be developed.

A standardised catch-per-unit-effort series have been fluctuating at a relatively high level since 2005 however the 2012-14 values are down, below the average of the time series. A standardised effort series indicates low fishing mortality since 2006.

Introduction

The resource of northern shrimp (*Pandalus borealis*) in the Barents Sea and in the Svalbard zone (ICES Div I and II) is for assessment purposes considered as one stock (Fig. 1). Norwegian and Russian vessels exploit the stock in the entire area while vessels from other nations are restricted to the Svalbard fisheries zone.

The fishery was initiated in 1970 by Norwegian vessels. As the fishery developed, vessels from several nations joined and catches reached 128 ktons in 1984 (Fig. 2). During the recent 10-year period annual yields have shown a declining trend reaching 19 ktons in 2013; Norwegian vessels accounted for around 48-93% of the total catches in that period and vessels from Russia, Iceland, Greenland and the EU for the rest (Table 1).

The fishery is regulated by effort control: licences are required for the Russian and Norwegian vessels and the fleets operating in the Svalbard zone are regulated by number of effective fishing days and number of vessels by country. Minimum cod-end mesh size is 35 mm. Other species and small shrimp are protected by mandatory sorting grids and by the temporary closing of areas with excessive by-catch of juvenile cod, haddock, Greenland halibut, redfish and shrimp <15 mm carapace length (measured in catch samples taken by independent observers).

A major restructuring of the fleet towards fewer and larger vessels has taken place mid 1990s to late 2010s. The fleet is now largely composed of a few large factory trawlers (>3000HP (HP=engine horsepower)) and a small group of <500HP vessels. Trawling is mainly performed using two or three trawls simultaneously.

The present paper updates available information derived from catch statistics, logbooks and catch sampling from the Norwegian trawl fishery for shrimp in the Barents Sea (ICES Div. I and II).

Materials and methods

Logbook data were analysed to show the spatial and temporal distribution of the fishery and fleet composition. Catch-per-unit-effort (CPUE) data from Norwegian vessels were used in multiplicative models to calculate standardised annual catch rate indices (Hvingel *et al*., 2000). A standardised effort series was derived by dividing total catch by the standardised CPUE.

The CPUE indices included the following variables: (1) vessel fishing power, (2) seasonal availability of shrimp, (3) spatial availability of shrimp, (4) gear type (single, double or triple trawl) and (5) annual mean CPUE. The calculations were done using the SAS statistical software (Anon., 1988). The area definition used is similar to the stratification used in the 1980-2004 survey (Hvingel, 2007). The multiplicative model was represented in logarithmic form as:

$$\ln\left(CPUE_{kjmhi}\right) = \ln\left(u\right) + \ln\left(V_k\right) + \ln\left(S_j\right) + \ln\left(A_m\right) + \ln(G_h) + \ln\left(Y_i\right) + e_{kjmhi}$$

Where $CPUE_{kjmhi}$ is the mean CPUE for vessel k, fishing in area m in month j during year i with geartype h (k = 1,...,n; m = 1,…,a; j = 1,…,s; i = 1,…,y; h=1,2,3); ln(u) is overall mean ln(*CPUE*); V_k is the effect of the kth vessel; S_j is the effect of the jth month; A_m is effect of the mth area; G_h is the effect of gear type h; Y_i is the effect of the ith year; e_{kjmhi} is the error term assumed to be normally distributed N(0,σ^2/n) where n is the number of observations in the cell. The standardised CPUE indices are the antilog of the year coefficients.

Results

Spatial and seasonal distribution

The fishery has mainly been conducted in the Hopen area (central Barents Sea) which, along with the Svalbard shelf, and on the Goosebank (south east Barents Sea) is considered the most important fishing ground (Fig. 1 and 3). However, since 2008 logbook data show a decreased activity in the Hopen Deep, coupled with increased effort further east in international waters in the so-called "Loop Hole". Information from the industry points to higher densities of shrimp in this area and area closures in the traditional Hopen Deep due to bycatch of juvenile fish as the main reasons for the change in fishing pattern. In recent years several fish stocks have increased substantially in the Barents Sea and as a consequence the by-catch restrictions (area closures) have had an increasing effect on the distribution of the shrimp fishery.

The fishery takes place in all months but may in certain years be restricted by ice conditions. The lowest intensity is generally seen in October through March, the highest in May to August (Fig. 4). In 2012-14 effort has peaked in April, one month earlier than seen in the 2000-2011 average.

Landings

Fishery in offshore areas began in 1970 and catches increased over the following 15 years from 5 to 130 ktons (Fig 2). Catches then declined rapidly. A new peak was seen in 1990 and again in 2000 at 80 ktons. Since 2000 catches have declined to 19 ktons in 2013. Based on data until July (logbooks and information from the industry) the total catch of 2014 is estimated at 21 ktons.

Discards and by-catch

Discard of shrimp is believed to be small as the fishery is not catch regulated. Small cod, haddock, Greenland halibut and redfish in the size range of 5-25 cm are caught as by-catch. The by-catch of small cod ranged between 2 and 67 million individuals/yr since 1997, while 1-9 million haddock/yr and 0.5 to 14 million Greenland halibut/yr was registered since 2000 (Table 2). Redfish by-catch has been low (<7 mill/yr) in recent years. Details on by-catch have

earlier been reported to AFWG (ICES, 2008). An estimate for the by-catch of cod for the years 2010-2013 is pending; for the other species these data are not routinely updated.

Fleet composition and gear
A major restructuring of the fleet towards fewer and larger vessels has taken place from the mid 1990s to late 2010s. An average vessel had before that period around 1000 HP. By the end of the 2010s this value had increased to more than 6000 HP (Fig. 5).

Until 1996 the fishery was conducted by using single trawls only. Double trawls were then introduced and in 2002 approximately 2/3 the total effort spent was by using two trawls simultaneously (Fig. 6). In 2000 a few vessels started to experiment with triple trawls: 58% of the effort in 2010 is accounted for by this fishing method while 35% and 7% of the effort is spent using double and single trawl respectively.

Standardised CPUE
The fishery dependent index of stock density in the fished areas – the standardised CPUE – is indicative of shrimp greater than 16 mm cpl., i.e. of the older male and the female stock combined. The standardised CPUE declined by 60% from a maximum in 1984 to the lowest value of the time series in 1987 (Table 3, Fig. 7). Since then it has shown an overall increasing trend until 2005. Since 2005 it has fluctuated above the average of the time series, but the 2012-14 values are down below the average.

New methods for the calculation of this index series were introduced in 2008 (see Hvingel and Thangstad (2008)). Details and diagnostics on the GLM model fit are given in appendix 1.

Effort
Standardised effort has been low since 2006 (Fig. 8).

References

ANON. 1988. SAS/STAT User's Guide, Release 6.03 Edition. Cary, NC: SAS Institute Inc., 1988. 1028
HVINGEL, C. AND THANGSTAD, T. 2008. The Norwegian fishery for northern shrimp (*Pandalus borealis*) in the Barents Sea. NAFO SCR Doc. 08/56, Serial No. N5585.
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ICES. 2008. Report of the Arctic Fisheries Working Group (AFWG), 21-29 April 2008, ICES Headquarters, Copenhagen. ICES CM 2008\ACOM:01.

Table 1. Nominal landings (‘000 tons) by nation (2014 catch is estimated based on data until July).

Year	Norway	Russia	Others	Total
1970	5.508	0	0	5.508
1971	5.116	0	0.026	5.142
1972	6.772	0	0	6.772
1973	6.921	0	0	6.921
1974	8.008	0	0	8.008
1975	8.197	0	0.002	8.199
1976	9.752	0	0	9.752
1977	14.700	0	4.854	19.554
1978	20.484	18.27	0.189	38.943
1979	25.435	10.474	0.39	36.299
1980	35.061	11.219	0	46.280
1981	32.713	9.886	1.011	43.610
1982	43.451	15.552	3.835	62.838
1983	70.798	29.105	4.903	104.806
1984	76.636	43.180	8.246	128.062
1985	82.123	32.104	10.262	124.489
1986	48.569	10.216	6.538	65.323
1987	31.353	6.690	5.324	43.367
1988	32.021	12.32	4.348	48.689
1989	47.064	12.252	3.432	62.748
1990	54.182	20.295	6.687	81.164
1991	39.663	29.434	6.156	75.253
1992	39.657	20.944	8.021	68.622
1993	32.663	22.397	0.806	55.866
1994	20.162	7.108	1.063	28.333
1995	19.337	3.564	2.319	25.220
1996	25.445	5.747	3.320	34.512
1997	29.079	1.493	5.163	35.735
1998	44.792	4.895	6.103	55.790
1999	52.612	10.765	12.293	75.670
2000	55.333	19.596	5.768	80.697
2001	43.031	5.846	8.408	57.285
2002	48.799	3.790	8.899	61.488
2003	34.172	2.776	2.277	39.225
2004	35.918	2.410	4.406	42.734
2005	37.253	0.435	4.930	42.618
2006	27.352	0.004	2.271	29.627
2007	25.558	0.192	4.181	29.931
2008	20.662	0.417	7.109	28.188
2009	19.784	0.000	7.488	27.272
2010	16.779	0.000	8.419	25.198
2011	19.923	0.000	9.867	29.790
2012	15.208	0.000	10.304	25.512
2013	8.845	1.067	8.774	18.686
2014	10.000	2.000	9.000	21.000

Table 2. Estimated bycatch of cod, haddock, Greenland halibut and redfish (no. in millions). No data for 2010-2013.

Year	Cod	Redfish	Haddock	Gr. Halibut
1983	14.57	91		
1984	12.6	167		
1985	92.41	198		
1986	10.91	18		
1987	9.87	110		
1988	5.19	46		
1989	1.5	199		
1990	9.02	94		
1991	22.52	51		
1992	25.43	78		
1993	19.23	22		
1994	4.56	23		
1995	5.92	2		
1996	17.1	25		
1997	28.69	24		
1998	67.11	3		
1999	13.43	11		
2000	7.77	15	3.72	13.94
2001	12.87	14	1.75	7.57
2002	2.46	5	9.19	0.19
2003	15.03	0.61	5.52	0.59
2004	2.66	1.1	1.22	0.33
2005	6.46	2.01		
2006	4.9	5.09		
2007	2.52	6.49		
2008	2.24	5.78		
2009	1.99	5.11		

Table 3. Realised catch-per-unit-effort (CPUE) and effort (hrs trawled), and standardised (se text) CPUE and effort as proxies for fishable biomass and fishing mortality respectively. Based on Norwegian logbook data (2014 values are estimated based on data until July).

year	Absolute		Standardised	
	CPUE	Effort	CPUE	Effort
	kg/hr	'000 hrs	index	index
1980	186	189	1.00	1.00
1981	216	152	1.19	0.79
1982	198	219	1.15	1.18
1983	231	306	1.31	1.73
1984	250	306	1.38	2.00
1985	231	356	1.14	2.35
1986	154	315	0.68	2.08
1987	116	270	0.53	1.76
1988	113	282	0.57	1.84
1989	143	330	0.72	1.88
1990	150	361	0.74	2.38
1991	171	230	0.78	2.09
1992	211	188	0.90	1.64
1993	209	159	0.97	1.24
1994	173	116	0.80	0.77
1995	150	129	0.67	0.81
1996	191	133	0.84	0.89
1997	228	127	0.80	0.97
1998	294	153	0.97	1.24
1999	295	178	1.02	1.60
2000	283	195	0.90	1.93
2001	356	121	0.91	1.36
2002	412	119	0.90	1.48
2003	386	88	0.88	0.96
2004	402	89	0.75	1.23
2005	611	61	1.04	0.89
2006	754	36	1.13	0.57
2007	840	30	1.02	0.63
2008	801	26	1.04	0.59
2009	794	25	1.05	0.56
2010	841	20	0.99	0.55
2011	777	26	1.09	0.59
2012	605	25	0.81	0.68
2013	534	17	0.64	0.64
2014	481	21	0.63	0.72

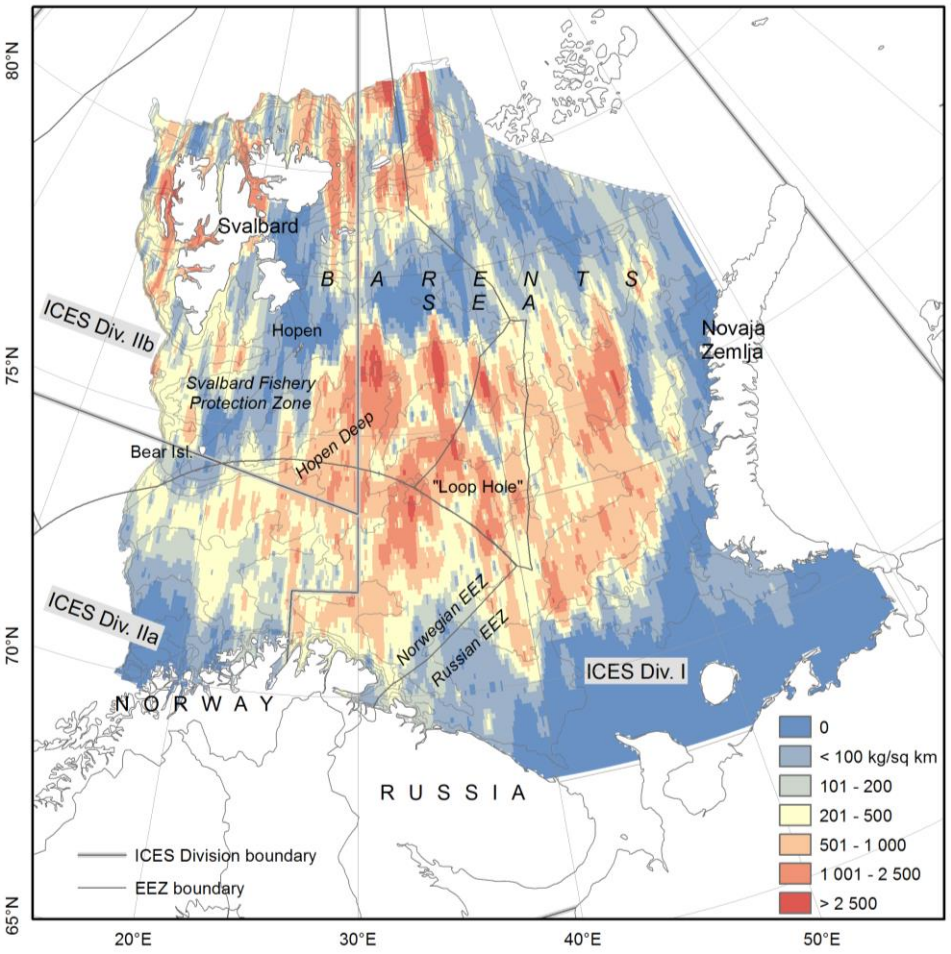

Fig. 1. Shrimp in the Barents Sea: stock distribution mean density index (kg/km^2) based on survey data 2000-2010.

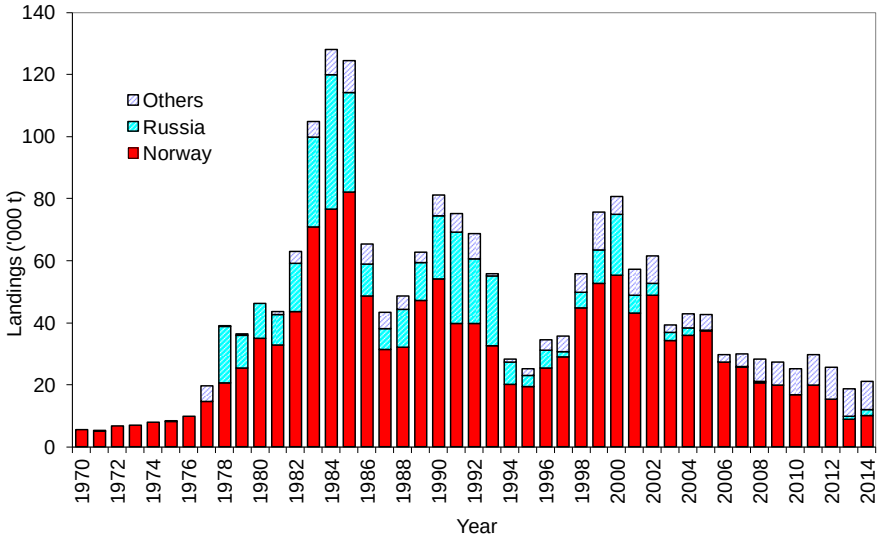

Fig. 2. Shrimp in the Barents Sea: Total annual landings. The 2014 projected value is estimated based on data until July and information from the industry.

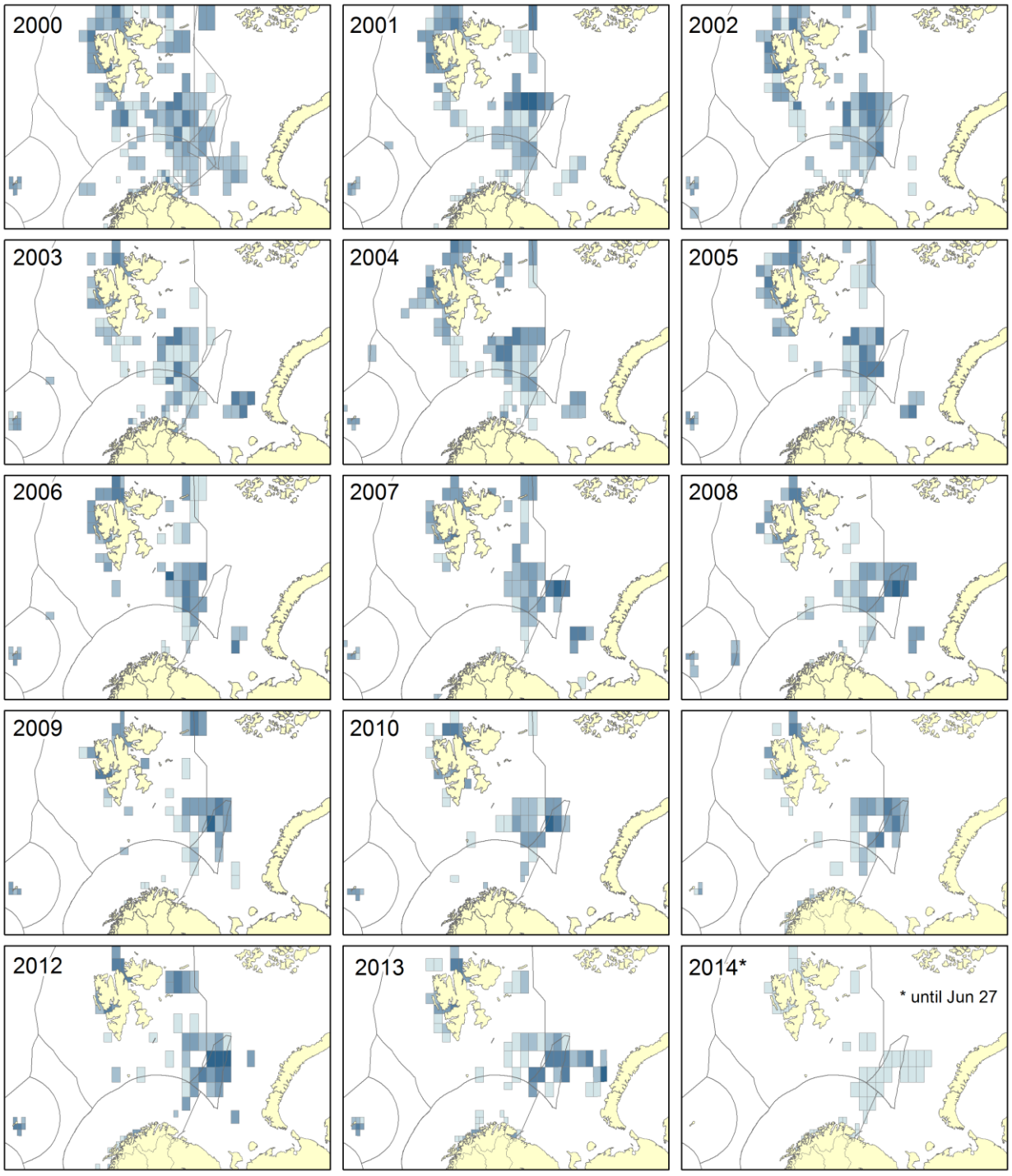

Fig. 3. Distribution of catches by Norwegian vessels 2000-2014 based on logbook information. (2014 only data until July)

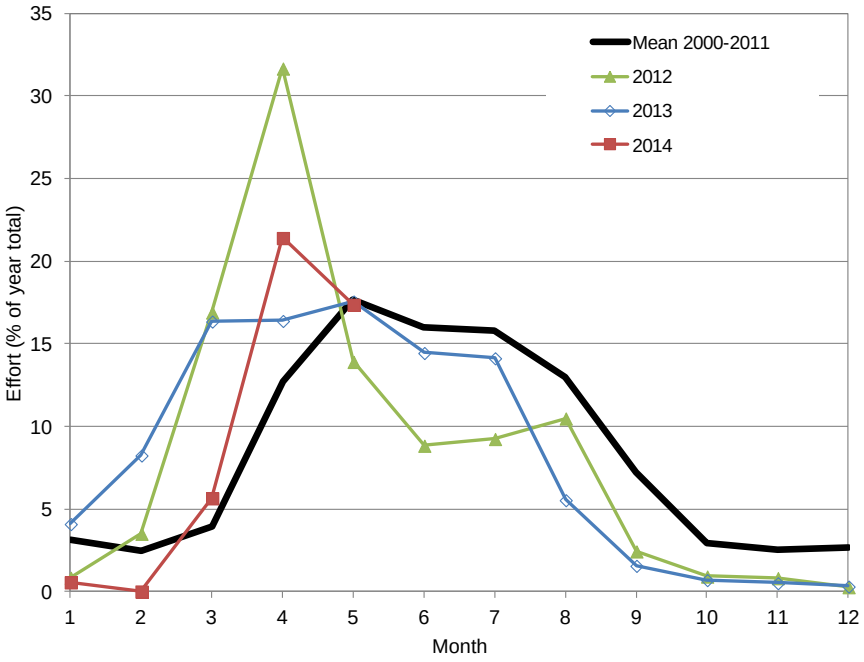

Fig. 4. Shrimp in the Barents Sea: Seasonal distribution of Norwegian fishing effort (hours trawled in a month as a percentage of total effort of the year) 2014-2014 and mean 2000-2011.

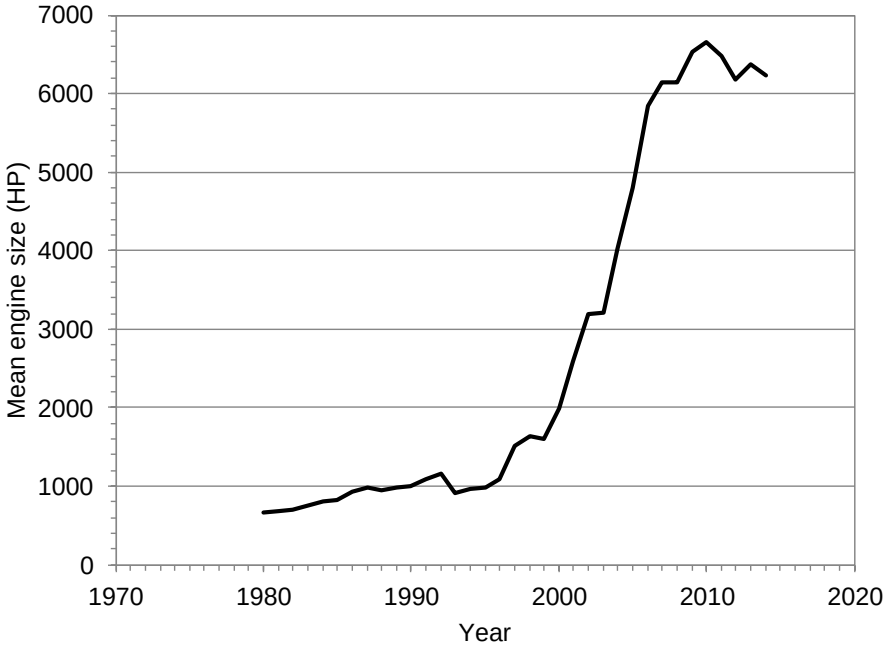

Fig. 5. Shrimp in the Barents Sea: Mean engine size (horse powers) behind an hour of trawled in the years 1980-2014.

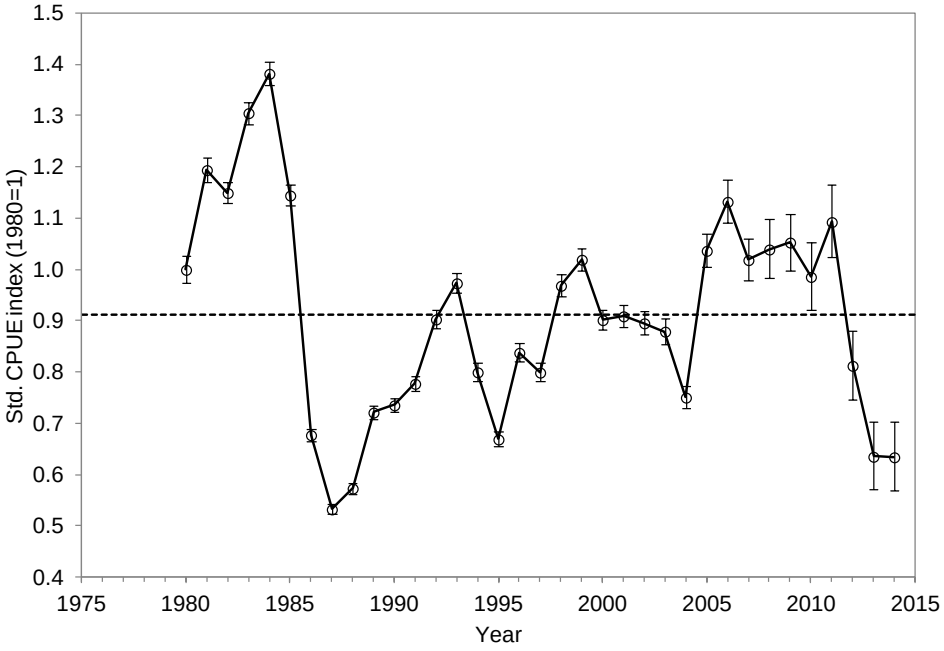

Fig 7. Shrimp in the Barents Sea: Standardised CPUE +/- one standard error.

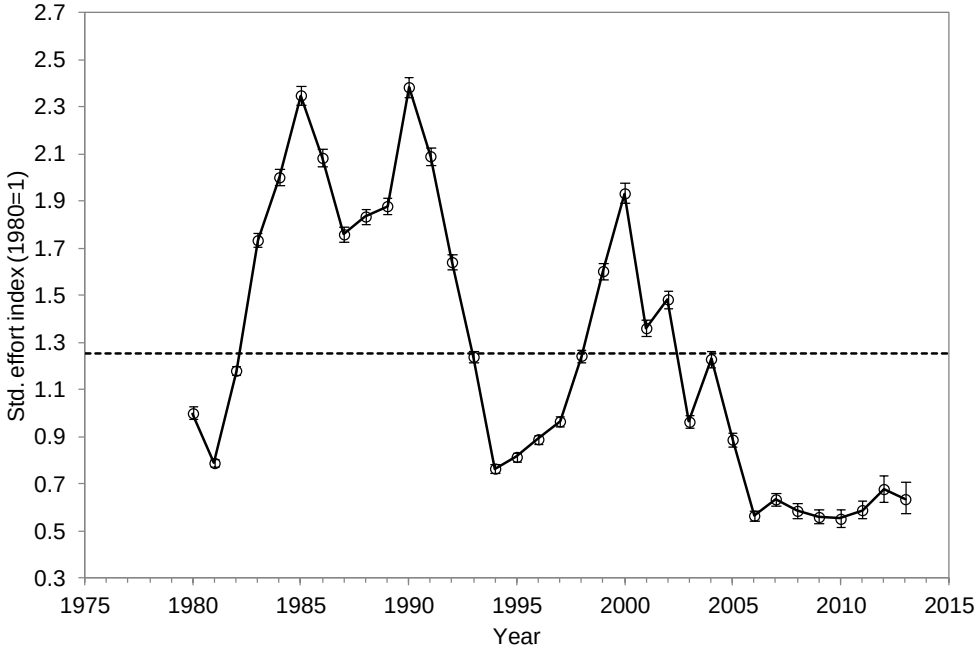

Fig 8. Shrimp in the Barents Sea: Standardised effort +/- one standard error.

Appendix 1. Output from GLM-run of the Barents Sea index. Gear 55=single trawl, grar 58=double trawl, gear 59= triple trawl. Strata definitions see Hvingel 2007. Vessels are individual vessel identification code.

The SAS System

The GLM Procedure

Class Level Information

Class	Levels	Values
strata	8	A B C D E F G H
gear	3	55 58 59
vessel	426	A 0003O AA0023HS F 0001BD F 0001BDN F 0001L F 0001SV F 0002BD F 0003V F 0004V F 0007LB F 0007M F 0009V F 0010BD F 0017BD F 0018NK F 0018NKN F 0019BD F 0020BD F 0020NK F 0023HV F 0024BD F 0025M F 0025NK F 0026LB F 0027M F 0032BD F 0032LB F 0034BD F 0038L F 0040V F 0042NK F 0044VS F 0055G F 0056B F 0057NK F 0060NK F 0061NK F 0062HV F 0077NK F 0080G F 0086NK F 0090BDN F 0090KD F 0091LB F 0092B F 0092NK F 0096V F 0097L F 0100M F 0100NK F 0101L F 0107VS F 0109HV F 0110L F 0111H F 0112M F 0125BD F 0128NK F 0136HV F 0144H F 0144S F 0148P F 0156V F 0156V N F 0157S F 0178NK F 0180G F 0180NK F 0184VS F 0197HV F 0200SV F 0202M F 0220BD F 0220M F 0221A F 0234NK F 0250NK F 0270NK F 0300M F 0300NK F 0301L N F 0321A F 0330NK F 0394L F 0415NK F 0415NKN H 0001B H 0010FE H 0020L H 0090AV M 0001A M 0001VN M 0002HØ M 0003A M 0003SM M 0006MD M 0007HØ M 0008S M 0010H • N M 0014H • M 0016A N M 0019A M 0019H • M 0020G M 0020H • M 0020S M 0023HØ M 0023VD M 0028VD M 0031G M 0032VD M 0033VN M 0034FI M 0037G M 0043H • M 0043VD M 0049H M 0053H • M 0059H M 0070M M 0071H • M 0079HØ M 0081H • M 0081H • N M 0081VD M 0088HØ M 0096H • M 0099AV M 0099H • M 0100AE M 0102S M 0106H M 0114F M 0114S • M 0165G M 0170A M 0199H • M 0206H M 0306HØ M 0360HØ M 0402H M 0444H • M 0450SM M 0450SMN M 0490SM M 0553H • N 0001H N 0001 • N 0002BRN N 0002H N 0002LN N 0002V N 0004AH N 0004V N 0005BR N 0005BRN N 0006H N 0007TN N 0007VV N 0007 • N 0008A N 0009VV N 0010MS N 0012V N 0014TS N 0014TSN N 0015TS N 0016ME N 0017BR N 0017BRN N 0017VV N 0020VR N 0021BR N 0021L N 0022V N 0025VV N 0026ME N 0026 • N 0030H N 0033H N 0034HR N 0035H N 0037MS N 0038V N 0041V N 0043V N 0044RT N 0045H N 0045H N N 0050H N 0055H N 0062H N 0062VV N 0068V N 0072MS N 0077F N 0077F N N 0078H N 0080A N 0081B • N 0085 • N 0094LF N 0100 • N 0110RT N 0111VR N 0111 • N 0120 • N 0148VV N 0148VVN N 0160VV N 0160VVN N 0165MS N 0173MS N 0180L N 0183ME N 0210A N 0230A N 0266V N 0271 • N 0294V N 0300VV N 0415V N 0415V N N 0431A N 0540ME N 0550SG NT0008V NT0150V NT0177V NT0444V NT0480V R 0001ESN R 0009ES R 0010ESN R 0045U R 0048U R 0051U R 0064B R 0091K R 0116K ST0041R ST0048HE ST0050R ST0086O ST0086O N ST0092O ST0183F T 0001H T 0001I N T 0001K T 0001K N T 0001S T 0001T T 0002H T 0002H N T 0002K T 0002LK T 0002LKN T 0002T T 0003LK T 0004SA T 0005K T 0005LK T 0005T T 0006L T 0006LK T 0006S T 0006T T 0006T N T 0007T T 0007TK T 0008S T 0008S N T 0008T T 0008TK T 0009LK T 0009T N T 0010LKN T 0011K T 0012I T 0012K T 0015T T 0016T T 0017T T 0017T N T 0018LK T 0018T T 0020K T 0020SA T 0022I T 0022T T 0023T T 0024T T 0028BG T 0028LK T 0028TN T 0029LK T 0029LKN T 0031I T 0031L T 0031SK T 0033B T 0033T T 0035T T 0036LK T 0036T T 0037S T 0038T T 0039H T 0039T T 0040LK T 0040T T 0041L T 0041T T 0042BG T 0042T T 0044T N T 0045T T 0046BG T 0047LK T 0048T T 0049L T 0050B T 0050K T 0050L T 0051LK T 0052S T 0055G T 0058T T 0058T N T 0060I T 0060K T 0061T T 0061T N T 0062T T 0063BG T 0064SA T 0068G T 0070LK T 0070SK T 0070T T 0070T N T 0077T T 0080LK T 0081T T 0086T T 0088B T 0088L T 0090T T 0092S T 0092S N T 0094I T 0095LK T 0097L T 0097T T 0099T T 0099T N T 0100D T 0100D N T 0100I T 0102BG T 0106T T 0111BG T 0122LK T 0122LKN T 0124LK T 0133T T 0137BG T 0137BGN T 0138TN T 0145LK T 0150BG T 0150T T 0150T N T 0156BG T 0160L T 0161N T 0165T N T 0170L T 0170T T 0170TK T 0171K T 0181K T 0182BG T 0183T T 0195L T 0198LK T 0200N T 0201BG T 0207BG T 0225N T 0228KD T 0228LK T 0230T T 0242T N T 0245LK T 0303T T 0320S T 0320T T 0320T N T 0345LK T 0350T T 0359T T 0360LK T 0429T N T 0440K T 0566S T 0569LK T 0805T T 0854T VA0002K VA0016S VA0034K VA0041K VA0046K VA0057K VA0066K VA0079K VA0087K VA0090FS VA0095K N VA0120K VA0156K • 0001H • 0061H • 0199H
year	35	1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2080
month	12	1 2 3 4 5 6 7 8 9 10 11 12

Number of Observations Read	208704
Number of Observations Used	208704

The SAS System

The GLM Procedure

Dependent Variable: lncpue

Weight: effort

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	480	997155.027	2077.406	543.48	<.0001
Error	208223	795910.780	3.822		
Corrected Total	208703	1793065.807			

R-Square	Coeff Var	Root MSE	lncpue Mean
0.556117	37.57395	1.955095	5.203326

Source	DF	Type I SS	Mean Square	F Value	Pr > F
strata	7	209000.4461	29857.2066	7811.12	<.0001
year	34	446000.3372	13117.6570	3431.79	<.0001
gear	2	30210.8052	15105.4026	3951.82	<.0001
vessel	426	253789.4738	595.7499	155.86	<.0001
month	11	58153.9642	5286.7240	1383.09	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
strata	7	16652.5573	2378.9368	622.37	<.0001
year	34	146697.2939	4314.6263	1128.78	<.0001
gear	2	230.4100	115.2050	30.14	<.0001
vessel	426	2064.1533	4.8454	1.27	0.0001
month	11	58153.9642	5286.7240	1383.09	<.0001

Parameter	Estimate		Standard Error	t Value	Pr > |t|
Intercept	3.742282379	B	2695.816337	0.00	0.9989
strata A	-0.090692194	B	0.005470	-16.58	<.0001
strata B	0.062892888	B	0.004846	12.98	<.0001
strata C	0.066677901	B	0.004522	14.74	<.0001
strata D	0.019292162	B	0.009478	2.04	0.0418
strata E	0.190381753	B	0.003781	50.35	<.0001
strata F	0.029040021	B	0.009835	2.95	0.0031
strata G	0.013480907	B	0.005591	2.41	0.0159
strata H	0.000000000	B	.	.	.

year 1981	0.177764276	B	0.009782	18.17	<.0001
year 1982	0.139594158	B	0.008570	16.29	<.0001
year 1983	0.266754558	B	0.008301	32.14	<.0001
year 1984	0.323815851	B	0.008522	38.00	<.0001
year 1985	0.135335771	B	0.008641	15.66	<.0001
year 1986	-0.389677667	B	0.008919	-43.69	<.0001
year 1987	-0.630056324	B	0.009463	-66.58	<.0001
year 1988	-0.556440008	B	0.009155	-60.78	<.0001
year 1989	-0.326490767	B	0.008812	-37.05	<.0001
year 1990	-0.307081718	B	0.008763	-35.04	<.0001
year 1991	-0.251614497	B	0.009253	-27.19	<.0001
year 1992	-0.101816918	B	0.009541	-10.67	<.0001
year 1993	-0.026652943	B	0.010000	-2.67	0.0077
year 1994	-0.223184022	B	0.011055	-20.19	<.0001
year 1995	-0.402003982	B	0.011088	-36.25	<.0001
year 1996	-0.176680398	B	0.010747	-16.44	<.0001
year 1997	-0.223788502	B	0.010953	-20.43	<.0001
year 1998	-0.031675258	B	0.010710	-2.96	0.0031
year 1999	0.019454889	B	0.010542	1.85	0.0650
year 2000	-0.103309034	B	0.011060	-9.34	<.0001
year 2001	-0.095128945	B	0.012402	-7.67	<.0001
year 2002	-0.110228824	B	0.012991	-8.49	<.0001
year 2003	-0.128594843	B	0.014080	-9.13	<.0001
year 2004	-0.286740096	B	0.014049	-20.41	<.0001
year 2005	0.036384777	B	0.015859	2.29	0.0218
year 2006	0.124509593	B	0.018336	6.79	<.0001
year 2007	0.018765516	B	0.019734	0.95	0.3416
year 2008	0.038861670	B	0.027473	1.41	0.1572
year 2009	0.051832716	B	0.026178	1.98	0.0477
year 2010	-0.013962376	B	0.033461	-0.42	0.6765
year 2011	0.089054530	B	0.032338	2.75	0.0059
year 2012	-0.207483966	B	0.039810	-5.21	<.0001
year 2013	-0.453713225	B	0.051657	-8.78	<.0001
year 2014	-0.455318467	B	0.085060	-5.35	<.0001
year 2080	0.000000000	B	.	.	.
gear 55	-0.143344795	B	0.023774	-6.03	<.0001
gear 58	-0.082739235	B	0.022538	-3.67	0.0002
gear 59	0.000000000	B	.	.	.
vessel A 0003O	-0.760389064		2695.816364	-0.00	0.9998

vessel AA0023HS	1.172839143	2695.816338	0.00	0.9997
vessel F 0001BD	1.368274434	2695.816338	0.00	0.9996
vessel F 0001BDN	1.594597718	2695.816337	0.00	0.9995
vessel F 0001L	2.423728497	2695.816338	0.00	0.9993
vessel F 0001SV	1.678866917	2695.816338	0.00	0.9995
vessel F 0002BD	1.726292115	2695.816337	0.00	0.9995
vessel F 0003V	1.222274108	2695.816338	0.00	0.9996
vessel F 0004V	1.169367971	2695.816337	0.00	0.9997
vessel F 0007LB	1.395130658	2695.816337	0.00	0.9996
vessel F 0007M	1.614765857	2695.816337	0.00	0.9995
vessel F 0009V	1.349041086	2695.816338	0.00	0.9996
vessel F 0010BD	2.071150521	2695.816338	0.00	0.9994
vessel F 0017BD	2.350129120	2695.816338	0.00	0.9993
vessel F 0018NK	1.413361666	2695.816338	0.00	0.9996
vessel F 0018NKN	1.107374950	2695.816338	0.00	0.9997
vessel F 0019BD	1.158060641	2695.816338	0.00	0.9997
vessel F 0020BD	0.878344790	2695.816338	0.00	0.9997
vessel F 0020NK	0.961409363	2695.816338	0.00	0.9997
vessel F 0023HV	0.888527006	2695.816338	0.00	0.9997
vessel F 0024BD	1.730740183	2695.816337	0.00	0.9995
vessel F 0025M	1.562758697	2695.816337	0.00	0.9995
vessel F 0025NK	0.821778872	2695.816338	0.00	0.9998
vessel F 0026LB	1.588231178	2695.816337	0.00	0.9995
vessel F 0027M	1.560479234	2695.816338	0.00	0.9995
vessel F 0032BD	1.010575075	2695.816338	0.00	0.9997
vessel F 0032LB	0.780567710	2695.816338	0.00	0.9998
vessel F 0034BD	2.225234998	2695.816338	0.00	0.9993
vessel F 0038L	1.046077087	2695.816338	0.00	0.9997
vessel F 0040V	1.279769946	2695.816337	0.00	0.9996
vessel F 0042NK	1.252690702	2695.816338	0.00	0.9996
vessel F 0044VS	1.101447156	2695.816338	0.00	0.9997
vessel F 0055G	1.412650746	2695.816337	0.00	0.9996
vessel F 0056B	1.281600660	2695.816337	0.00	0.9996
vessel F 0057NK	0.760055459	2695.816338	0.00	0.9998
vessel F 0060NK	1.434181386	2695.816337	0.00	0.9996
vessel F 0061NK	1.048983896	2695.816338	0.00	0.9997
vessel F 0062HV	1.854843360	2695.816338	0.00	0.9995
vessel F 0077NK	1.360182701	2695.816338	0.00	0.9996
vessel F 0080G	1.658926588	2695.816338	0.00	0.9995

vessel F 0086NK	1.021504099	2695.816338	0.00	0.9997
vessel F 0090BDN	1.505956506	2695.816337	0.00	0.9996
vessel F 0090KD	1.225528053	2695.816338	0.00	0.9996
vessel F 0091LB	1.126748816	2695.816338	0.00	0.9997
vessel F 0092B	1.484713621	2695.816338	0.00	0.9996
vessel F 0092NK	1.480586162	2695.816337	0.00	0.9996
vessel F 0096V	1.561408107	2695.816338	0.00	0.9995
vessel F 0097L	1.357262908	2695.816337	0.00	0.9996
vessel F 0100M	1.712382888	2695.816337	0.00	0.9995
vessel F 0100NK	1.367085881	2695.816338	0.00	0.9996
vessel F 0101L	1.009164564	2695.816338	0.00	0.9997
vessel F 0107VS	1.064151830	2695.816338	0.00	0.9997
vessel F 0109HV	1.273514380	2695.816338	0.00	0.9996
vessel F 0110L	1.284718474	2695.816338	0.00	0.9996
vessel F 0111H	1.383994420	2695.816338	0.00	0.9996
vessel F 0112M	1.172808392	2695.816338	0.00	0.9997
vessel F 0125BD	1.039300489	2695.816338	0.00	0.9997
vessel F 0128NK	1.368652806	2695.816338	0.00	0.9996
vessel F 0136HV	1.744982648	2695.816337	0.00	0.9995
vessel F 0144H	0.740129675	2695.816338	0.00	0.9998
vessel F 0144S	0.855369165	2695.816338	0.00	0.9997
vessel F 0148P	1.152192618	2695.816338	0.00	0.9997
vessel F 0156V	1.637142660	2695.816338	0.00	0.9995
vessel F 0156V N	1.592600989	2695.816338	0.00	0.9995
vessel F 0157S	1.180000789	2695.816338	0.00	0.9997
vessel F 0178NK	1.384533533	2695.816338	0.00	0.9996
vessel F 0180G	1.767797273	2695.816338	0.00	0.9995
vessel F 0180NK	1.765154272	2695.816338	0.00	0.9995
vessel F 0184VS	1.530252652	2695.816337	0.00	0.9995
vessel F 0197HV	1.068641116	2695.816338	0.00	0.9997
vessel F 0200SV	1.777514483	2695.816338	0.00	0.9995
vessel F 0202M	1.350744110	2695.816338	0.00	0.9996
vessel F 0220BD	2.294359619	2695.816338	0.00	0.9993
vessel F 0220M	1.476490757	2695.816337	0.00	0.9996
vessel F 0221A	2.415816933	2695.816337	0.00	0.9993
vessel F 0234NK	1.039297892	2695.816338	0.00	0.9997
vessel F 0250NK	0.961203031	2695.816338	0.00	0.9997
vessel F 0270NK	1.345828535	2695.816338	0.00	0.9996
vessel F 0300M	1.257506527	2695.816338	0.00	0.9996

vessel F 0300NK	1.066088757	2695.816338	0.00	0.9997
vessel F 0301L N	0.801268355	2695.816338	0.00	0.9998
vessel F 0321A	2.681167190	2695.816338	0.00	0.9992
vessel F 0330NK	0.781576830	2695.816338	0.00	0.9998
vessel F 0394L	1.416647043	2695.816337	0.00	0.9996
vessel F 0415NK	0.949354941	2695.816338	0.00	0.9997
vessel F 0415NKN	1.185115898	2695.816337	0.00	0.9996
vessel H 0001B	0.696670343	2695.816338	0.00	0.9998
vessel H 0010FE	0.866768863	2695.816338	0.00	0.9997
vessel H 0020L	1.691310549	2695.816338	0.00	0.9995
vessel H 0090AV	1.795017938	2695.816338	0.00	0.9995
vessel M 0001A	2.067029475	2695.816337	0.00	0.9994
vessel M 0001VN	1.891345623	2695.816337	0.00	0.9994
vessel M 0002HØ	2.657796141	2695.816337	0.00	0.9992
vessel M 0003A	1.659763059	2695.816337	0.00	0.9995
vessel M 0003SM	1.899199287	2695.816337	0.00	0.9994
vessel M 0006MD	1.315911970	2695.816337	0.00	0.9996
vessel M 0007HØ	2.510972672	2695.816337	0.00	0.9993
vessel M 0008S	1.475195894	2695.816338	0.00	0.9996
vessel M 0010H • N	1.556821307	2695.816338	0.00	0.9995
vessel M 0014H •	1.929295515	2695.816337	0.00	0.9994
vessel M 0016A N	1.464925958	2695.816337	0.00	0.9996
vessel M 0019A	2.109027423	2695.816338	0.00	0.9994
vessel M 0019H •	1.261819063	2695.816338	0.00	0.9996
vessel M 0020G	1.226124695	2695.816338	0.00	0.9996
vessel M 0020H •	1.820101019	2695.816337	0.00	0.9995
vessel M 0020S	1.348780689	2695.816338	0.00	0.9996
vessel M 0023HØ	2.506097911	2695.816337	0.00	0.9993
vessel M 0023VD	2.324480642	2695.816338	0.00	0.9993
vessel M 0028VD	1.516050905	2695.816338	0.00	0.9996
vessel M 0031G	1.299275868	2695.816338	0.00	0.9996
vessel M 0032VD	1.588534351	2695.816337	0.00	0.9995
vessel M 0033VN	2.635818780	2695.816338	0.00	0.9992
vessel M 0034FI	1.198766140	2695.816338	0.00	0.9996
vessel M 0037G	2.194315430	2695.816338	0.00	0.9994
vessel M 0043H •	2.245265748	2695.816337	0.00	0.9993
vessel M 0043VD	2.162291797	2695.816337	0.00	0.9994
vessel M 0049H	0.804397646	2695.816338	0.00	0.9998
vessel M 0053H •	1.885718519	2695.816338	0.00	0.9994

vessel M 0059H	2.443432413	2695.816338	0.00	0.9993
vessel M 0070M	1.329075974	2695.816338	0.00	0.9996
vessel M 0071H •	0.972151532	2695.816338	0.00	0.9997
vessel M 0079HØ	2.223695443	2695.816338	0.00	0.9993
vessel M 0081H •	1.869954518	2695.816338	0.00	0.9994
vessel M 0081H • N	2.536469889	2695.816337	0.00	0.9992
vessel M 0081VD	1.869771473	2695.816337	0.00	0.9994
vessel M 0088HØ	2.302859685	2695.816337	0.00	0.9993
vessel M 0096H •	2.102943973	2695.816337	0.00	0.9994
vessel M 0099AV	1.064555309	2695.816338	0.00	0.9997
vessel M 0099H •	2.169075050	2695.816337	0.00	0.9994
vessel M 0100AE	1.316079835	2695.816338	0.00	0.9996
vessel M 0102S	2.356622368	2695.816338	0.00	0.9993
vessel M 0106H	2.268990655	2695.816338	0.00	0.9993
vessel M 0114F	1.139988256	2695.816351	0.00	0.9997
vessel M 0114S •	1.438460089	2695.816338	0.00	0.9996
vessel M 0165G	1.018141054	2695.816338	0.00	0.9997
vessel M 0170A	1.335990103	2695.816337	0.00	0.9996
vessel M 0199H •	1.390819959	2695.816338	0.00	0.9996
vessel M 0206H	1.748034802	2695.816337	0.00	0.9995
vessel M 0306HØ	2.637683606	2695.816338	0.00	0.9992
vessel M 0360HØ	2.500905662	2695.816337	0.00	0.9993
vessel M 0402H	1.714385635	2695.816337	0.00	0.9995
vessel M 0444H •	1.547472074	2695.816338	0.00	0.9995
vessel M 0450SM	2.955022174	2695.816339	0.00	0.9991
vessel M 0450SMN	1.735860808	2695.816337	0.00	0.9995
vessel M 0490SM	1.586419367	2695.816337	0.00	0.9995
vessel M 0553H •	1.861221578	2695.816337	0.00	0.9994
vessel N 0001H	1.240658426	2695.816337	0.00	0.9996
vessel N 0001 •	1.120185929	2695.816338	0.00	0.9997
vessel N 0002BRN	0.963797093	2695.816338	0.00	0.9997
vessel N 0002H	2.002031720	2695.816337	0.00	0.9994
vessel N 0002LN	1.197021732	2695.816338	0.00	0.9996
vessel N 0002V	1.170081103	2695.816338	0.00	0.9997
vessel N 0004AH	0.911610465	2695.816338	0.00	0.9997
vessel N 0004V	1.028137639	2695.816337	0.00	0.9997
vessel N 0005BR	1.369685374	2695.816338	0.00	0.9996
vessel N 0005BRN	1.213717278	2695.816337	0.00	0.9996
vessel N 0006H	0.874549773	2695.816338	0.00	0.9997

vessel N 0007TN	1.234271899	2695.816338	0.00	0.9996
vessel N 0007VV	2.312506948	2695.816337	0.00	0.9993
vessel N 0007 •	1.485209583	2695.816337	0.00	0.9996
vessel N 0008A	2.348463715	2695.816338	0.00	0.9993
vessel N 0009VV	1.411265263	2695.816337	0.00	0.9996
vessel N 0010MS	1.134635039	2695.816338	0.00	0.9997
vessel N 0012V	1.338390176	2695.816338	0.00	0.9996
vessel N 0014TS	1.548530195	2695.816337	0.00	0.9995
vessel N 0014TSN	1.804375049	2695.816337	0.00	0.9995
vessel N 0015TS	1.681738873	2695.816338	0.00	0.9995
vessel N 0016ME	1.066852242	2695.816338	0.00	0.9997
vessel N 0017BR	1.203768730	2695.816338	0.00	0.9996
vessel N 0017BRN	1.910209574	2695.816338	0.00	0.9994
vessel N 0017VV	0.902072535	2695.816338	0.00	0.9997
vessel N 0020VR	1.129079720	2695.816338	0.00	0.9997
vessel N 0021BR	1.091949430	2695.816338	0.00	0.9997
vessel N 0021L	1.374178734	2695.816337	0.00	0.9996
vessel N 0022V	1.178348481	2695.816337	0.00	0.9997
vessel N 0025VV	1.584011586	2695.816338	0.00	0.9995
vessel N 0026ME	1.299039381	2695.816338	0.00	0.9996
vessel N 0026 •	1.448574904	2695.816338	0.00	0.9996
vessel N 0030H	1.953443735	2695.816337	0.00	0.9994
vessel N 0033H	0.995873881	2695.816338	0.00	0.9997
vessel N 0034HR	1.210038293	2695.816337	0.00	0.9996
vessel N 0035H	2.204351346	2695.816337	0.00	0.9993
vessel N 0037MS	1.245344197	2695.816338	0.00	0.9996
vessel N 0038V	0.981467119	2695.816338	0.00	0.9997
vessel N 0041V	1.446156396	2695.816337	0.00	0.9996
vessel N 0043V	1.531757974	2695.816338	0.00	0.9995
vessel N 0044RT	1.728556727	2695.816339	0.00	0.9995
vessel N 0045H	1.039793984	2695.816338	0.00	0.9997
vessel N 0045H N	2.103353746	2695.816337	0.00	0.9994
vessel N 0050H	2.803064459	2695.816338	0.00	0.9992
vessel N 0055H	1.313248362	2695.816338	0.00	0.9996
vessel N 0062H	1.879046077	2695.816337	0.00	0.9994
vessel N 0062VV	1.437003873	2695.816338	0.00	0.9996
vessel N 0068V	1.237666678	2695.816338	0.00	0.9996
vessel N 0072MS	1.075764002	2695.816338	0.00	0.9997
vessel N 0077F	1.287586253	2695.816337	0.00	0.9996

vessel N 0077F N	1.099055780	2695.816338	0.00	0.9997
vessel N 0078H	0.906523520	2695.816338	0.00	0.9997
vessel N 0080A	2.031676561	2695.816338	0.00	0.9994
vessel N 0081B •	1.047967042	2695.816338	0.00	0.9997
vessel N 0085 •	1.019978922	2695.816337	0.00	0.9997
vessel N 0094LF	1.105198277	2695.816338	0.00	0.9997
vessel N 0100 •	1.551636010	2695.816338	0.00	0.9995
vessel N 0110RT	1.571078280	2695.816338	0.00	0.9995
vessel N 0111VR	1.223677962	2695.816338	0.00	0.9996
vessel N 0111 •	1.482163860	2695.816337	0.00	0.9996
vessel N 0120 •	1.707440089	2695.816338	0.00	0.9995
vessel N 0148VV	1.257010964	2695.816338	0.00	0.9996
vessel N 0148VVN	1.206559362	2695.816338	0.00	0.9996
vessel N 0160VV	0.946441069	2695.816338	0.00	0.9997
vessel N 0160VVN	1.152551851	2695.816338	0.00	0.9997
vessel N 0165MS	0.751422350	2695.816338	0.00	0.9998
vessel N 0173MS	0.887735799	2695.816338	0.00	0.9997
vessel N 0180L	0.862363929	2695.816338	0.00	0.9997
vessel N 0183ME	1.027684237	2695.816338	0.00	0.9997
vessel N 0210A	1.000328918	2695.816338	0.00	0.9997
vessel N 0230A	1.828736101	2695.816337	0.00	0.9995
vessel N 0266V	0.916151161	2695.816338	0.00	0.9997
vessel N 0271 •	1.371273745	2695.816338	0.00	0.9996
vessel N 0294V	1.103670204	2695.816338	0.00	0.9997
vessel N 0300VV	1.164488352	2695.816338	0.00	0.9997
vessel N 0415V	1.331208791	2695.816338	0.00	0.9996
vessel N 0415V N	1.233589954	2695.816338	0.00	0.9996
vessel N 0431A	1.818473864	2695.816337	0.00	0.9995
vessel N 0540ME	1.559786743	2695.816338	0.00	0.9995
vessel N 0550SG	1.587562324	2695.816338	0.00	0.9995
vessel NT0008V	1.731972152	2695.816338	0.00	0.9995
vessel NT0150V	1.427269086	2695.816338	0.00	0.9996
vessel NT0177V	1.179066351	2695.816338	0.00	0.9997
vessel NT0444V	1.316398470	2695.816337	0.00	0.9996
vessel NT0480V	1.448414416	2695.816338	0.00	0.9996
vessel R 0001ESN	-0.488589890	2695.816371	-0.00	0.9999
vessel R 0009ES	0.553276052	2695.816343	0.00	0.9998
vessel R 0010ESN	2.416990623	2695.816660	0.00	0.9993
vessel R 0045U	1.288199947	2695.816338	0.00	0.9996

vessel R 0048U	1.535506765	2695.816338	0.00	0.9995
vessel R 0051U	0.832399083	2695.816338	0.00	0.9998
vessel R 0064B	0.092683111	2695.816367	0.00	1.0000
vessel R 0091K	1.214848276	2695.816338	0.00	0.9996
vessel R 0116K	0.950464616	2695.816338	0.00	0.9997
vessel ST0041R	1.463852501	2695.816338	0.00	0.9996
vessel ST0048HE	1.430577987	2695.816338	0.00	0.9996
vessel ST0050R	1.344971966	2695.816338	0.00	0.9996
vessel ST0086O	1.523214189	2695.816337	0.00	0.9995
vessel ST0086O N	1.372241787	2695.816338	0.00	0.9996
vessel ST0092O	1.571749886	2695.816337	0.00	0.9995
vessel ST0183F	1.353044361	2695.816338	0.00	0.9996
vessel T 0001H	2.351124027	2695.816338	0.00	0.9993
vessel T 0001I N	1.381118704	2695.816337	0.00	0.9996
vessel T 0001K	1.223620192	2695.816337	0.00	0.9996
vessel T 0001K N	1.587200196	2695.816337	0.00	0.9995
vessel T 0001S	1.226770321	2695.816338	0.00	0.9996
vessel T 0001T	1.568141756	2695.816338	0.00	0.9995
vessel T 0002H	1.712074099	2695.816337	0.00	0.9995
vessel T 0002H N	2.191784729	2695.816338	0.00	0.9994
vessel T 0002K	1.345784795	2695.816337	0.00	0.9996
vessel T 0002LK	1.367122580	2695.816337	0.00	0.9996
vessel T 0002LKN	2.433290766	2695.816337	0.00	0.9993
vessel T 0002T	1.344166119	2695.816338	0.00	0.9996
vessel T 0003LK	1.950105894	2695.816337	0.00	0.9994
vessel T 0004SA	1.576565830	2695.816338	0.00	0.9995
vessel T 0005K	1.127962212	2695.816338	0.00	0.9997
vessel T 0005LK	2.187614974	2695.816337	0.00	0.9994
vessel T 0005T	1.321518326	2695.816337	0.00	0.9996
vessel T 0006L	1.218222101	2695.816338	0.00	0.9996
vessel T 0006LK	2.051653093	2695.816338	0.00	0.9994
vessel T 0006S	1.157547546	2695.816338	0.00	0.9997
vessel T 0006T	1.659812327	2695.816338	0.00	0.9995
vessel T 0006T N	1.672590247	2695.816338	0.00	0.9995
vessel T 0007T	2.348030402	2695.816338	0.00	0.9993
vessel T 0007TK	1.387838168	2695.816337	0.00	0.9996
vessel T 0008S	1.521125334	2695.816338	0.00	0.9995
vessel T 0008S N	1.381983555	2695.816338	0.00	0.9996
vessel T 0008T	1.975294924	2695.816337	0.00	0.9994

vessel T 0008TK	1.657625075	2695.816338	0.00	0.9995
vessel T 0009LK	1.524739741	2695.816337	0.00	0.9995
vessel T 0009T N	2.056727235	2695.816337	0.00	0.9994
vessel T 0010LKN	1.973611237	2695.816337	0.00	0.9994
vessel T 0011K	1.404551649	2695.816338	0.00	0.9996
vessel T 0012I	1.448121923	2695.816338	0.00	0.9996
vessel T 0012K	1.233905607	2695.816337	0.00	0.9996
vessel T 0015T	1.841594811	2695.816337	0.00	0.9995
vessel T 0016T	1.352537421	2695.816337	0.00	0.9996
vessel T 0017T	1.468808107	2695.816337	0.00	0.9996
vessel T 0017T N	1.933987935	2695.816337	0.00	0.9994
vessel T 0018LK	1.553291538	2695.816337	0.00	0.9995
vessel T 0018T	1.453893841	2695.816338	0.00	0.9996
vessel T 0020K	1.400746614	2695.816337	0.00	0.9996
vessel T 0020SA	1.543250477	2695.816337	0.00	0.9995
vessel T 0022I	1.584388960	2695.816338	0.00	0.9995
vessel T 0022T	2.007226760	2695.816337	0.00	0.9994
vessel T 0023T	1.791783868	2695.816337	0.00	0.9995
vessel T 0024T	1.833345565	2695.816337	0.00	0.9995
vessel T 0028BG	1.112546273	2695.816338	0.00	0.9997
vessel T 0028LK	2.111305558	2695.816337	0.00	0.9994
vessel T 0028TN	1.198037271	2695.816338	0.00	0.9996
vessel T 0029LK	1.240913149	2695.816338	0.00	0.9996
vessel T 0029LKN	1.108890376	2695.816338	0.00	0.9997
vessel T 0031I	1.289159938	2695.816338	0.00	0.9996
vessel T 0031L	1.017377390	2695.816338	0.00	0.9997
vessel T 0031SK	1.468761549	2695.816338	0.00	0.9996
vessel T 0033B	1.522949520	2695.816338	0.00	0.9995
vessel T 0033T	1.712432919	2695.816337	0.00	0.9995
vessel T 0035T	2.637127070	2695.816338	0.00	0.9992
vessel T 0036LK	1.467360987	2695.816338	0.00	0.9996
vessel T 0036T	1.272716300	2695.816337	0.00	0.9996
vessel T 0037S	1.676041062	2695.816338	0.00	0.9995
vessel T 0038T	1.331395069	2695.816338	0.00	0.9996
vessel T 0039H	1.383741367	2695.816338	0.00	0.9996
vessel T 0039T	1.055275498	2695.816338	0.00	0.9997
vessel T 0040LK	1.198544441	2695.816337	0.00	0.9996
vessel T 0040T	1.222247324	2695.816338	0.00	0.9996
vessel T 0041L	1.526647188	2695.816338	0.00	0.9995

vessel T 0041T	1.140666311	2695.816338	0.00	0.9997
vessel T 0042BG	1.482865305	2695.816338	0.00	0.9996
vessel T 0042T	1.174351506	2695.816338	0.00	0.9997
vessel T 0044T N	1.496272282	2695.816337	0.00	0.9996
vessel T 0045T	2.538649161	2695.816338	0.00	0.9992
vessel T 0046BG	1.316556676	2695.816338	0.00	0.9996
vessel T 0047LK	1.663981382	2695.816338	0.00	0.9995
vessel T 0048T	1.401363593	2695.816338	0.00	0.9996
vessel T 0049L	1.201724678	2695.816338	0.00	0.9996
vessel T 0050B	1.164287618	2695.816337	0.00	0.9997
vessel T 0050K	1.580044097	2695.816337	0.00	0.9995
vessel T 0050L	1.273857425	2695.816338	0.00	0.9996
vessel T 0051LK	1.373702638	2695.816337	0.00	0.9996
vessel T 0052S	1.234150439	2695.816338	0.00	0.9996
vessel T 0055G	1.556932284	2695.816338	0.00	0.9995
vessel T 0058T	1.235041341	2695.816338	0.00	0.9996
vessel T 0058T N	1.277509950	2695.816337	0.00	0.9996
vessel T 0060I	1.327121623	2695.816338	0.00	0.9996
vessel T 0060K	1.347910473	2695.816337	0.00	0.9996
vessel T 0061T	1.448054731	2695.816337	0.00	0.9996
vessel T 0061T N	1.728639767	2695.816337	0.00	0.9995
vessel T 0062T	1.349763770	2695.816337	0.00	0.9996
vessel T 0063BG	1.423809003	2695.816337	0.00	0.9996
vessel T 0064SA	1.608501446	2695.816337	0.00	0.9995
vessel T 0068G	1.568041391	2695.816338	0.00	0.9995
vessel T 0070LK	1.411710361	2695.816337	0.00	0.9996
vessel T 0070SK	1.660435664	2695.816338	0.00	0.9995
vessel T 0070T	1.542834321	2695.816337	0.00	0.9995
vessel T 0070T N	1.581719339	2695.816337	0.00	0.9995
vessel T 0077T	1.519621005	2695.816337	0.00	0.9996
vessel T 0080LK	1.548611321	2695.816337	0.00	0.9995
vessel T 0081T	1.099864976	2695.816338	0.00	0.9997
vessel T 0086T	1.461059041	2695.816337	0.00	0.9996
vessel T 0088B	1.322533066	2695.816337	0.00	0.9996
vessel T 0088L	1.362847024	2695.816337	0.00	0.9996
vessel T 0090T	1.427255639	2695.816337	0.00	0.9996
vessel T 0092S	1.374334736	2695.816338	0.00	0.9996
vessel T 0092S N	1.421532860	2695.816338	0.00	0.9996
vessel T 0094I	1.268566568	2695.816338	0.00	0.9996

vessel T 0095LK	1.614311843	2695.816337	0.00	0.9995
vessel T 0097L	1.262777446	2695.816338	0.00	0.9996
vessel T 0097T	1.274927346	2695.816337	0.00	0.9996
vessel T 0099T	1.653793512	2695.816337	0.00	0.9995
vessel T 0099T N	1.565320864	2695.816337	0.00	0.9995
vessel T 0100D	1.328049149	2695.816338	0.00	0.9996
vessel T 0100D N	1.504421955	2695.816338	0.00	0.9996
vessel T 0100I	1.686458901	2695.816338	0.00	0.9995
vessel T 0102BG	1.340728518	2695.816337	0.00	0.9996
vessel T 0106T	1.500622082	2695.816337	0.00	0.9996
vessel T 0111BG	1.386139879	2695.816337	0.00	0.9996
vessel T 0122LK	1.229591879	2695.816338	0.00	0.9996
vessel T 0122LKN	0.994453816	2695.816338	0.00	0.9997
vessel T 0124LK	1.200728212	2695.816338	0.00	0.9996
vessel T 0133T	1.105720248	2695.816337	0.00	0.9997
vessel T 0137BG	1.450198803	2695.816337	0.00	0.9996
vessel T 0137BGN	1.468639181	2695.816337	0.00	0.9996
vessel T 0138TN	1.423898228	2695.816338	0.00	0.9996
vessel T 0145LK	1.616650569	2695.816337	0.00	0.9995
vessel T 0150BG	2.114552928	2695.816337	0.00	0.9994
vessel T 0150T	1.161218523	2695.816338	0.00	0.9997
vessel T 0150T N	1.063489368	2695.816338	0.00	0.9997
vessel T 0156BG	1.243355104	2695.816338	0.00	0.9996
vessel T 0160L	1.172849074	2695.816338	0.00	0.9997
vessel T 0161N	1.358126696	2695.816337	0.00	0.9996
vessel T 0165T N	1.413071600	2695.816337	0.00	0.9996
vessel T 0170L	1.495961577	2695.816338	0.00	0.9996
vessel T 0170T	0.940432480	2695.816338	0.00	0.9997
vessel T 0170TK	1.501692010	2695.816337	0.00	0.9996
vessel T 0171K	1.239008968	2695.816338	0.00	0.9996
vessel T 0181K	1.401954358	2695.816338	0.00	0.9996
vessel T 0182BG	1.257018318	2695.816337	0.00	0.9996
vessel T 0183T	1.404396913	2695.816337	0.00	0.9996
vessel T 0195L	0.855606532	2695.816339	0.00	0.9997
vessel T 0198LK	1.155979375	2695.816338	0.00	0.9997
vessel T 0200N	0.081551264	2695.816346	0.00	1.0000
vessel T 0201BG	1.134629978	2695.816338	0.00	0.9997
vessel T 0207BG	0.986254853	2695.816338	0.00	0.9997
vessel T 0225N	1.013808378	2695.816337	0.00	0.9997

vessel T 0228KD	1.600138830		2695.816337	0.00	0.9995
vessel T 0228LK	1.533453581		2695.816338	0.00	0.9995
vessel T 0230T	1.338926183		2695.816338	0.00	0.9996
vessel T 0242T N	1.036250123		2695.816338	0.00	0.9997
vessel T 0245LK	1.472266127		2695.816338	0.00	0.9996
vessel T 0303T	1.629651080		2695.816338	0.00	0.9995
vessel T 0320S	1.087011970		2695.816338	0.00	0.9997
vessel T 0320T	1.047151439		2695.816338	0.00	0.9997
vessel T 0320T N	1.089737923		2695.816337	0.00	0.9997
vessel T 0345LK	1.456445897		2695.816337	0.00	0.9996
vessel T 0350T	1.020131298		2695.816338	0.00	0.9997
vessel T 0359T	1.385793586		2695.816337	0.00	0.9996
vessel T 0360LK	1.082635800		2695.816338	0.00	0.9997
vessel T 0429T N	1.317060492		2695.816338	0.00	0.9996
vessel T 0440K	-0.177385167		2695.816408	-0.00	0.9999
vessel T 0566S	1.037931650		2695.816338	0.00	0.9997
vessel T 0569LK	0.895313101		2695.816338	0.00	0.9997
vessel T 0805T	1.319005471		2695.816338	0.00	0.9996
vessel T 0854T	1.691674553		2695.816337	0.00	0.9995
vessel VA0002K	1.417787956		2695.816338	0.00	0.9996
vessel VA0016S	-0.560243930		2695.816338	-0.00	0.9998
vessel VA0034K	0.984847827		2695.816341	0.00	0.9997
vessel VA0041K	0.873282839		2695.816345	0.00	0.9997
vessel VA0046K	-1.057852182		2695.816360	-0.00	0.9997
vessel VA0057K	0.867774429		2695.816338	0.00	0.9997
vessel VA0066K	0.654604524		2695.816338	0.00	0.9998
vessel VA0079K	0.914179868		2695.816340	0.00	0.9997
vessel VA0087K	0.813303405		2695.816339	0.00	0.9998
vessel VA0090FS	0.714262747		2695.816344	0.00	0.9998
vessel VA0095K N	0.073359159		2695.816369	0.00	1.0000
vessel VA0120K	1.185983631		2695.816338	0.00	0.9996
vessel VA0156K	-0.210589189		2695.816356	-0.00	0.9999
vessel • 0001H	0.801212869		2695.816339	0.00	0.9998
vessel • 0061H	0.761453277		2695.816338	0.00	0.9998
vessel • 0199H	0.260353209		2695.816359	0.00	0.9999
month 1	0.219647268	B	0.009181	23.92	<.0001
month 2	0.172608599	B	0.009564	18.05	<.0001
month 3	0.288462707	B	0.008949	32.23	<.0001
month 4	0.212675891	B	0.008099	26.26	<.0001

month 5	0.144735766	B	0.007694	18.81	<.0001
month 6	0.137971617	B	0.007661	18.01	<.0001
month 7	0.082324774	B	0.007708	10.68	<.0001
month 8	0.022365260	B	0.007741	2.89	0.0039
month 9	-0.150974022	B	0.007958	-18.97	<.0001
month 10	-0.380916101	B	0.008635	-44.11	<.0001
month 11	-0.183429099	B	0.008392	-21.86	<.0001
month 12	0.000000000	B	.	.	.