



Raajat pillugit biologit siunnersuinerat 2015

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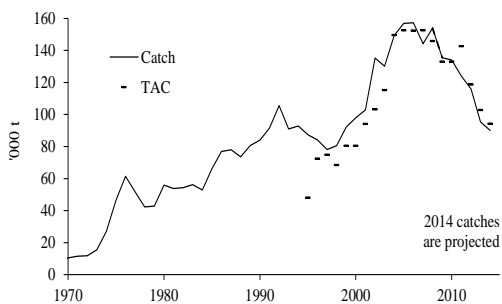
Kitaata Tunullu imartaanni 2015-imi raajartassiissutigineqarsinnaasut pillugit biologit siunnersuinerannik ilisimatitsissut

Kalaallit Nunaata kitaata imartaanni raajaqassuseq appariartuinnavippoq, taamaattumik NAFO/ICES-imit 2015-imit raajartassiissutigineqarsinnaasutut innersuussutigineqarput 60.000 tonsit. Nunatta kitaata imartaanni 2013 aamma 2014-imi raajartassiissutigineqarsinnaasutut innersuussutigineqarput ukiumut 80.000 tonsit.

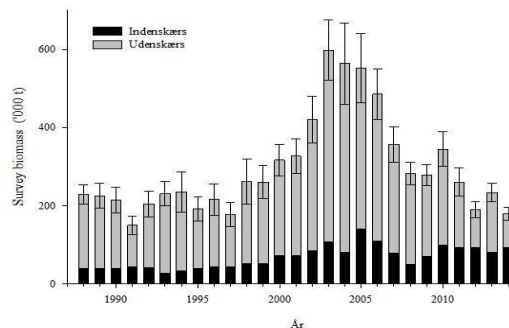
Tunup imartaanni 2015-imit raajartassiissutigineqarsinnaasutut innersuussutit 2014-imit innersuussutigineqartunit allannguuteqaratik 2.000 tonsiupput.

Kalaallit Nunaata kitaa: 2015-imit pisassiissutigineqarsinnaasut makkuninnga tunngaveqarluni aaliangersagaapput:

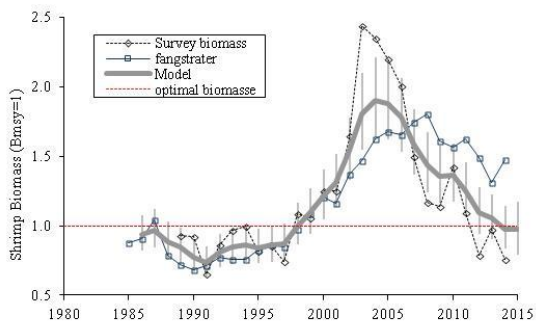
- Raajat oqimaassusinnorlugu amerlassusiat appariartuaarsinnarpoq – avataani malunnaatilissuarmik appariarlutik
- Raajaaqqanik aalisarneqarumaalersussanik takkussuttoqarnera appasippoq
- Raajaqassuseq siaruarsimavallaarunnariartorpoq, raajat eqimanerulerput
- Raajaqarfiusuni saarullit (pingaartumik kitaata imartaata kujataatungaani) oqimaassusinnorlugu amerlassusiat ukiuni kingullerni pingasuni qaffariarsimavoq, taamaalillunilu saarullit raajanik nerisaqarnermikkut ilanngartuiuarnerat qaffasiinnassangatinneqarluni



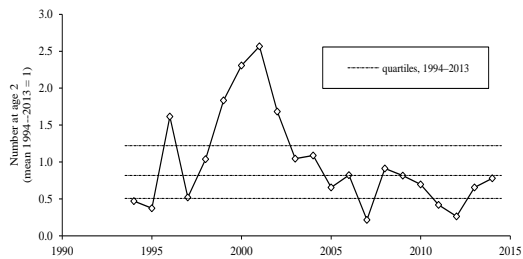
Takuss.1. Kitaa. Pisasartut tamakkerlugit ('000 tons)



Takuss.3. Kitaa. Misissuiner. peqassuseq oqimaassusinnng.



Takuss 2. Kitaa. Naatsorsuinerit peqassuseq oqimaassusinn.



Takuss.4. Kitaa.Raajat marlunnik ukiullit amerlassusiat – misissuinerit 1994-2014

Kalaallit Nunaata kitaata imartaani raajarniermut tunngatillugu SIUNNERSUINEQ

Naatsorsuinerit missiliuussinerat naapertorlugit 2015-imi pisat 60.000 tonsit sinninngippagit, taava raajaqassuseq ajunnginnerpaamik inissisisimaffimmiiniissinnaassaaq (B_{msy}), qaffakkiartorsinnaaqqilersinnaanissaminullu periarfissaqassalluni. Taamaattumik ilisimatuussutsikkut tunngavilersukkamik innersuussutigineqarpoq 2015-imi raajartassat 60.000 tonsit qaangertariaqanngikkaluarat (ataatungaantitoq takuuk¹).

Raajarnierup saniatigut saarulliillu raajatortarnerisa sanitigut raajaqassuseq allanit pissutsinit ilisimaneqanngitsunit sunnerneqartarpoq, soorlu immap nillissusianit kissassusianilluunniit, raajat pinngortitaassusiannut tunngassutillinnit, uumasogatigiiat allat raajatortarsinnaasut ilisimaneqanngikkallartut ilanngartuinerannillu. Tamakku ilisimasaqarfigineqanngikkallartut sunniutigisinnaasaat paasisaqarfiginiarlugit biologit suliniartuarsinnarput, taamaalluni siunissami ilisimatuussutsikkut siunnersuisarnissani tamakku sunniutaat ilanngullugit siunnersuisoqartarniassammat.

Siunnersuinerit tunngatillugu tunuliaqutaasut naatsumik ataatungaani saqqummiunneqassapput (siunnersuinerup tuluttoortaa ilanngussaq 1-imi atuarneqarsinnaavoq):

Pisaasartut 1998-imiit 80.000 tonsiniit 2008 tungaanut qaffakkiartorsimapput ukioq taanna 150.000 tonsit pisarineqarsimallutik kingornalu pisassiissutigineqartartut appariartuinnarsimanerat malillugu ikiliartorsimallutik. 2014-imi pisat 90.000 tonsiussangatinneqarput (Takussutissaq 1). Nalunaaquttap akunnerani ataatsimi kalinnermi **pisat kiilunngorlugit annertussusiat** (CPUE) peqassutsip tamarmiusup inissisisimaffianik takussutissiisarpur, toqqaannanngikkaluartumik raajat eqimassusiannik takussutissiisarmata. Taakku takutippaat peqassuseq 2008-miilli appariartuaaginnavissimasoq, kisiannili 2014-imi 2013-imut sanilliullugu siuriaateqalaarsimalluni. Raajarnierup ukiut ingerlaneranni

¹ 2015-imi pisat 60.000 tonsiuppata peqassutsip appariartulernissaanut 35 %-imit appasinnerusumik aarleqquteqartoqarsinnaavoq. Siunnersuussikkut suliareersut takutippaat maanna raajarniermi raajat raajaqassutsimit tamarmit ilanngartuutaasartut (aalisarnermit pisaasartut sunniutaasartullu allat peqqutaallutik peqassutsimit ilanngartuutaasut) eqqarsaatigalugit peqassutsip tamarmiusup oqimaassusinngorluni aalisarnermut pitsaanerpaamik tunniusisinnaffiata (B_{msy}) nalaaniinnissaanut imaluunniit qaangersimanissaanut 35 %-imik aarleqqutitaqartoq.

sumiiffinnut ikinneruartortunut eqimanerusunullu katersuukkiartuaarsimavoq, ullutsinnilu Stor Hellefiskebankip avannaatungaani Disko Bugtimilu raajarniartoqarnerulluni.

2014-imi biologit misissuinerisa ersersippaat peqassuseq ukiunut siuliinut sanilliullugu appariarsimasoq (Takussutissiaq 3). Avataani raajaqassuseq pingaartumik appariaateqarsimavoq, **peqassuseq tamarmiusoq oqimaassusinnorlu** 1988-imiit aatsaat taamak appasitsigisuumiilersimalluni. Sinerissalli qanittuani peqassuseq taamaaginnartutut isikkoqarpoq, Disko Bugtimimi 2014-imi naatsorsuinerit tunngavigalugit peqassuseq agguaqatigiissitsinermut sanilliullugu qaffariarsimavoq. Raajaqqanik siunissami aalisarneqarsinnaalersussanik **takkussuuttoqarnera** ukiuni kingulliunerusuni appasissumiippoq, naatsorsuutigineqarporlu tamaattoqarnera aalisarneqarsinnaasut amerlassusiannut pitsaanngitsumik sunniuteqarumaartoq. Ukiunik marlunnik pisoqaassusillit ukiuni kingulliunerusuni agguaqatigiisillugu amerlassusaasartunit ikinnerupput, aatsaallu taamak pingasunik sisamanillu ukiunik pisoqaassusillit ikitsigipput. Taamaattumik siunissami aggersumi qanittumi aalisarneqalerumaartussanik **takkussuuttoqarnera** appasittumiiginnassangatinneqarpoq. Maannalu raajaqassuseq tamakkiisumik qiviarlugu arnarluit angutivissanit amerlanipilussuullutik.

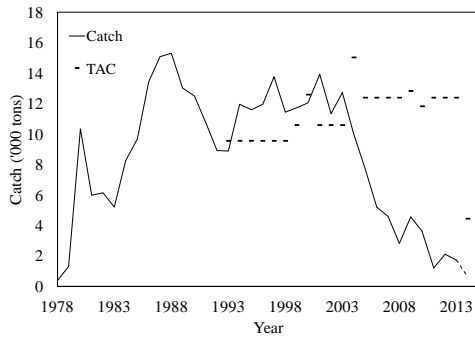
Qarasaasiaq atorlugu peqassutsimik naatsorsuusiortoqartarpoq aammalu peqassutsip pisaasartut annertussusiat naaperlorlugu ineriartorfigisinnaasaanik naatsorsuut missingersuusiortarluni, taamaaliorniarnermilu pisat (tassa peqassutsimut tamakkiisumut ilanngaasut), misissuinerit paasissutissat katersat, aammalu saarullit oqimaassusinnorlugu amerlaassusiannut (saarullit raajartortarmata) tunngassutillit kisitsisit atorneqartarlutik.

Qarasaasiaq atorlugu naatsorsuutip aamma takutippaa peqassuseq 2014-ip naanerani tamakkiisumik tunniussisinnaassutsimi (B_{msy}) ataaniilersimassasoq, taamaalilluni peqassutsip tamarmiusup nammassinnaasani sipporlugu (tassa peqassutsimit ilanngaataasut tamarmiusut piujuartitsinermik tunngaveqarluni ilanngartuutaasinnasunit (Z_{msy}) qaffasinnerulissammata) pilissalluni.

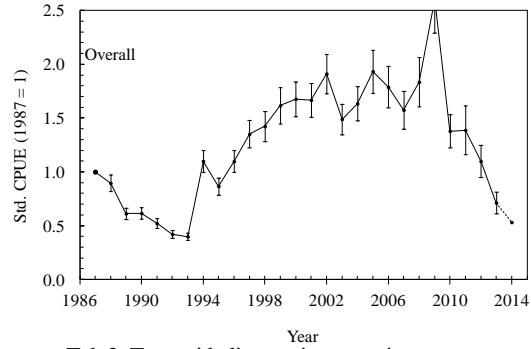
Saarullit oqimaassusinnorlugu amerlassusiat ukiuni kingulliunerusuni qaffakkiartorsimavoq, taamaalilluni raajat saarullinnit nerineqartartut amerlanerulerlutik. 2014-imi saarullit oqimaassusinnorlugu amerlaassusiat 2012-13-imilu amerlassusiannit qaffasinnerulaarsimavoq.

Tunup imartaani raajarniarnernut tunngatillugu siunnersuineq (siunnersuinerup tuluttoortaa ilanngussaq 1-mi ataatungaani atuarneqarsinnaavoq)

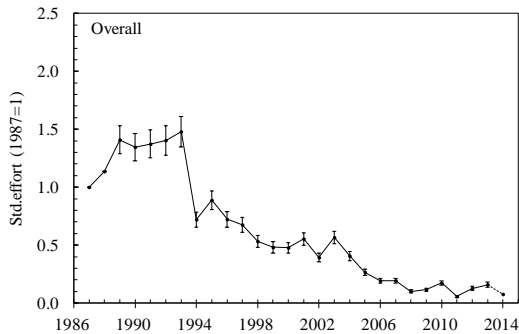
Tunup imartaani raajarniarnermi 2015-imut pisassiissutigineqarsinnaasutut innersuussutit allannguuteqaratik 2.000 tonsiupput. Biologit misissuinerannit tamanilu raajarniarnermiit paasissutissat pissarsiarineqartut naapertorlugit erseqqippoq tamaani raajaqassuseq appasittuarsinnartoq, naak pisarineqartartut ukiuni kingullerni appasikkaluartut. Peqassutsip appariartuaarnera saarullit amerliartornerinut naapertuuppoq (saarullit raajartortarmata)



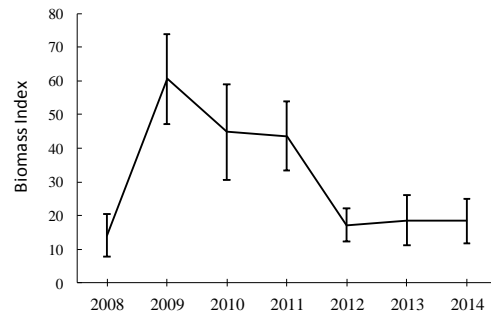
Tak. 1. Tunumi pisat



Tak 2. Tunumi kalinnermi ataats. pisaasartut



Tak. 3. Peqass. tamarm. ilanngaataasartut



Tak. 4. Misiss. Peqass. oqimaassusinnngorlugu

Siunnersuinnermut tunngasut

Siunnersuinerit NAFO/ICES-ip kingullermik Nuummi 10.-17- september 2014 ataatsimiinnerani suliarineqarput. Pinngortitaleriffik katillugit allaaserisanik arfineq pingasunik saqqummiussaqqarpoq, taakkulu nunatta imartaani raajartassiisutissatut siunnersuutitut tunuliaqutaapput. Ataatsimiinnermi Atlantikup Avannaani tamarmi raajaqassuseq sammineqarpoq, nalunaarusiornermilu Flemish Cap-imi, Grand Bankimi, Barentshavimi Skagerak-imilu raajaqassutsit killiffiat taakkunanilu raajartassiisutigineqarsinnaasutut innersuussutit ilanngunneqarput.

Ataatsimiinnermi ilisimatusartartut 17-it nunanit Canada, EU, Norge, Rusland aammalu nunatsinniit peqataapput. Pinngortitaleriffimmiit peqataapput seniorforsker Michael Kingsley, ilisimatusartartoq Nanette Hammeken Arboe, ilisimatusartartoq AnnDorte Burmeister aamma Immikkoortortami pisortaq Helle Siegstad. Siunnersuinerit pisortatigoortut NAFO-p nittartagaani pissarsiarineqarsinnaapput - www.NAFO.int
NAFO-mit siunnersuinerit pillugit nalunaarussiaq tuluttoortoq A4 quppernerit 100-t sinneqartup assilineri Aalisarnermut Aqutsisoqarfimmut ilanngullugu nassiunneqarpoq.

Siunnersuinerup tunuliaqutai pillugit Pinngortitaleriffik aqutsisunut raajarnianullu saqqummiilluni ataatsimeeqatigiinnissamut aggersaassaaq, tassani apeqquteqartarnerit ilisimasaniillu saqqummeeqatigiinnerit ingerlanneqarsinnaassapput.

Inussiarnersumik inuulluaqqusillunga

Helle Siegstad, Immikkoortortami pisortaq

Bilag 1: Northern Shrimp in Subarea 1 and Div. 0A

Advice September 2014 for 2015



Recommendation

Previous work has shown that a maintained mortality risk of 35% is low enough to keep stock levels safely at or above B_{msy} . A catch of 60 000 t in 2015 would entail an estimated mortality risk below 35% and is projected to allow stock growth. Scientific Council therefore advises that catches in 2015 should not exceed 60 000 t.

Management Objectives

Scientific Council is aware of the Greenland management plan for shrimp and of general management objectives specified in the Greenland Fisheries Act; however the contents of these have not been conveyed to the Council. Canada requested Scientific Council to provide advice on this stock within the context of the NAFO Precautionary Approach Framework (SCS Doc. 13/04).

Advice is based on risk analysis coming from a quantitative model, and on qualitative evaluation of biomass and stock-composition indices.

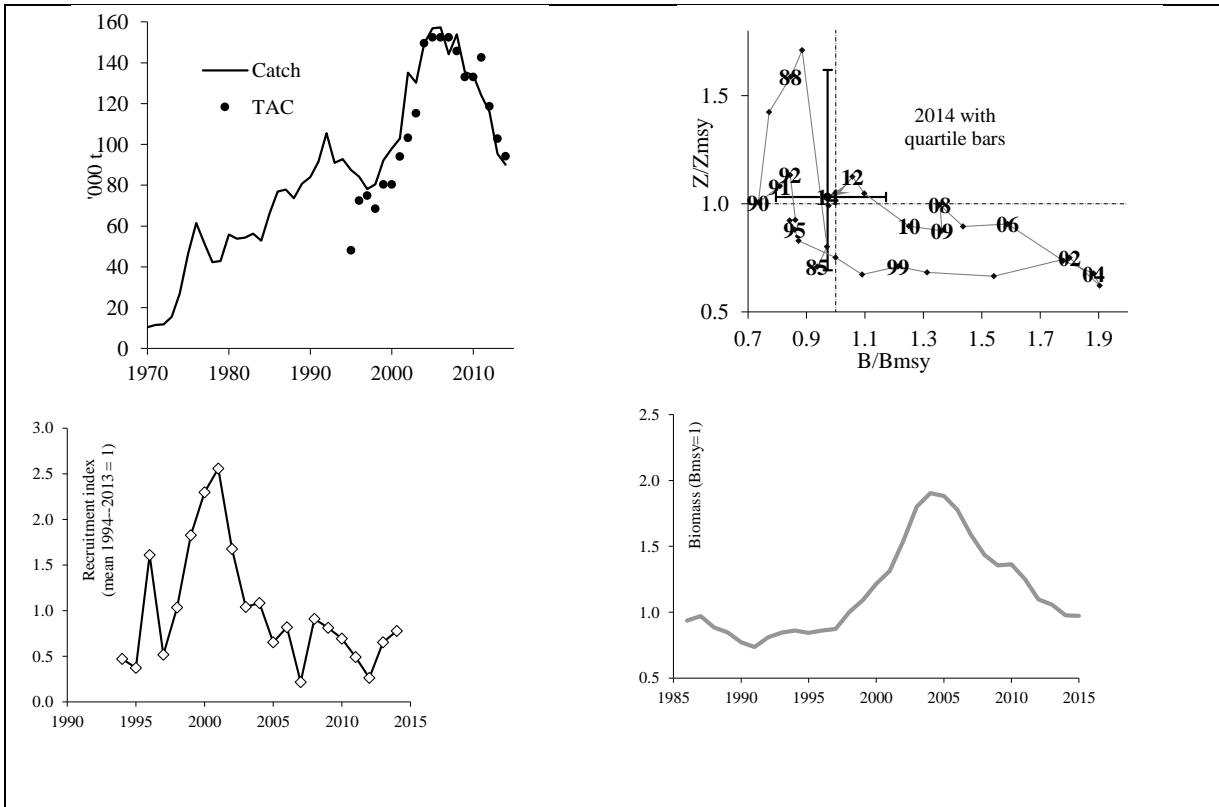
<i>Objective</i>	<i>Status</i>	<i>Comment/consideration</i>
Apply Precautionary Approach		Stock status is both estimated and forecast relative to precautionary reference points  OK

Management unit

The stock, considered distinct from all others, is distributed throughout Subarea 1, extends into Div. 0A east of 60°30'W, and is assessed as a single stock.

Stock status

Biomass is estimated to have been declining since 2004, and at the end of 2014 is projected to be near B_{msy} with a risk of being below B_{lim} of <2%. The risk that total mortality in 2014 will exceed Z_{msy} is estimated at 53%.



Reference points

B_{lim} is 30% of B_{msy} and the limit reference point for mortality is Z_{msy} (FC Doc. 04/18).

Projections

Projections for 2015 were made with catch levels ranging from 50 to 90 Kt/yr and a cod stock biomass at 50 Kt.

50 000 t cod	Catch option ('000 tons)						
	50	55	60	65	70	80	90
Risk (%) of transgressing:							
B_{msy} , end 2015	50	51	51	52	52	53	54
2016	47	47	48	49	49	52	53
2017	45	46	47	48	49	52	54
B_{lim} , end 2015	3	3	3	3	3	3	3
2016	3	4	4	4	4	4	4
2017	5	5	5	5	5	5	6
Z_{msy} during 2015	27	30	32	36	39	47	53
2016	28	30	33	37	40	47	54
2017	28	31	34	37	41	47	55

Assessment

The analytical assessment was run with the same methods as in 2011–13, with the exception that cod-stock biomass index series were combined within the model, and with updated data series.

The next assessment is scheduled for 2015.

Human impact

Mainly fishery related mortality has been documented. Other sources (e.g. pollution, shipping, oil-industry) are considered minor.

Biological and Environmental Interactions

Cod is an important predator on shrimps. This assessment incorporates this interaction.

Fishery

Shrimps are caught in a directed trawl fishery. Bycatch of fish in the shrimp fishery is around 1% by weight. The fishery is regulated by TAC.

Recent catches and TACs (t) have been as follows:

	2007	2008	2009	2010	2011	2012	2013	2014
NIPAG	144 190	152 749	135 458	133 990	123 985	115 975	95 380	90 000 ¹
STATLANT 21	144 123	148 550	133 990	129 179	123 195	115 080	91 802	—
Enacted TAC ²	152 417	145 717	132 987	132 987	142 597	118 596	102 767	94 140

¹ provisional—projected to year end; ² sum of TACs autonomously set by Canada and Greenland.

Effects of the fishery on the ecosystem

Measures to reduce effects of the fishery on the ecosystem include area closures and moving rules to protect sponges and cold-water corals and to reduce bycatch, and gear modifications to reduce damage to benthic communities, and, again, to reduce bycatch.

Special comments

The future trajectory of the stock is likely to depend on the evolution of the stock of cod, which has recently been increasing and is difficult to predict.

The stock comprises a low proportion of males, and recruitment to both the fishable and the spawning stocks in the short term are expected to remain low.

Source of Information

SCR Docs 04/75, 04/76, 08/6, 11/053, 11/057, 11/058, 12/44, 13/54, 13/56, 13/57, 13/58, 13/59, SCS Doc. 04/12.

Bilag 2: Northern Shrimp in Denmark Strait and off East Greenland

Advice September 2014 for 2015

Recommendation

In 2013 Scientific Council advised that catches should not exceed the current catch level of 2 000 t, and there is no basis to change this advice.

Management objectives

Scientific Council is aware of general management objectives specified in the Greenland Fisheries Act; however the contents of these have not been conveyed to the Council.

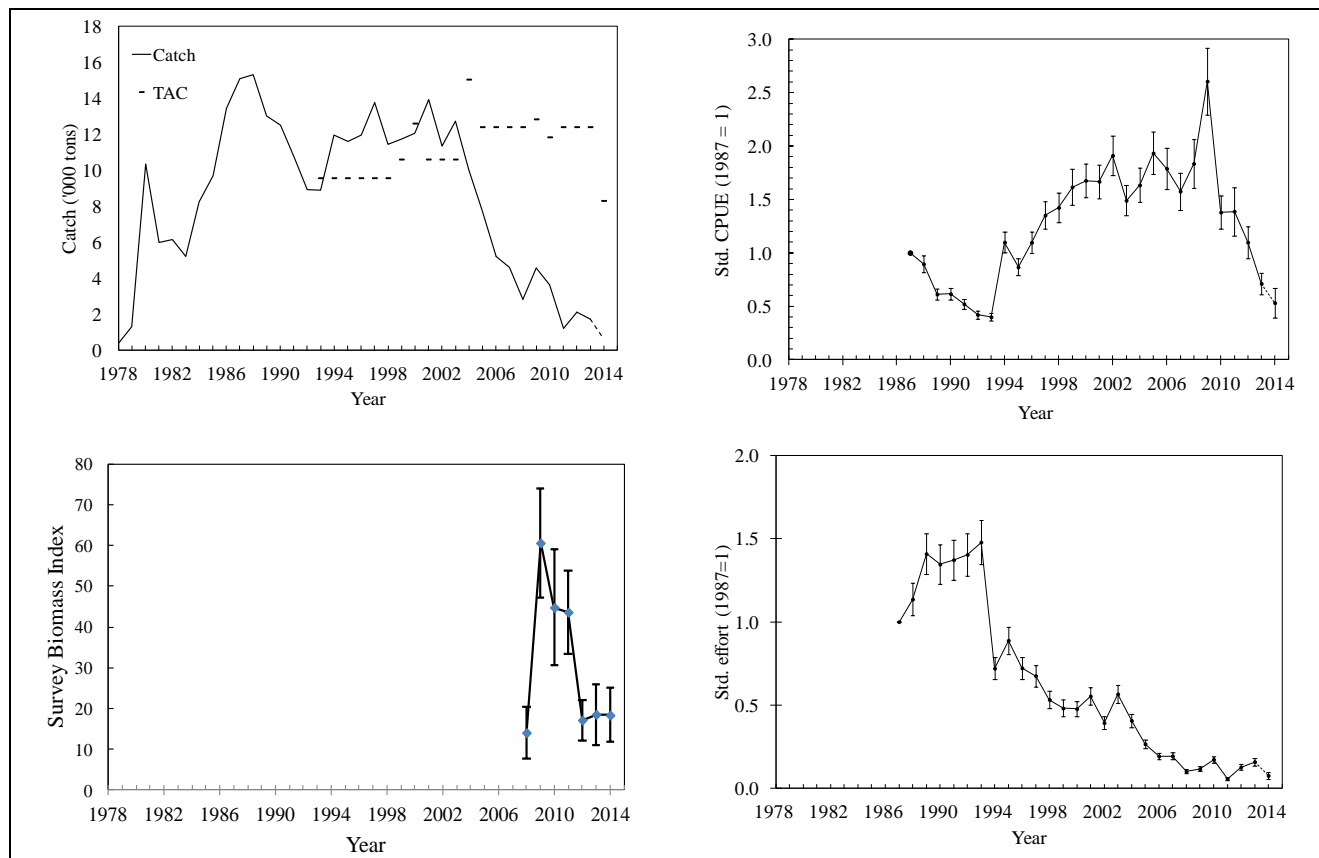
Advice is based on qualitative evaluation of biomass indices in relation to historic levels.

Management unit

The shrimp stock is distributed off East Greenland in ICES Div. XIVb and Va and is assessed as a single population

Stock status

The stock size remained at a very low level in 2014 despite several years of very low exploitation rates.



Reference points

No reference points have been established for this stock

Projections

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

Assessment

No analytical assessment is available. Evaluation of stock status is based upon interpretation of commercial fishery and research survey data.

Next full assessment is scheduled for 2015.

Human impact

Mainly fishery related mortality has been documented. Other sources (e.g. pollution, shipping, oil-industry) are considered minor.

Biological and Environmental Interactions

Cod is an important predator on shrimp. The cod stock has been increasing in East Greenland waters in recent years.

Fishery

Shrimp is caught in a directed trawl fishery. The fishery is regulated by TAC and bycatch reduction measures include move on rules and Nordmøre grates.

Recent catches were as follows:

	2007	2008	2009	2010	2011	2012	2013	2014 ¹
NIPAG	4600	2794	4555	3735	1235	2109	1702	609
SC Recommended TAC	12400	12400	12400	12400	12400	12400	12400	2000
Enacted TAC	12400	12400	12835	11835	12400	12400	12400	8300

¹ To July

2014

Effects of the fishery on the ecosystem

Measures to reduce effects of the fishery on the ecosystem include move-on rules to protect sponges and cold-water corals, and gear modifications to reduce damage to benthic communities.

Source of Information

SCR Doc. 14/057, 14/060

Bilag 3: Harvest Control Rules and B_{msy}
kommer