

1) How does GINR's dep, of fish and shellfish look at the future use of local knowledge to inform decision makers about the environment and the living resources in Greenland: Should local knowledge be used further to inform decision makers?

... It's not only the law... it's a good idea!

How?

Good question.... There are several ways and some are already implemented...

2) Which challenges and opportunities are available to link local and scientific data when relevant?

Local knowledge is not homogeneous....

3) How can the economic and organisational sustainability of cooperation programs and lokalmanagement be secured?

Communication should be easy, direct and mutually beneficial....

(online, personal and with economic purpose or compensation)

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1) Aalajangiisartut ilisimatinnissaannut siunissami sumiiffikkaani ilisimasat atornissaannut GINR Fisk og Skaldyr (Pinngortitaleriffimmi Aalisakkanut Qalerualinnullu Immikkoortoqarfik) qanoq isiginnippa: Aalajangiisartut ilisimatinnissaannut sumiiffikkaaneersut ilisimasaat suli annermik atugaalissappat?

... Inatsisaannaanngilaq ... tassaavoq isumassarsiatsialak! Qanutut?

Apeqqut pitsak Periutsit arlaliupput, ilaallu atuutsinneqalereerput ...

2) Attuumassuteqartillugit sumiiffikkaanit ilisimatusarnikkullu paasissutissat ataqatigiinnissaannut sunik ajugaaffiginiagassaqarlunilu periarfissaqarpa?

Sumiiffikkaanit ilisimasat assigiiartuunngillat ...

3) Suleqatigiinnissamut ingerlattakkani sumiiffikkaanilu aqutsinerni aningaasaqarnikkut kattuffilersuinikkullu piujuartitsineq qanoq isumannaarneqarsinnaava?

Attaveqatigiinneq paasiuminassaaq, toqqaannartuulluni, illua'tungeriinnilu iluaqutaassalluni ... (qarasaasiakkut, inuit naapinnerisigut, aammalu aningaasaqarnikkut siunertalittut imaluunniit taarsiiffiginninnikkut)



Why don't scientists listen to what fishermen are saying ???

Sooruna aalisartut oqaatiginiagaat ilisimatusartut tusarumaneq ajoraat ???

Scientific advice must be based on Data, not on what you think!
Ilisimatusarnikkut siunnersuisarneq illit isummatit pinnagit paasissutissanik tunngaveqartussaavoq!

The fishermen say that there is more fish than ever!

The fishermen say that the fishery is not so good because of climate change, but we expect it to change.

There is fewer, but still plenty of fish !...

I have a new boat and catch better than ever!

It was better in the old days!

... too many ...

... are small

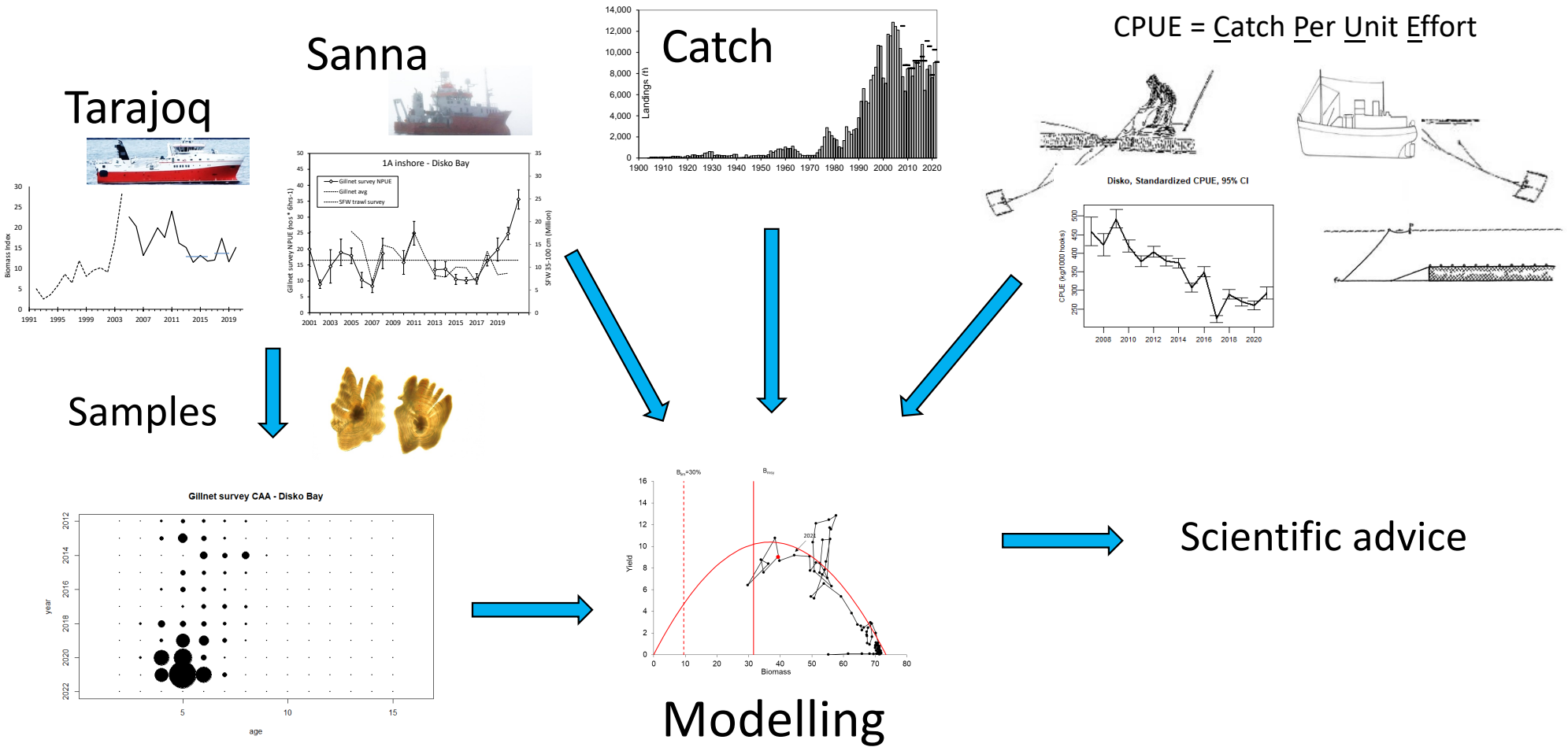
It is too warm! ... this year there was lots of ice!

I have heard that there are lots of fish

NAFO Northwest Atlantic Fisheries Organization

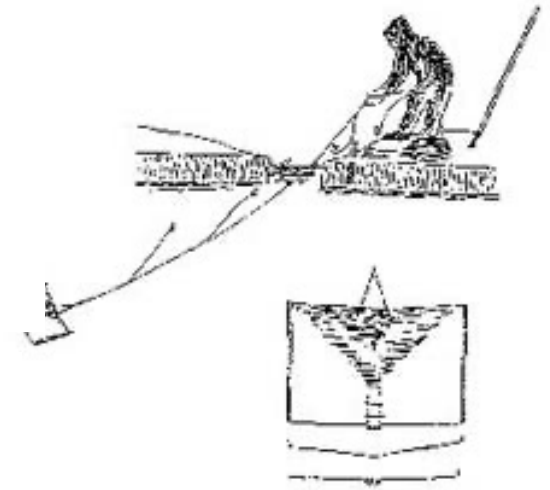
What data is already used for scientific advice?

Ilisimatusarnikkut siunnersuisarnermi paasissutissat sorliit atorreqareerpat?



How many times per year do I ask
"how was your fishery today"?

Ukiumi qasseriarlunga aperisarpunga
"ullumikkut aalisarnerit qanoq ippa"?



How many observations are used to calculate the CPUE index based on
longline fishery?

Ningittakkersorluni aalisarnermik tunngaveqartumik CPUE-indeksimik
naatsorsuinnermut nakkutilliinerit qanoq amerlatigisut atorneqarpat?

For each fishing event both catch, area,
effort (number of gear and time) and much
more is registered and transferred to a
governmental database (LULI).

- Logbook (haul by haul)
- Factory (by landing event)

CPUE = Catch Per Unit Effort

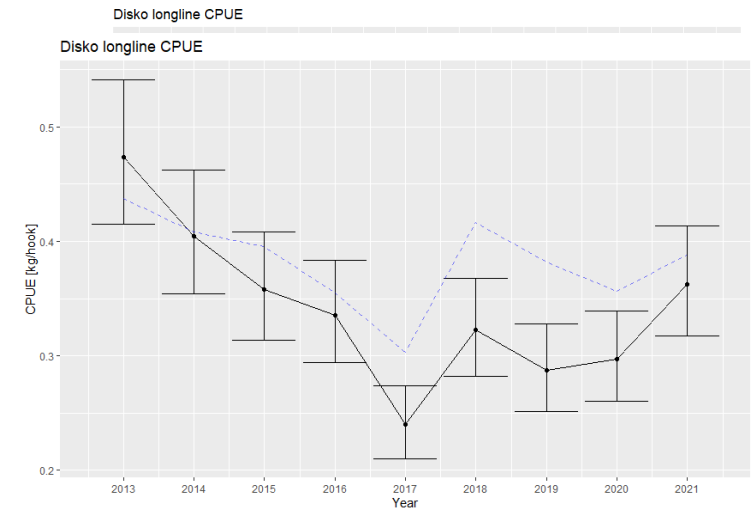
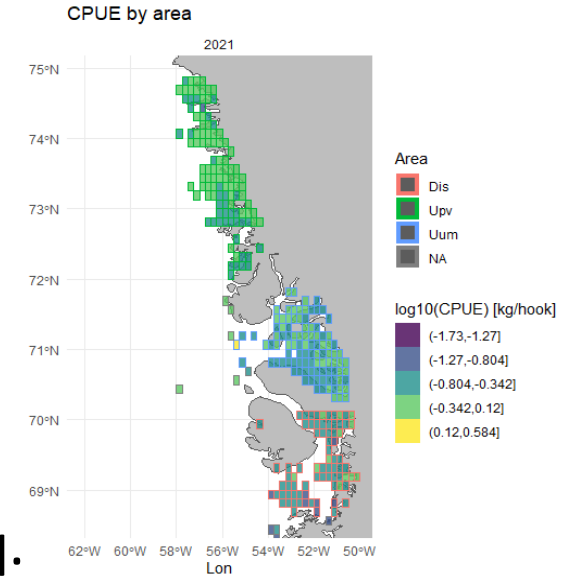
	Dis	Upv	Uum
2013	13543	10661	12062
2014	12785	11432	11865
2015	14945	11345	13126
2016	14831	15419	14892
2017	11889	14179	16564
2018	12745	14876	17002
2019	15319	16610	17588
2020	14360	15906	17645
2021	15939	14596	14839

Disko Bay factory landing CPUE

Qeqertarsuup Tunuani aalisakkeriviliaassat CPUE

- A raw average does not account for the effect of fishing ground, month or fisherman.
- A general linear model is used to do that ...
- Suliarisaanngitsumik agguaqatigiissitsineq aalisarfiup sunniutaanik, qaammammik imaluunniit aalisartumik ilaqartitsinngilaq.
- Tamatigoortutut ingerlaartunut iluseq taamaaliornissamut atugaasarpoq ...

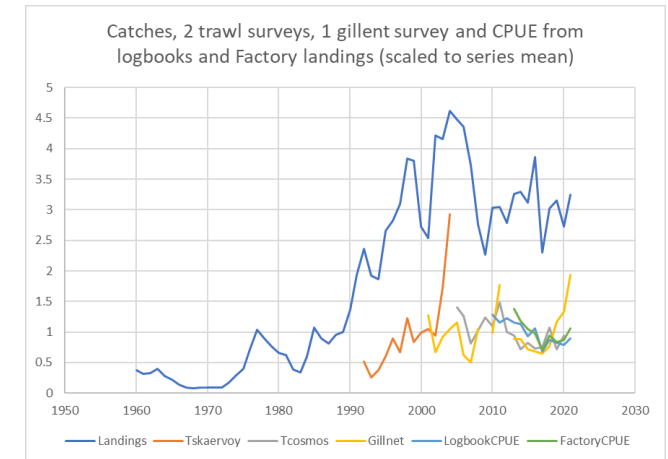
```
glm(log(CPUE) ~ factor(Year) + factor(Month)  
+ factor(Vesseltype) + factor(Fieldcode))
```



Is there a link between fishery independent data (scientific research vessel surveys) and data from the fishery or industry?

Aalisarnermut tunngasuunngitsutut paasissutissanit (angallatit ilisimatusartut atugaat), aamma aalisartunit imaluunniit suliffissuaqarfimmit paasissutissat akornanni ataatigiissoqarpa?

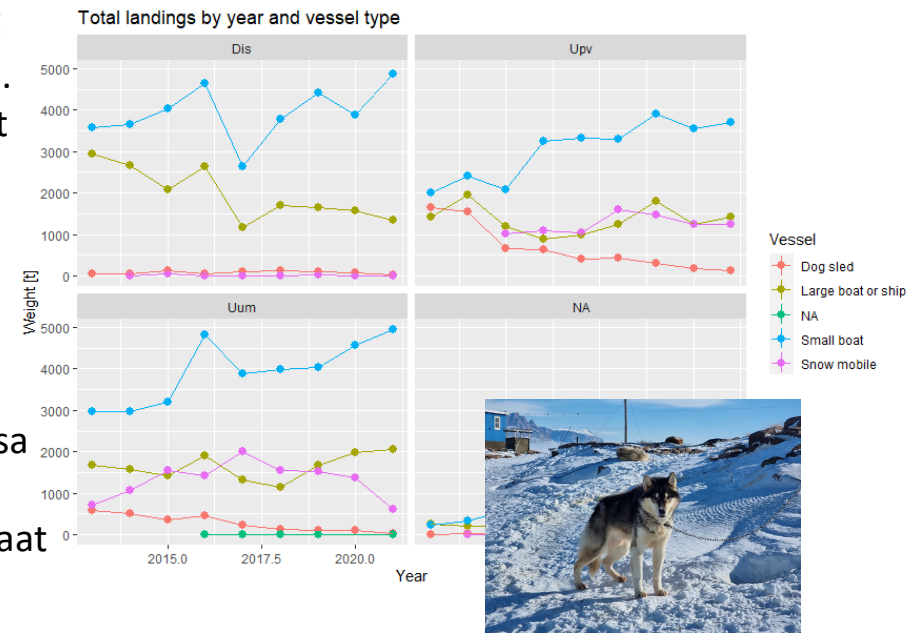
- Similar development in scientific surveys using different gears.
- Similar development commercial CPUE and scientific surveys. (scientific surveys predicts CPUE experienced by fishermen)
- Atortut assigiinngitsut atorlugit ilisimatusarnermi misissuinerni assingusumik ineriartortitsineq.
- Niuernermi CPUE-mi, aamma ilisimatusarnermi misissuinerni assingusumik ineriartortitsineq. (Ilisimatusarnermi misissuinerit aalisartut misigisaannik CPUE-nik siulittuisarput).



What else can be drawn from data already available?

Paasissutissanit pissarsiarineqarsinnaareersunit aamma suut paasineqarsinnaappat?

1. Renewal of the small boat fishing fleet.
2. Gradual change from use of dogs to snowmobiles.
1. Angallateerarsortut angallataasa nutarsagaaneri.
2. Qimmit atorneriniit qamuteralaat atugaaleriartuaarneri.



Ways to implement user knowledge ... Suggestions are welcome

Atuisartut ilisimasaannik atuutsitsileriaatsit ... Siunnersuutiniq pissarserusunnarpoq

- Information from stakeholders in reports.

A report from the local organizations (local organizations like IAPP, SQAPK or Neqitaq or other local unions, can be put in assessment documents.

- Standardization of opinion.

Like CCI (Consumer Confidence Index) statistics of standardized questionnaires can be turned into indices of opinion.

- Scientist fishermen cooperation projects

Projects where scientist and fishermen work together improves mutual understanding.

- Nalunaarusiani soqutigisaqaqati-giinnit paasissutissat.

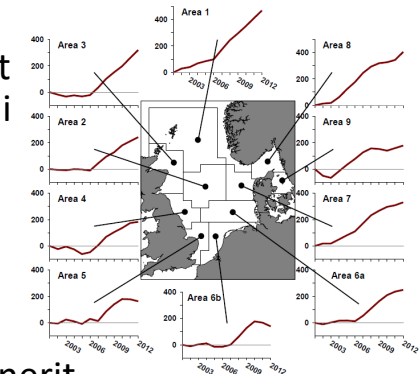
Nalilersuutitut allagaatini sumiiffikkaani kattuffinnit nalunaarut ilanngunneqarsinnaavoq (sumiiffikkaani kattuffiit soorlu IAPP, SQAPK, imaluunniit Neqitaq, sumiiffikkaaniluunniit kattuffigisat allat).

- Isummanik assigiissarinerit.

CCI (Consumer Confidence Index) assigalugu apeqqutinut assigiissaakkanut naatsorsueqqissarinerit isummanut nalileeriaaseqarfinngortillugit allanngortinneqarsinnaapput.

- Ilisimatusarnikkut aalisartunut suleqatigiiffissatut suliniutit.

Suliniutit ilisimatusartut aalisartullu suleqatigiiffigisaat illua'tungeriulluni paasinninnernik pitsanngorsaapput.



A stranded attempt for a perception of stock index..

“Stock’imik paasinninnermik” nalileeriaaseqarfimmik misiliineq taamaatitaq ...

Now data can be collected digitally instead of paper

Maanna pappialanut taarsiullugu qarasaasiakkut paasissutissat katersorneqarsinnaalerput

<p>1 Når du kigger 5 år tilbage i tiden. Hvordan er bestandens størrelse i dag i forhold til for 5 år siden ? Altså er det lettere eller sværere at fange fisk i dag, end det var for 5 år siden? Skal du fiske mere eller mindre for at opnå samme fangst?</p>			<p>1 Ukiut tallimat kingumut qiviassanguit, aalisakkat amerlassusaat mannakkumut qanoq sanilliunneqarsinnaava? Ullutsinni aalisakkat pisariuminarneruppat imaluunniit pisariuminaanneruppat? Illutsinni annertunerusumik imaluunniit annikinnerusumik</p>		
I dag er bestanden mindre end for 5 år siden. Der er ikke så mange fisk og de er mindre.	I dag er der lige så mange fisk som tidligere.	I dag er bestanden større. Der er flere fisk og de er større end tidligere.	ukiut tallimat kingumut sanilliutissangaanni ullutsinni aalisakkat ikinnerullutillu	ukiut tallimat kingumut sanilliutissangaanni ullutsinni aalisakkat amerlaqatingiinnarpaat	ukiut tallimat kingumut sanilliutissangaanni ullutsinni aalisakkat anginerullutillu
<p>2 Når du kigger 1 år tilbage i tiden. Hvordan er bestandens størrelse nu i forhold til for 1 år siden ? Altså er det lettere eller sværere at fange fisk nu, end det var sidste år og skal du fiske mere eller mindre for at opnå samme fangst?</p>			<p>2 Siornamut qiviassanguit, aalisakkat amerlassusaat maannakkumut qanoq sanilliunneqarsinnaappat? Ullutsinni aalisakkat pisariuminarneruppat imaluunniit pisariuminaanneruppat? Illutsinni annertunerusumik imaluunniit annikinnerusumik</p>		
Der er ikke så mange fisk i dag. Bestanden er gået tilbage siden sidste år.	Bestanden har samme størrelse som tidligere.	Der er flere fisk nu og bestanden er vokset siden sidste år.	siornamut sanilliutissangaanni ullutsinni aalisakkat	siornamut sanilliutissangaanni ullutsinni aalisakkat	siornamut sanilliutissangaanni ullutsinni aalisakkat
<p>3 Når du kigger fremad. Tror du at der vil være et bedre eller dårligere fiskeri på dine normale fiskepladser til næste år. Altså om du kan fange den samme mængde fisk, hvis du fisker på samme måde som i år?</p>			<p>3 Siumut takorluuissanguit. Aappaangu aalisarnej pitsanngoriassua imaluunniit ajorseriassua aalisarfigisartakkanni? Aappaangu assiganik pisaqarniarlutit aalisarnerussuit imaluunniit aalisannginnerusuuit?</p>		
Det bliver dårligere og der mangler nye årgange.	Fiskeriet bliver det samme som i år.	Fiskeriet bliver bedre og der er gode årgange på vej.	Aappaangu aalisarnej ajorseriassooq	Aappaangu aalisarnej taamaginnassooq	Aappaangu aalisarnej pitsanngoriasooq
<p>4 Når du kigger fremad. Vil det være en god ide at hæve kvoten og at tillade flere fartøjer/licenser eller er det nødvendigt at begrænse fiskeriet på en eller anden måde af</p>			<p>4 Siumut qiviassanguit . Pisassat amerlineqarnissaat aalisarnermullu akuersissutit amerlineqarnissaat pissusissamisoopa imaluunniit arlaatingut killillersuisoqartariaqarpa?</p>		
Det er nødvendigt at kapaciteten, kvoten eller antallet af licenser begrænses.	Det nuværende niveau er fornuftigt og kan fortsætte.	Vi kan fiske mere. Der er plads til mere kapacitet, større kvote eller flere licenser.	pisariqarpoq pisassiissutit imaluunniit aalisarnermut akuersissutit killillersorneqarnissaat	massakkut pisassiissutit imaluunniit aalisarnermut akuersissutit naammaginantumik	aalisarnerusoqarsinnaavoq . Pisassiissutit imaluunniit aalisarnermut akuersissutit annertusineqarsinnaapput
<p>5 Kommentar: Skriv forslag, problemer, bekymringer eller ide'er der bør arbejdes med:</p>			<p>5 Oqaaseqaatit: Siunnersuutit, Ajornartorsuutit, ernumassutit imaluunniit isumassarsiat aalisarnermut tunngasut uani ilanngunneqarsinnaapput:</p>		

Example: Removal of lost fishing gear

Assersuut: Aalisarnermi atortut katatat piarneqarneri

