

NAMMCO



COMMITTEE ON INSPECTION AND OBSERVATION

*16-17 February 2021
Online meetings*

REPORT



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0. SUMMARY

The Committee on Inspection and Observation (CIO) met online 16 and 17 February 2021.

Present were Guðni Magnús Eiríksson, Chair (Iceland), Ulla Svarrer Wang (Faroe Islands), Sofie Abelsen and Jesper Ødegaard Jakobsen (16 February), Amalie Jessen (17 February) (Greenland), Guro Gjelsvik and Hild Ynnesdal (Norway), and Charlotte Winsnes from the Secretariat.

Actions arising from the meeting:

- The Chair and the Secretary to investigate how and if statistical information could be extracted from the overview of recommendations, document NAMMCO/CHM-recommendations, in a useful / fruitful manner.
- The Secretary will clarify outstanding issues regarding the 2020 submission of data with the members concerned.

1. ADOPTION OF AGENDA AND REVIEW OF DOCUMENTS

The Chair, Guðni Magnús Eiríksson, opened the meeting for comments to the agenda. The agenda was adopted, and meeting documents reviewed. (Appendix 1)

2. ANNUAL REPORTING FROM MEMBERS

NAMMCO/Database-2020 contained the database up to and including the year 2020.

CIO reviewed the submitted data from 2020 from members countries on national control efforts. Some clarifications were needed, and it was agreed that these would be taken in dialog with the Secretariat and that the database would be updated accordingly.

The Chair noted that it might be prudent to re-evaluate the different data categories requested as some might be open for discussion with reference to usability on a general level, i.e. not applicable for all member countries.

3. OBSERVATION ACTIVITY

3.1 SCOPE AND RANGE OF OBSERVATIONS 2022

The FAC in its meeting in October 2020 reviewed a request from the CIO to increase the observation budget for 2022 to NOK 500,000. Responding to this the FAC had asked for more clarification on the added value of increasing the budget from the previously allocated NOK 300,000.

Document NAMMCO/CIO-2021-01/02 (Annex 1) was two-folded. It included a draft prepared by the Secretariat of the rationale behind the request to increase the observation budget above the NOK 300,000 (Part 1) and the proposal for observation activities in 2022 already agreed by the CIO (Part 2).

The proposal submitted by the CIO to the FAC meeting in October 2020 argued:

- To cancel the observation activities in 2021 due to the COVID-19 situation and transfer the allocated budget of NOK 300,000 for observation activities in 2021 to 2022.
- To allocate a further NOK 200,000 for observation activities in 2022, which combined with the carryover from 2021, brought the total budget available to NOK 500,000. It was argued that no observers had been active since the 2017 season, and NOK 500,000 would approximately represent the combined cost had the observation scheme been active in the 5 years 2018–2022. For information, the average annual expenditure from all active years is NOK 129,308 (1998–2007) and NOK 109,363 for the last 10 active observation seasons (2008–2017).

- The new observation scheme approved in 2019 introduced the option of “setting aside” allocated budgets for observation activities from several years to enable an increased effort in one specific year.

To qualify why an increased budget would give added value to the Observation Scheme it is necessary to look at the purpose of the Scheme. The provisions define the purpose as collecting reliable information on all kinds of hunting activities. From this it follows that the more reliable information collected, the greater value it has for NAMMCO. Information in turn is primarily obtained through contracting observers to go to certain areas and observe certain hunts, and by the CIO reviewing national legislation.

The interesting or critical factor is observation days. A higher budget can lead to a higher observation effort measured in days of observation given an optimal combination of number of observers and length of time each observer is contracted for. A higher observation effort means that more hunting events can be observed, and more information can be collected. When more information is collected, more robust and reliable conclusions can be drawn from the observation scheme to inform management.

The possibility of deploying more than one observer also creates the possibility that observation can take place at different locations and at different times, which enhances the probability of observing several hunts.

Currently the pool of available observers is 16 people. Using the principle of rotation among the observers, contracting one observer each season means that most of the observers will be “sleeping partners” with a need for renewed training courses before going into the field. Increasing the likelihood of being called upon to serve arguably helps maintain the motivation and interest of the observers to be part of the pool.

With the scope defined, maximising the outcome for an allocated budget requires first and foremost identifying (based on catch statistics from previous years), the locations and times of year that give the highest probability of successfully observing the chosen hunts.

Appendix 1 of Annex 1 gave 17 different budget scenarios, calculated based on the numbers of observers and the duration of their assignments. To simplify the observation budget was divided into two expense categories:

- Costs that vary with the number of observers but are independent of the duration of the assignment (i.e., travel costs to and from and internally in the country of focus, cost of insurance and equipment)
- Costs that depend on the duration of the assignment and increase per contract day (i.e. honoraria, per diem and accommodation costs)

There are a multitude of combinations that may be used to optimise and maximise the allocated budget, but generally speaking, it is most cost-efficient to have fewer observers undertaking longer assignments. The relationship between budget and provided observation days is, however, not linear. An increased budget can increase the observation effort measured in days of observation, but this is not automatically the case because both the costs that are dependent and independent of the assignment duration (as outlined above) need to be considered.

For example:

Looking at maximising the number of observations days achieved for an allocated budget, 1 observer contracted for 5 weeks (option 2, appendix 1) gives a greater return than 2 observers for a total of 6 weeks (option 3). This is due to less travel time and less travel, insurance and equipment expenses. When compared with the original budget of NOK 300,000, option 8 gives 5 observation days less for a NOK 28,000 increase in the budget. Option 11 gives 16 extra observation days for a budget increase of NOK 100,000.

The CIO acknowledged that 5 weeks may be stretching the limit of what most observers are able to commit to in terms of duration of assignment.

Another aspect to consider is the possibility of creating opportunities for observing several hunts in one location or one hunt in several locations, which can increase the probability of successful observations (successful in the sense that there is a hunt taking place that can be observed).

The overview of budget scenarios showed specifically the number of added days of observation that could be realised for different budgets and the corresponding costs per added day. By adding NOK 105,000 to the budget (total NOK 405,000) the gain in increased days of observation would be 19 at an added cost of NOK 6,605 per day. By adding NOK 131,416 (total NOK 431,000) the gain would be 23 days at a cost of NOK 5.714 per extra day.

The CIO discussed the different scenarios and agreed to forward document NAMMCO/CIO-2021-01/02 with Option 12 to Council (Annex 1). Option 12 represents an increase in the observation budget of NOK 131,416 making the total budget allocation for observation activities in 2022 NOK 431,000 (rounded). This budget would allow for 3 observers to be deployed and would give approximately 76 observation days.

The CIO noted that a significant amount of resources have been invested in defining the new Scheme. Making a major allocation and effort in the first year of resuming observations sends a strong signal to the international community that NAMMCO is committed the Scheme and to ensuring that the hunts taking place within its area are sustainable and responsible and that observation activities have an important role in monitoring this.

3.2 PROPOSED INCREASES IN THE OBSERVERS REMUNERATION

Document NAMMCO/CIO-2021-01/03 contained a draft proposal giving the rational and financial implications of the recommended increases in the remuneration of the observers.

The CIO had previously discussed remuneration of observers taking into consideration the assessment carried out in 2008 and the 2019 levels for national inspectors in member countries. Based on this the CIO recommended that remuneration be increased by adjusting the 2008 rates with the Norwegian inflation rates throughout the years since 2008 (the year when the rates were last adjusted). The new recommended rates were:

- NOK 3,000 per day at sea
- NOK 2,276 per day on land
- NOK 2,900 as a lumpsum for working cloths

The FAC in its meeting in October had asked the CIO for further clarification on the financial implications of the recommended increases in remuneration.

The CIO noted that any effort measured in days of a given assignment will be more costly corresponding to the increases pr day multiplied by the number of days. The increases per day are NOK 600 at sea and NOK 476 on land. Ultimately the extent of the financial implications of these increases will be dictated by the number of observers and duration of assignments at any given time.

As an example, only taking salary level into account for 1 observer contracted for 3 weeks:

Current level: 21 days times NOK 2,400 = NOK 50,400

New recommended level: 21 days times NOK 3,000 = NOK 63,000

The CIO agreed to forward document NAMMCO/CIO-2021-01/03 (appendix 2) to the FAC.

4. SECTION A OF THE PROVISIONS OF THE NAMMCO INSPECTION AND OBSERVATION SCHEME

Document NAMMCO/CIO-2021-01/04 contained draft Rules of Procedure for the CIO.

The CIO at its meeting in October 2020 agreed to recommend to Council that Section A, common elements for national inspection schemes for whaling with harpoon guns, in the Joint NAMMCO Control Scheme, was redundant and thus should be removed.

Consequently, if endorsed by the Council, the “Provisions of the Joint NAMMCO Control Scheme”, which consisted of Section A and Section B with appendices, will become a historic document. The new “NAMMCO Observation Scheme” endorsed in 2019 is independent and completely separated from the original Joint NAMMCO Control Scheme.

National inspection schemes are by default within NAMMCOs area of competence. Reviewing national inspection schemes are indirectly covered in the objectives of the Observation Scheme when it is stated that it shall “*provide a mechanism for NAMMCO to oversee whether recommendations made by NAMMCO are implemented and national regulations are adhered to*”.

The CIO discussed the need to amend and revise the Terms of Reference for the Committee resulting from the introduction of the new Observation Scheme and the recommendation to make redundant Section A of the old Joint NAMMCO Control Scheme.

In the spirit of transparency and clarity it was seen as expedient to include a reference to national inspection schemes and the CIOs mandate to give advice on these should Council require this. Appendix 3 gives the recommended new text of the Terms of Reference in the Rules of Procedure.

5. EVALUATION OF THE OBSERVATION SCHEME

5.1 MEMBERS COMPLIANCE TO RECOMMENDATIONS

CIO has agreed to make compliance to recommendations a standard agenda item when evaluating the Scheme.

Document NAMMCO/CHM-recommendations contained the overview of all hunting related recommendations arising from Workshops and Expert Group meetings organised by the CHM. The overview has been under consideration by members of the CHM, and also by the CIO since February 2020. Considerable work had been put into reviewing all recommendations and responses with the aim of identifying which were completed and which were still active. A recommendation defined as active is understood to be under execution / ongoing in the member country in question. Prior to the current meeting all members had submitted their input and completed the task of reviewing and categorising recommendations pertaining to them.

The CIO discussed the way forward and agreed that with the submission from all member countries on responses on recommendations the task of looking at compliance to recommendations had been accomplished. It was noted that the compiled overview may represent a tool to obtain quantitative information about member countries responses to recommendations. As a starting point it was agreed that the Chair and the Secretary would investigate this and see how and if statistical information could be extracted in a useful / fruitful manner.

The CIO also noted that with the new observation scheme it would be important to see how an evaluation process could incorporate observers reports.

6. NEXT MEETING

The next meeting was scheduled for the beginning of next year unless a situation arises that requires the attention of the CIO before.

7. ADOPTION OF REPORT

The report was adopted at the end of the meeting on 17 February 2021.

APPENDIX 1: AGENDA AND LIST OF DOCUMENTS

AGENDA

1. Adoption of agenda and review of documents
2. Annual reporting from members 2021
3. Observation activity
4. Scope and range of observations 2022
5. Proposed increases in the observers Remuneration
6. Section a of the provisions of the NAMMCO Inspection and Observation Scheme
7. Evaluation of the Observation Scheme
8. Next Meeting
9. AOB

LIST OF DOCUMENTS

NAMMCO/CIO-2021-01/01	Draft annotated agenda and list of documents
NAMMCO/Database-2020	NAMMCO database
NAMMCO/CIO-2021-01/02	Draft proposal for observation activities 2022
NAMMCO/CIO-2021-01/03	Proposal for increased numeration
NAMMCO/CIO-2021-01/04	Draft Rules of Procedure
NAMMCO/CHM-recommendations	Overview of recommendations

APPENDIX 2: PROPOSAL FOR INCREASED REMUNERATION OF OBSERVERS

BACKGROUND

When the scheme was established in 1998 the observers were paid a daily honorarium of NOK 1,200 regardless of being on a vessel or on land. In addition, meals, accommodation, travel and agreed incurred expenses were covered by NAMMCO. The honorarium was flat regardless of where the observation took place and more importantly, the nationality of the observer.

When planning the 2008 season, it became apparent that the remuneration was not sufficient to attract observers from all member countries. For some candidates, the honorarium was less than their wages so unless they worked for NAMMCO during holidays, they would lose money.

The FAC consequently reviewed the economic aspects of the Scheme. It was agreed to distinguish between land-based and at sea observations setting the latter honorarium at a higher level to reflect the different working conditions.

The final decision on remuneration was based on a comparison of salary levels for field workers and national fisheries inspectors in NAMMCO member countries. The comparison showed a significant variation from approx. NOK 2,400 to NOK 1,200 when at sea. The Council endorsed the FAC recommendations that:

- As a general principle NAMMCO, being an international organisation, should remunerate observers at least at the same level as the maximum level in member countries.
- The rates would be NOK 2,400 when at sea for longer periods and NOK 1,800 when land based. The salary levels were flat rates and reflected that the observer is expected to work long and odd hours daily without any overtime payment.
- A continuation of existing rules for per diem and expenses.
- Up to NOK 2,300 as reimbursement to cover necessary work clothing.

RECOMMENDATION TO COUNCIL

In connection with the training course for observer candidates held in 2020 it became apparent that NAMMCO again was in a situation that the remuneration, having been unaltered since 2008, needed revisiting to ensure the availability of observer candidates from all member countries.

The CIO considered the situation taking into consideration the assessment carried out in 2008 and the 2019 levels for national inspectors in member countries. The CIOs recommendation is that the rates be adjusted for the Norwegian inflation rate going back to 2008 (the year when the rates were last adjusted). The new recommended rates are:

- NOK 3,000 per day at sea
- NOK 2,276 per day on land
- NOK 2,900 as a lumpsum for working cloths

FINANCIAL IMPLICATIONS

The CIO was asked to clarify the financial implications of the recommended increases. The answer to this question is simply that any effort measured in days of a given assignment will be more costly corresponding to the increased salary rate per day multiplied by number of days. The increases per day are NOK 600 at sea and NOK 476 on land. The extent of the increased cost will depend on number of observers and contract-time.

As an example, only taking salary level into account for 1 observer contracted for 3 weeks.:

Current level: 21 days times NOK 2,400 = NOK 50,400

New recommended level: 21 days times NOK 3,000 = NOK 63,000

APPENDIX 2: PROPOSAL FOR NEW TERMS OF REFERENCE

Terms of Reference

New text in red.

1. The Committee shall, upon request from the Council, individual member countries or the Secretariat provide advice on the ~~Joint NAMMCO Control Scheme~~ **NAMMCO Observation Scheme** for the hunting of marine mammals.

The Committee shall provide advice on national inspection schemes upon request from the Council or from member countries pertaining to their own inspection schemes.

2. The Committee shall function as a standing review body to monitor the implementation of the **NAMMCO** Observation Scheme ~~under the Joint NAMMCO Control Scheme for the hunting of marine mammals~~ and provide recommendations for improvements.

3. Members of the Committee may raise specific questions for discussion during meetings of the Committee. The Committee may make proposals to the Council for specific tasks to undertake within its terms of reference.

4. Non-member governments with observer status in NAMMCO may request advice from the Committee through the Council.

ANNEX 1: PROPOSAL FOR INCREASED OBSERVATION EFFORT IN 2022

1. PROPOSAL FOR INCREASED OBSERVATION EFFORT IN 2022

1.1 BACKGROUND

The Council (Council-HoD meeting March 2020) allocated NOK 300,000 for observation activities in 2021 “with the view to strengthening the implementation of the Observation Scheme. The allocation is pending the submission by CIO of a detailed plan for scope of activities and its subsequent approval of Council”.

The following proposal was submitted by the CIO to the FAC meeting in October 2020:

- To cancel the observation activities in 2021 due to the COVID-19 situation and transfer the allocated budget of NOK 300,000 for observation activities in 2021 to 2022.
- To allocate a further NOK 200,000 for observation activities in 2022, which combined with the carryover from 2021, brought the total budget available to NOK 500,000. It was argued that no observers had been active since the 2017 season, and NOK 500,000 would approximately represent the combined cost had the observation scheme been active in the 5 years 2018–2022. For information, the average annual expenditure from all active years is NOK 129,308 (1998–2007) and NOK 109,363 for the last 10 active observation seasons (2008–2017).
- The new observation scheme approved in 2019 introduced the option of “setting aside” allocated budgets for observation activities from several years to enable an increased effort in one specific year.

The presented proposal for the scope of observation activities in 2022 is reiterated below, under item 2.

The FAC meeting in October 2020 agreed to cancel the 2021 activities due to the pandemic and discussed the proposal for increasing the 2022 budget. FAC asked the CIO to come back with more information on the added value that the increase of NOK 200,000 would have on the observation activities proposed for 2022.

1.2 HOW TO MEASURE THE VALUE OF AN OBSERVATION SCHEME

The provisions of the Observation Scheme define the purpose as collecting reliable information on all kinds of hunting activities. From this it follows that the more reliable information collected, the greater value it has for NAMMCO. Information is primarily obtained through contracting observers to go to certain areas and observe certain hunts, and by the CIO reviewing national legislation.

In previous years, the scope of observations was mostly chosen based on a principle of rotation between member countries and hunts. Within the new Observation Scheme, the CIO has identified the following additional criteria for deciding the observation focus in a year:

- Hunting level
- Hunts not covered by national inspectors – monitored by humans
- Hunts for which the SC or CHM request data (e.g., on struck and lost)
- Maximising the effort to reach the objectives of the Scheme by allocating money from several years into one year.

Hunts that are not a priority:

- Small scale hunts happening infrequently and in remote areas
- Hunts not practically feasible for observation because of specific hunting methods or other aspects

With the scope defined, maximising the outcome for the allocated budget requires first and foremost identifying (based on catch statistics from previous years), the locations and times of year that give the highest probability of successfully observing the chosen hunts.

1.2.1 Financial aspects

The cost of the Observation Scheme has two main drivers: the number of observers and the duration of their assignments.

For the sake of simplicity, one may divide the observation budget into the following expense categories:

- Costs that vary with the number of observers but are independent of the duration of the assignment (i.e. travel costs to and from and internally in the country of focus, cost of insurance and equipment)
- Costs that depend on the duration of the assignment and increase per contract day (i.e. honoraria, per diem and accommodation costs)

There are a multitude of combinations that may be used to optimise and maximise the allocated budget for observation activities (see appendix 1). Generally speaking, it is most cost-efficient to have fewer observers undertaking longer assignments. The relationship between budget and provided observation days is, however, not linear. An increased budget can increase the observation effort measured in days of observation, but this is not automatically the case because both the costs that are dependent and independent of the assignment duration (as outlined above) need to be taken into account. For example:

Looking at maximising the number of observations days achieved for an allocated budget, 1 observer contracted for 5 weeks (option 2, appendix 1) gives a greater return than 2 observers for a total of 6 weeks (option 3). This is due to less travel time and less travel, insurance and equipment expenses. When compared with the original budget of NOK 300,000, option 8 gives 5 observation days less for a NOK 28,000 increase in the budget. Option 11 gives 16 extra observation days for a budget increase of NOK 100,000.

When considering the combinations, it is important to note that experience has shown that contracting observers to work for more than 4-5 weeks can be difficult.

Another aspect to consider is the possibility of creating opportunities for observing several hunts in one location or one hunt in several locations, which can increase the probability of successful observations (successful in the sense that there is a hunt taking place that can be observed).

1.2.2 Added value for the Observation Scheme of a higher budget

As shown in appendix 1, a higher budget can lead to a higher observation effort measured in days of observation given an optimal combination of number of observers and length of time each observer is contracted for. A higher observation effort means that more hunting events can be observed, and more information can be collected. When more information is collected, more robust and reliable conclusions can be drawn from the observation scheme to inform management.

The possibility of deploying more than one observer also creates the possibility that observation can take place at different locations and at different times, which enhances the probability of observing several hunts.

Currently the pool of available observers is 16 people. Using the principle of rotation among the observers, contracting one observer each season means that most of the observers will be “sleeping partners” with a need for renewed training courses before going into the field. Also not being called to serve may be counterproductive to maintaining their interest in NAMMCO and their willingness to offer their services. Increasing the likelihood of being called upon to serve arguably helps maintain the motivation and interest of the observers to be part of the pool.

1.2.3 Added value for NAMMCO of a higher observation effort

NAMMCO has always taken a certain pride in the fact that the organisation is the only one with a functioning international observation scheme for marine mammal hunts with observers active every season.

In 2022, 4 years will have passed without active observers, and a new observation scheme has been in place since 2019. Allocating a substantial amount of money for the 2022 season will show that NAMMCO continues to take the scheme seriously, and that it is of high importance to its members. It also indicates that NAMMCO

although no observation was carried out in the period 2018-2021 because of the revision of the Scheme and the COVID-19 situation, the organisation continues to invest in the scheme at the same level and without reduction.

A significant amount of resources have been invested in defining the new Scheme. Making a major allocation and effort in the first year of resuming observations sends a strong signal to the international community that NAMMCO is committed to ensuring that the hunts taking place within its area are sustainable and responsible and that observation activities have an important role in monitoring this.

2. PROPOSAL FOR 2022 SCOPE AS PRESENTED TO FAC

2.1 BACKGROUND

The purpose of the Observation Scheme is to collect reliable information on all kinds of hunting activities in the NAMMCO Member Countries, with the objectives to

- a) provide a mechanism for NAMMCO to oversee whether recommendations made by NAMMCO are implemented and national regulations are adhered to
- b) provide a foundation for the member states to evaluate whether a recommendation is serving its purpose or not
- c) contribute to the improvement of the national regulation of hunting activities in the Member Countries

One of the tools available for meeting the objectives is the appointment of observers to observe hunting and inspection activities in member countries.

For 2021 Greenland is the focus of the observation activities. The selected species and hunts are quota restricted and governed by national regulations arising from recommendations arriving from NAMMCO¹. The species have not previously been the focus of observation activities. The specific hunts are carried out by a method identified as of concern by NAMMCO due to relative long times to death. They also represent hunts where the Scientific Committee has expressed a desire to get more information on the phenomenon of struck and lost, especially on how to obtain good reliable information. Currently the estimated struck and lost numbers used in NAMMCO advice range from 10% to 30% depending on hunt and time of year.

Once the scope has been approved by Council, the Secretariat (in co-operation with the authorities in Greenland) will develop a specific plan for the observation activities. In line with the proposed guidelines, the detailed plan of observation activities will only be known to the authorities in the relevant member countries and the Secretariat.

2.2 PROPOSED SCOPE

Walrus, narwhal and beluga hunts in West Greenland carried out with rifle and handheld harpoon from dingy/small boats.

1

Parliamentary Act No 12 of 29 October 1999 on hunting amended in No 1 of 16 May 2008

Executive Order:

- No 3 of 27 January 2017 on protection and hunting of beluga and narwhal
- No 20 of 27 October 2006 on protection and hunting of walrus

2.2.1 Species and hunting methods

All three species are hunted in West Greenland whereas only walrus and narwhal are hunted in East Greenland.

The East Greenland catches are few compared to West Greenland. For walrus the average catches the last 6 reported years (2015-2020) have been 5% of a total of 693 animals and for narwhal 17 % of a total of 2,463 animals. Also, the narwhal quotas for 2021 has been reduced significantly with a total of 15 animals. The proposal is therefore to focus on West Greenland to utilise the observer resources most efficiently.

The hunting method chosen, rifle with handheld harpoon, has been identified by NAMMCO as a method of concern given the reported relatively longer times to death and also the lack of reliable struck and lost information.

Belugas and narwhales in West Greenland are also hunted by netting or from kayaks with handheld harpoons (no rifles allowed). However, these hunts are considered less optimal to observe because:

- Netting is only allowed in Qaanaaq in North Greenland during the dark winter months. Struck and lost is not considered an issue as it is anticipated that all animals are retrieved dead or alive. Should an animal escape the nett it is supposed to be unharmed and alive.
- Hunting from kayaks takes place in Qaanaaq, Upernavik and Uummannaq (all north of Disco bay). Compared to the rifle hunt there is no noise from a motor and the hunters get closer to the animals and due to the method (harpooned first) there is little struck and lost incidents. The hunt is not recommended for observation from a safety perspective as it would require observation from a kayak. Also, few animals are taken per hunting trip.

2.2.2 Areas and time periods

It is nearly impossible to find one location and period that coincides for all three hunts. The proposal for locations and timing are informed by reported catch statistics from previous years (2015-2020).

The following locations, time of year and hunts have been identified as priorities:

- Sisimiut in March – April: beluga
- Sisimiut in March – April: walrus
- Upernavik in April – May: narwhal
- Uummannaq in October – November: narwhal
- Upernavik in in October – November: beluga

2.2.2.1 Walrus:

Current West Greenland management areas/populations and permitted hunting periods:

West Greenland winter population, from 66° N (south edge of the mouth of Søndre Strømfjord) and 70° 30 'N (northwest tip of Hare Island), hunting allowed March 1 to April 30, both days inclusive.

Northwest Greenland stock, areas north of 70°30'N (northwest tip of Hare Island), hunting allowed October 1 to June 30, both days inclusive.

Chosen management area and time:

- West Greenland stock: Sisimiut in March and April.

The last 3 years Sisimiut has recorded a growing number of catches. In the 3-year period 2015-2017, a total of 60 walruses was caught in Sisimiut. 24 walruses in 2015, 20 walruses in 2016 and 16 in 2017. For this period, the average number of annual catches is 20. During the following 3-year period 2018-2020, a total of 80 walruses was caught in Sisimiut, 28 walruses in 2018 and 26 walruses in both 2019 and 2020. For this period, the average number of annual catches is 26.7. This is a growth of 34 %.

2.2.2.2 Narwhal:

Hunting permitted: 1 January to 31 December

Current West Greenland and Disko Bay management areas:

- 1) Etah 2) Inglefield Breeding (Qaanaaq), 3) Melville Bay 4) Uummannaq and 5) Inglefield Breeding (Disko Bay – West Greenland)

Chosen management areas and time: Upernavik during April - May and Uummannaq during October - November

Average number of annual catches for Upernavik 61 animals rounded up (2015-2020)

Uummannaq 96 animals (2015-2020)

2.2.2.3 Beluga:

Hunting permitted: 1 January to 31 December

Current management areas: Qaanaaq and West Greenland.

Chosen management areas and time: Upernavik during October and Sisimiut during March-April

Average number of annual catches (2015 – 2020): 51 Upernavik and 11 Sisimiut.

3. BUDGET

With reference to appendix 1 option 12 is recommended.

Proposal for observation in Greenland - different budget scenarios

Within the present budget of NOK 300,000

Travel days return 5 days incl one day in Nuuk

Minimum 3 weeks land-based assignments

Options	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Number of observers	1				2				3				4				
Total number of weeks	4 weeks	5 weeks	6 weeks	7 weeks	8 weeks	9 weeks	10 weeks	9 weeeeks	10 weeks	11 weeks	12 weeks	13 weeks	14 weeks	15 weeks	12 weeks	14 weeks	16 weeks
Contract days	28	35	42	49	56	63	70	63	70	77	84	91	98	105	84	98	112
Travel days	-5	-5	-10	-10	-10	-10	-10	-15	-15	-15	-15	-15	-15	-15	-20	-20	-20
Observation days	23	30	32	39	46	53	60	48	55	62	69	76	83	90	64	78	92
Honoraria (NOK 2 276)	63,728	79,660	95,592	111,524	127,456	143,388	159,320	143,388	159,320	175,252	191,184	207,116	223,048	238,980	191,184	223,048	254,912
Per diem (NOK 500)	14,000	17,500	21,000	24,500	28,000	31,500	35,000	31,500	35,000	38,500	42,000	45,500	49,000	52,500	42,000	49,000	56,000
Accommodation (NOK 900)	25,200	29,700	36,000	42,300	48,600	54,900	61,200	54,900	61,200	67,500	73,800	80,100	86,400	92,700	73,800	86,400	99,000
Return travel(NOK 20 000)	20,000	20,000	40,000	40,000	40,000	40,000	40,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	80,000	80,000	80,000
Travel within Greenland (NOK 5000)	5,000	5,000	10,000	10,000	10,000	10,000	10,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	20,000	20,000	20,000
Insurance (NOK 5 000)	5,000	5,000	10,000	10,000	10,000	10,000	10,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	20,000	20,000	20,000
Equipment (per observer: NOK 2 900)	2,900	2,900	5,800	5,800	5,800	5,800	5,800	8,700	8,700	8,700	8,700	8,700	8,700	8,700	11,600	11,600	11,600
Total cost	135,828	159,760	218,392	244,124	269,856	295,588	321,320	328,488	354,220	379,952	405,684	431,416	457,148	482,880	438,584	490,048	541,512
Average cost of one observation day	5,906	5,325	6,825	6,260	5,866	5,577	5,355	6,844	6,440	6,128	5,879	5,677	5,508	5,365	6,853	6,283	5,886
Added budget above NOK 300,000							21,320	28,488	54,220	79,952	105,684	131,416	157,148	182,880	138,584	190,048	241,512
Extra days gained compared to a NOK 300,000 budget							7	- 5	2	9	16	23	30	37	11	25	39
Cost of added days pr day							3,046		27,110	8,884	6,605	5,714	5,238	4,943	12,599	7,602	6,193