

Oil exploration in the Dreki Area on the Jan Mayen Ridge

**Summary of comments received on the Strategic Environmental Assessment of
the Dreki Area and responses by the Ministry of Industry, Energy and
Tourism to the comments**

**Ministry of Industry, Energy and Tourism
January 2009**

Contents

1. Introduction	3
2. Final Assessment	3
2.1 Licenses, monitoring and oversight	3
3. Main comments by reviewers and a summary of responses to the comments	5
4. Summary of the comments on the SEA and the responses of the Ministry of Industry	5
4.1. The Icelandic Confederation of Labor (ASÍ)	5
4.2. EYPING – union of communities in Eyjafjörður fjord and Þingeyjarsýslur counties.....	6
4.3. Fjallabyggd community	6
4.4. Fjardabyggd community.....	6
4.5. Archaeological Heritage Agency of Iceland	7
4.6. Iceland GeoSurvey (ÍSOR)	7
4.7. The Icelandic Coast Guard.....	8
4.8. Langanesbyggd community.....	8
4.9. The Kingdom of Norway.....	8
4.10. The National Energy Authority.....	12
4.11. Icelandic Maritime Administration	12
4.12. Ministry of Fisheries/Marine Research Institute.....	12
4.13. Confederation of Icelandic Employers (SA); Federation of Icelandic Fishing Vessel Owners (LÍÚ); Federation of Icelandic Industries (SI); Federation of Icelandic Energy and Utilities (Samorka); Federation of Trade & Services (SVP).....	13
4.14. Icelandic Planning Agency.....	14
4.15. Environment Agency of Iceland	16
4.16. Icelandic Meterological Office.....	16

1. Introduction

On March 30th, 2007, the Ministry of Industry, Energy and Tourism (hereafter referred to as the Ministry of Industry) put for review a report on the Strategic Environmental Assessment, in accordance with Act no. 105/2006 on Strategic Environmental Assessment, of the exclusive licensing of the northern Dreki Area on the Jan Mayen Ridge for exploration and production of hydrocarbons. The deadline for returning comments on the report was June 23rd, 2007, and a total of 16 comments were received.

Comments were received by the following: the Icelandic Confederation of Labor (ASÍ); EYÐING – union of communities in Eyjafjörður fjord and Thingeyjarsýslur communities. Fjallabyggd community; Fjardabyggd county; Archaeological Heritage Agency of Iceland; Iceland GeoSurvey; Icelandic Coast Guard; Langanesbyggd community; the Kingdom of Norway; the National Energy Authority; Icelandic Maritime Administration; Ministry of Fisheries/Marine Research Institute; Icelandic Planning Agency; Confederation of Icelandic Employers (SA), The Federation of Icelandic Fishing Vessel Owners (LÍÚ), The Federation of Icelandic Industries(SI), Icelandic Energy and Utilities (Samorka), and Federation of Trade and Services (SVP); Environmental Institute; and Icelandic Meteorological Office.

In this summary, which is sent to all that were asked for reviews, gives an overview of the comments and responses by the Ministry of Industry to those comments in accordance with Act 105/2006 on Strategic Environmental Assessment. The Ministry of Industry gratefully acknowledges all reviewers for their interest and comments.

2. Final Assessment

It has been decided that exclusive licenses for the exploration and production of hydrocarbons will be offered in a licensing round, which will open on the January 22nd, 2009, and with deadline for applications of May 15th, 2009.

Exclusive licenses will be on offer for the entire area that was assessed in the SEA, a total of 42 700 km². However, at most 4000 km² of this area will be licensed. A maximum of 5 licenses will be issued and a maximum area of each license will be 800 km².

Environmental concerns have been a part of the plan from the beginning and the SEA-report and comments that were received were put under consideration prior to the making of a final plan as is further explained below.

2.1 Licenses, monitoring and oversight

Licenses, monitoring and oversight are covered in depth in the SEA-report for the prospecting, exploration and production of hydrocarbons. There it is stated i.a. that prospecting licenses shall be issued in accordance with Act no. 13/2001 and, before a license is issued, recommendations shall be sought from the Ministry of Fisheries and Ministry of the Environment. Prospecting surveys do not require environmental impact assessment according to Act no. 106/2000 nor do they require a work license according to Act no. 7/1998 and it is considered that there is little risk of pollution due to those activities.

Drilling during the exploration stage do require environmental impact assessment under Act no. 106/2000. In addition, it requires a work license according to Health, Safety and Environmental legislation, and in these procedures there will be further details on the implementation of drilling, procedures on polluting materials and pollution prevention. The issuer of the work license will also oversee that the work is in accordance with the license. Before drilling is begun, it will be required that there is an investigation performed on the environment in the area of the proposed drill site. These will include investigations on the bottom substrate and shape (multibeam bathymetric measurements), distribution and conditions of benthic communities and pelagic fish, concentration of main polluting chemicals (especially PAHs) in sediments, organisms and seawater. Precise accounting of the chemicals that need to be monitored will depend on the types of chemicals used during the drilling. Requirements on oversight and monitoring will be put in the license and those are expected to be accounted for in the environmental impact assessment.

Various other parts of hydrocarbon production do each, and not the least together, require several licenses that will consider environmental impacts. Each drill hole requires environmental impact assessment, in addition to the production itself and the same is applicable to licenses that are issued by the Environmental Institute. The same applies to any construction and other work that follows such activities. These procedures will not be covered by this summary, but they will be in the environmental impact assessments for the hydrocarbon production activities.

Environmental oversight will be multifaceted. Weekly, inner oversight is under consideration, and, in fact, this may be required as outer oversight will be limited due to distance and seclusion. Other oversight with the activities will mostly be twofold: checks that the activities are done in accordance with the license, monitoring and evaluation of the results of the monitoring; and general monitoring for pollution of the sea in the area of activities.

Monitoring is an integral part of oversight with potentially polluting activities and one of the main part of that will be to make sure that the requirements of the license are kept and that it maintains its role. Prior to the initiation of monitoring certain baseline information on the environment for the area will need to be in place. This is necessary so that it will be possible to separate influences from the licensed activities from other influences, e.g. natural variability. All parameters that will be or are likely to be affected by the licensed activities will need to be monitoring.

Monitoring will mainly be of:

- The conditions of the sea floor (changes in bottom substrate, organisms in and on the sea floor)
- Concentration of polluting chemicals in sediments in the area of the activities.
- Concentration of polluting chemicals in sea water in the area of the activities (in the entire water column).
- Concentration of polluting chemicals in tissue of the most common organisms of the area (zooplankton, capelin, herring, sea birds, whales).
- Condition of the biological communities in the area of influenced by the activities (benthic communities, demersal fish).
- Release of polluting chemicals to the air, sea, sea floor, and additionally, sound pollution.

The main polluting chemicals that will be monitored will be PAHs, heavy metals, radioactive chemicals and traces of chemicals that will potentially be used, i.e. during drilling and for handling hydrocarbons on site. Otherwise it is not possible at this stage to further describe which chemicals will be monitored or how extensive the monitoring and oversight of the activities will be. Plans for the inner oversight, estimates on the quantity and types of chemicals to be used will be the grounds by

which the nature of the oversight and monitoring will be determined. These will be further described in the environmental impact assessment and application for work license for the individual, planned activities.

3. Main comments by reviewers and a summary of responses to the comments

Most of the reviewers emphasized that further environmental research of the area was necessary in accordance with the suggestions that were made in the SEA-report. Following this, the government agreed to the suggestions of the Minister of Industry on further research on the environment and biology of the northern Dreki Area to be conducted during the years 2008-2009. Most of these studies are now in their final stages and the data from one of them is available for delivery upon request. The status of the studies is described shortly in italics.

1. Acquisition of a precise map of the bottom shape and substrate with multibeam bathymetric measurements. Such a map allows better estimation of currents, as well as the habitats of benthic organisms and their distribution. *Multibeam bathymetric measurements were conducted in June 2008 and the data are available for delivery upon request.*
2. Benthic habitats and communities will be mapped in the areas that are most likely to be disturbed during exploration and production of hydrocarbons. *Benthic organisms were sampled and the sea floor photographed in a survey in August 2008. Selected, representative samples from the survey will be fully processed; the others will be preserved for future investigations.*
3. Investigations of potential demersal fish stocks in the northern Dreki Area planned for the summer of 2009. *The demersal fish survey has been postponed.*
4. Current measurements will be collected by shipboard profiles three times during the year and measurements collected with a current mooring in the area for one year. *Current measurements have been collected according to plan, the mooring was successfully retrieved after one year of data collection in December, 2008. The current data is being processed and a report will be prepared.*
5. Meteorological and wave data will be collected in the area by buoy. *A meteorological and wave buoy has collected data successfully in the area for over one year. Further data will be collected until the buoy will be retrieved in Spring or Autumn, 2009. After data collection is finished, a report will be prepared.*

The Ministry of Industry deems that the environmental research mentioned above, in addition to research that has already been made during the SEA, are adequate at this stage. In the case of the drilling of appraisal or production wells, further research can be expected as a part of the environmental impact assessment of the drilling activities.

4. Summary of the comments on the SEA and the responses of the Ministry of Industry

4.1. The Icelandic Confederation of Labor (ASÍ)

In the comment made by The Icelandic Confederation of Labor (ASÍ), it is stated that if exclusive licenses for exploration and production of hydrocarbons are issued, this could have a significant impact on the environment, the biota in the sea, the Icelandic economy and the job market. ASÍ will monitor the progress of these activities and reserves the right to give further comments at

later stages. As is reported in the comment by ASÍ, the position of ASÍ is based on their comments on the bill on the changes to the Hydrocarbon Act from February 12th, 2007, and on the Green Book of the EU on the maritime and sea policy. These two comments are enclosed with their comments on the SEA.

The Ministry of Industry appreciates the argument made by ASÍ that the issuing of exploration and production licenses may have considerable impact on the environment, the biota of the sea, the Icelandic economy and the job market. The Ministry of Industry will attempt to keep all parties informed on the progress of the project and it will be possible to give formal and informal comments at later stages.

4.2. EYÞING – union of communities in Eyjafjörður fjord and Þingeyjarsýslur counties

The board of Eyþing is pleased with the SEA report and the plans introduced in it. The board does not think it has the capacity to give a professional review on the SEA. It is emphasized that the environmental research suggested in the report should be undertaken as preparation for the issuing of licenses. Eyþing stresses that the preparation work that is needed prior to the issuing of licenses for exploration and production be started immediately.

The Ministry of Industry appreciates and welcomes these comments. As is stated in Section 3 of this summary, the government accepted the plan suggested by the Minister of Industry for the preparations for issuing of exclusive licenses for exploration and production of hydrocarbons in the northern Dreki Area, as well as the plan for research and data gathering to be undertaken in cooperation with other ministries as needed.

4.3. Fjallabyggd community

The community of Fjallabyggd does not see a reason to comment on the SEA, but welcomes an interesting project, and points to various harbour installations and services that are available in the community that may prove to be useful for exploration and production activities.

The Ministry of Industry will attempt to give licensees information on where necessary installations and services are to be found. It will be at the discretion of each licensee which place is best for servicing the needs of their exploration and production activities, e.g. with attention to the distance from the Dreki Area, the existing services that are on offer, weather conditions, safety and other important matters. The Ministry of Industry is preparing a regulation where among other things this matter will be of a concern, and it is planned to add a requirement that the nearest harbour to the Dreki Area be used, which fulfills the requirements of the exploration and production activities as well as is necessary due to safety concerns.

4.4. Fjardabyggd community

The community of Fjardabyggd points out in its comments that the fishing companies in the community are dependent upon pelagic stocks. The county thus emphasizes that a close consideration be made of any potential impacts that exploration and production activities might have on fishing from these stocks in the area.

The comments by Fjardabyggd community also refers to the fact that the sailing route north of Norway and over to North America lies on both sides of the Dreki Area, and in fact it splits to either side of Iceland. In the comments it is pointed to increasing harbor activities in Fjardabyggð as a potential shipping center for East and/or North Iceland. It is pointed out that there seem to be grounds to investigate the sailing routes from the communities' harbours and north of Norway.

The Ministry of Industry appreciates the arguments made by the Fjardabyggð community that a close consideration be given to potential impacts of the activities on fishing in the area. The Ministry of Industry puts great emphasis on the importance of environmental protection and pollution prevention during exploration and production activities in the Dreki Area. Requirements will be made for the best available technologies to be used to reduce environmental impacts and reduce the risk of a polluting incident in the area, as is reported in the SEA.

The possibility of a shipping center in East and/or North Iceland are under consideration and the Icelandic Maritime Administration is investigating shipping routes from those areas; this will be considered further when the results of that investigation are available.

4.5. Archaeological Heritage Agency of Iceland

The Archaeological Heritage Agency of Iceland (AHAI) points out that there is no existing information on the presence of archaeological remains on the sea floor of the Dreki Area, and thus considers it unlikely that archaeological remains are endangered as a result of the planned activities. The AHAI emphasizes that in case of discovery of archaeological remains (e.g. ship wrecks) it will be imperative to take note of their presence and to leave them undisturbed. If preservation of the remains is not possible, it will be necessary to request permission from the AHAI to remove them, according to Art. 10 and 12 of national heritage laws, and then the AHAI will decide on whether research is required, whether the area should be declared a preserved area or whether the remains could be removed, and then under which conditions. The AHAI also points out that according to Art. 13 of national heritage laws, it is stated that if archaeological remains are found, that were previously unknown, then the AHAI shall be notified as soon as possible. Furthermore, it is stated in Art. 13 that if archaeological remains are found during the activities, then they should be stopped until the AHAI has decided whether the activities may continue and under which conditions.

The Ministry of Industry appreciates the points made by the Archaeological Heritage Agency that it is important to acknowledge the possible presence of archaeological remains in the area, and will relate to licensees the requirements for the protection of discovered archaeological remains that exist in the national heritage laws.

4.6. Iceland GeoSurvey (ÍSOR)

ÍSOR considers that the SEA-reports is a detailed and well prepared, and does not have a comment on the material in the report. ÍSOR compliments the preparation of the report, and consider it to have been prepared to a high standard and emphasizes that careful preparations need to be made in preparation for potential licensing for exploration and production of hydrocarbons in the Dreki Area.

The Ministry of Industry appreciates points made by ÍSOR, and puts great emphasis on that preparations for the license round will be handled carefully, and that the preparations are done in cooperation with the National Energy Authority as well as other ministries and government agencies.

4.7. The Icelandic Coast Guard

The Hydrographic Department of the Icelandic Coast Guard pointed out in an informal comment that the Department considered it necessary to put a requirement in any licenses issued that they give the Icelandic state access to any bathymetric measurements that could be useful for bathymetric maps made by the Hydrographic Department.

The Ministry of Industry appreciates this point and notes that requirements will be made of the licensees on data delivery, including bathymetric data.

4.8. Langesbyggd community

The representatives of the Langesbyggd community welcomes that work is begun to increase the use of potential use of resources on the Icelandic Continental Shelf. It is pointed out that the Langesbyggð community is in a unique position, geographically, to give any services that are needed on land, including the location of a potential liquified natural gas plant, to support the exploration and production activities in the northern Dreki Area. The point is made that in the inner Bakkaflói bay, conditions are ideal for the above mentioned activities and plenty of land available, deep near-shore waters and the area is well protected from ocean waves, in case it will be necessary to build new harbor installations in addition to the ones already in place in Thórshöfn. There is a good airport in Thórshöfn, and there has been added service for the helicopter team of the Icelandic Coast Guard. The representatives of Langesbyggd recommend the initiation of investigations whether this is not a good choice for servicing the exploration and production activities and they welcome dialogue on this matter.

The Ministry of Industry will attempt to give potential licensees information on the location of existing installations and services necessary for the exploration and production activities. However, it will depend on the licensees which location they deem best for their needs, e.g. with regard to the distance from the northern Dreki Area, existing services that are available, weather conditions, safety and other important aspects. The Ministry of Industry is preparing a regulation, that will e.g. consider whether there will requirements be made on the use of the nearest harbor to the northern Dreki Area which both fulfills the needs of the exploration and production activities as well as safety requirements. There has been an investigation done on the practicality of a placement of a service center for the exploration and production activities in Langesbyggd at the behest of the Ministry of Industry.

4.9. The Kingdom of Norway

The Icelandic received comments from the Norwegian authorities concerning the report. The comments and the response from Icelandic authorities were discussed at a meeting between Norwegian and Icelandic authorities in Oslo in February 2008. The main points that were discussed are listed below:

a) Based on the input from competent bodies in the field of environmental impact assessments related to petroleum activities, Norwegian authorities would have appreciated a more

comprehensive assessment of the environmental impact of petroleum activities in this area. They would like to emphasize the importance of developing high environmental standards in accordance with internationally recognized standards. They stand ready to cooperate in conducting further surveys of the marine environment and safeguarding consideration for the environment in all phases of the activities from licensing rounds to exploration, development, operations and decommissioning.

In the Assessment report, available data was collected and analyzed, in order to evaluate which studies would be necessary in order to publicly open the field for applications, amongst others. As by now, some studies have been initiated by the Icelandic authorities, notably mapping of the ocean floor, weather and current measurements, and evaluation of the state of the sea water column (salinity, temperature, currents) in a vertical section, with emphasis on the bottom of the sea. Furthermore, sampling of benthic organisms is underway and further studies are to be conducted next summer. Finally, further studies will be conducted by the licensee, as a part of the preparation for the Environmental Impact Assessment before any drilling can take place.

Iceland welcomes the offer by the Norwegian authorities to assist in the field and the Environment Agency, which is responsible for operational licenses for polluting activities, surveillance, and response to acute pollution, are looking to its Norwegian counterparts (SFT and Ptil) for guidance and assistance. Based on the input from competent bodies in the field of environmental impact assessments related to petroleum activities, Norwegian authorities would have appreciated a more comprehensive assessment of the environmental impact of petroleum activities in this area. They would like to emphasize the importance of developing high environmental standards in accordance with internationally recognized standards. They stand ready to cooperate in conducting further surveys of the marine environment and safeguarding consideration for the environment in all phases of the activities from licensing rounds to exploration, development, operations and decommissioning.

b) The report mentions that the Icelandic authorities are considering whether to prepare a sensitivity map and a contingency plan for the area between Iceland, Norway and the Faroe Islands. It also states that if a decision is made to go ahead with these, an evaluation must be made of whether to extend them north to Jan Mayen, thus including possible oil pollution from any petroleum activities in the Dreki area. The Norwegian authorities would like to support the preparation of a sensitivity map and contingency plan, which should include the area up to Jan Mayen. The Norwegian authorities would be willing to cooperate and provide input to this work.

Presently, there are underway preparations for two linked projects concerning contingency plans in the sea area between Iceland and Norway. Firstly, it is evident that it is important to know which resources are at risk in the case of an oil spill in the Dreki area, and to plan how to react in such an event. Secondly, there are growing concerns because of increased traffic of tankers and other merchandise ships in the Arctic and North Atlantic Ocean. The idea has therefore arisen to launch a comprise sensitivity map and contingency plan for the sea area between Greenland, Iceland, Jan Mayen, Faroe Islands and Norway. An ambitious project, which would be a joint project, where the intent would be to seek funds from the

Nordic Council. One is directly pointed at a point source of acute oil pollution incident, but the other at the ocean area in general.

We are at present considering the scope and means for those projects but at present unfortunately cannot specify dates or exactly how the project will be conducted. Iceland, however welcomes the support and willingness to cooperate and provide input to the work, and intends to follow on with that offer.

c) It is important to ensure that assessments of the impacts of future petroleum activities on the Icelandic continental shelf include thorough evaluation of the pressures and impacts on the marine environment and living marine resources. In particular, the maritime area around Iceland is an important feeding ground for capelin and herring. The herring in this area belong to the Atlanto-Scandian stock, known as Norwegian spring-spawning herring in Norway, which has its spawning grounds on Norwegian coastal banks. There are indications that the stock is resuming old migration patterns, which involves moving into areas between Iceland and Jan Mayen to feed. Petroleum activities in this area might therefore have an impact on the stock's feeding grounds. The capelin in this area belong to the Iceland–East Greenland–Jan Mayen stock, which spawns in the Iceland–Jan Mayen area. Norwegian fishermen harvest from both of these stocks. The Norwegian authorities therefore request clearer identification of particularly valuable and vulnerable areas within the area that may be affected by petroleum activities. In addition, before any licenses to conduct petroleum activities are granted, requirements should be laid down with a view to safeguarding the state of the environment in the area.

Reference is made to answers given before, and it is stressed that no activities will be granted before an environment impact assessment, where the items mentioned here will be considered.

d) The report indicates that drilling may be restricted to the winter months to minimize the adverse effects of oil spills on the most vulnerable natural resources. However, Norway would like to point out that, taking into consideration factors such as light, icing and drift ice, conditions are normally more favourable for maintaining an effective emergency response to acute pollution during the summer months.

In the cited discussion, a reference was made to the drilling of well 7125/4-1 in the Nucula field (references DNV-Rapport nr. 2006-1170, rev.01, and SFT license (utslipstillatelse) dated 6.11.2006) where drilling into the oil-bearing layer is only allowed between September and February, in order to limit the negative effects of oil pollution incident to the environment. The reason for mentioning this in the present report was actually to point out that even though conditions are better in the summertime, pollution incidents can have more severe effects on the environment at that time. This will be evaluated in the risk assessment and Environment Impact Assessment for drilling in the Dreki field, in order to limit the risk for human lives, accidents and pollution incidents.

e) The report also mentions that it might be possible to call on Norway for assistance in the event of incidents that cause acute pollution. It should be noted that it would take a long time for Norwegian assistance to reach the Dreki area. Moreover, this would put an additional strain on the Norwegian oil pollution emergency response system, for which it is not designed, and could

therefore weaken the emergency response on the Norwegian continental shelf. It is therefore essential to ensure adequate oil pollution emergency response resources located close to the source of possible spills.

As mentioned in the report, response to acute pollution incidents will be divided according to risk evaluation and amount of spilled oil. Tier one incidents and first response is to be located on the site. Tier two response equipment will be located in Iceland according to the general contingency plan for oil spills at open sea. At present, Tier 3 responses are beyond Icelandic capacities and we rely on international cooperation and agreements. The first and foremost is the Copenhagen agreement between Denmark, Finland, Iceland, Norway and Sweden about Cooperation concerning pollution Control of the Sea after Contamination by Oil or other Harmful Substances. Furthermore, Iceland has access to an EU cooperation in case of an acute pollution incident, including two counter-pollution vessels ready to sail within 24 hrs notice.

Iceland is going to strengthen each tier, e.g. by increasing the equipment stock on land, installing a Coast Guard vessel, presently under construction, with counter pollution equipment, strengthening surveillance in the Exclusive Economic Zone, and, to open discussions in order to strengthen the direct cooperation between Iceland and Norway in the field of pollution prevention and response in the ocean between the two countries, for instance in connection with a united contingency plan. The scope of such an agreement cannot, evidently, be decided on beforehand.

Icelandic authorities will, furthermore, request the licensee to have adequate response material on site, in line with what is commonly required in such a pristine area, and to have procedures aimed at limiting the risk for a pollution incident.

e) Furthermore, Norway would like to stress that the Norwegian part of the Jan Mayen Ridge area has not been opened for petroleum activities. The Norwegian Petroleum Act requires comprehensive environmental impact assessments to be carried out before an area is opened for petroleum activities.

Reference is also made to the 1981 Agreement between Norway and Iceland on the continental shelf in the area between Norway and Jan Mayen. The Norwegian authorities would like to point out the need to ensure full respect for the provisions of that Agreement. It would therefore be useful to cooperate to ensure compatibility between Norwegian and Icelandic petroleum legislation relevant to the extraction of any oil or gas discovered in the area defined in Article 2 in the 1981 Agreement.

The Icelandic authorities fully agree with the need to respect the Jan Mayen Agreement and welcome the Agreement signed by the Icelandic and Norwegian Foreign Ministers on November 3rd, 2008, concerning transboundary hydrocarbon deposits and the Agreed Minutes on procedures in relation to their rights of participation with a share of 25% in petroleum activities in each other's part of the continental shelf in the cooperation area between Iceland and Jan Mayen according to the Agreement between the countries from 1981.

4.10. The National Energy Authority

The National Energy Authority (NEA) welcomes the publishing of the SEA report, and considers it to be detailed and well written. The NEA does not have any comments on its content, but would like to emphasize that the government give funding for the research that is recommended in Section 12.3 of the SEA-report, and that this research begin as soon as possible.

The Ministry of Industry agrees with the view of the NEA that further research is required, and points out that the government agreed, in the latter half of 2007, to the suggestion by the Minister of Industry on further environmental research and data gathering in the northern Dreki Area; see section 3 of this summary. If it comes to exploration and production drilling, further research will be necessitated in the process of the environmental impact assessment for the drilling activities.

4.11. Icelandic Maritime Administration

The Icelandic Maritime Administration (IMA) does make a comment on the SEA-report. However, it emphasizes the importance of gathering data on the waves in the area, and that such data could be gathered by placing a meteorological and wave buoy in the area, as is described in Section 12.3 of the SEA-report, which is on the recommendations for further research.

The Ministry of Industry appreciates the comments of the IMA on the importance of further investigations on waves in the Dreki Area. At the end of 2007, a meteorological and wave buoy was placed in the area in accordance with recommendations made in the SEA-report and data has been acquired from the buoy for over a year. As a result, a lot of data on the meteorological and wave conditions are already available, even though data collection and processing continues.

4.12. Ministry of Fisheries/Marine Research Institute

Based on the report made by the staff of the Marine Research Institute on existing knowledge of the environment and biota of the northern Dreki Area, the Ministry of Fisheries emphasizes the importance of conducting further environmental research, along with the preparations for the upcoming licensing round for hydrocarbon exploration and production. The Ministry of Fisheries would like to recommend the following studies be conducted:

1. Precise mapping of the bottom substrate and shape of the area with multibeam measurements
2. Current measurements by mooring and shipboard current measurements over at least a one year period.
3. Mapping the benthic habitats and community structure in the areas that are most likely to be disturbed as a result of hydrocarbon exploration and production.
4. A survey of demersal fish stocks in the northern Dreki Area
5. Monitoring of polluting chemicals (i.e. PAHs) in the tissue of zooplankton.

In the comment it is pointed out that all of the described research is the basis that will allow the pros and the cons of hydrocarbon exploration and the potential for consequential environmental impacts. Even though the Icelandic government will fund the surveys initially, in the future such research would be expected to be funded by licensees.

The government agreed, in the latter half of 2007, to the suggestion by the Minister of Industry on further environmental research and data gathering in the northern Dreki Area in preparation for the upcoming licensing round for hydrocarbon exploration and production. The environmental research is well under way and has, for the most part gone according to plan; see section 3 of this summary. If it comes to exploration and production drilling, further research will be necessitated in the process of the environmental impact assessment for the drilling activities.

4.13. Confederation of Icelandic Employers (SA); Federation of Icelandic Fishing Vessel Owners (LÍÚ); Federation of Icelandic Industries (SI); Federation of Icelandic Energy and Utilities (Samorka); Federation of Trade & Services (SVP)

The federations wholeheartedly support the acceptance of the SEA and the following initiation of preparations for issuing of exclusive licenses for exploration and production of hydrocarbons in the northern Dreki Area.

The federations recommend that the companies that receive licenses be taxed according to the laws and regulations on company taxation, and that additional taxation on hydrocarbon profits be reasonable and competitive with such taxation in neighbouring countries. Thus making hydrocarbon exploration and production in Icelandic Waters as attractive as possible for the companies, and increasing the chances of success for the licensing round.

The federations pointed out the importance of allowing private companies to perform as much of the research and oversight with the activities as possible, and seek e.g. assistance from parties in other countries that perform such services. There should be no reason for government institutions to increase their size in order to take on specialized projects in this arena, that can be easily bought from abroad. This applies especially to the monitoring of the working environment, safety, security and health, on which considerable knowledge and experience has been gained over the years in the neighbouring countries.

The federations emphasized that further information on currents by the sea surface and by the sea floor are key information that are needed to be able to estimate the distribution of potential pollution from the exploration and production areas, and in addition the potential effect such pollution might have on fish stocks. Special attention should be given to the importance of decreasing as much as possible any risk of disturbing the growth conditions of capelin and other pelagic fish in the area. It would be very important to use the best possible technology available at any given time to reduce the risk of environmental impacts and the chances of accidents and other mishaps.

The Ministry of Industry agrees with the comments by the reviewers on taxation, and emphasizes similar views will be at the forefront for determination of hydrocarbon taxation in Iceland.

The Ministry of Industry will fund such basic research that is deemed necessary and will have parties with the appropriate experience and expertise conduct the studies. The Ministry of Industry considers it necessary that administration and monitoring of hydrocarbon prospecting, exploration and production be conducted by Icelandic

authorities and government institutes, since this authority should not be given to other countries.

As has been pointed out previously in this summary, the government agreed, in the latter half of 2007, to the suggestion by the Minister of Industry on further environmental research and data gathering in the northern Dreki Area in preparation for the upcoming licensing round for hydrocarbon exploration and production; see section 3 of this summary. The Ministry of Industry has according to this agreement, already begun the preparations in cooperation with other ministries and government institutes.

The Ministry of Industry puts great emphasis on the importance of environmental protection and pollution prevention in relation to hydrocarbon prospecting, exploration and production in the northern Dreki Area, and will make requirements for the use of the best possible technology available at any given time to reduce the risk of environmental impacts and the chances of accidents and other mishaps, as is discussed in the SEA-report.

4.14. Icelandic Planning Agency

The Icelandic Planning Agency (IPA) considers the SEA-report to be clear and well prepared.

However, the IPA has the following comments regarding the report:

a) Relation to other activities and plans: The IPA it necessary to explain how the planned activities are compatible with the policy on sustainable development since that policy does not involve hydrocarbon exploration and production.

The Ministry of Industry points out that several aspects of the policy on sustainable development relate to exploration and production activities, even though those activities are not considered in the policy directly. In addition, many of the controls and ways that are recommended to reach the goals of sustainable development are or will be used in the preparations for hydrocarbon exploration and production. For example, aspects of planning, laws and regulations, international treaties, economical controls, environmental impact assessment, education, monitoring and research

The Ministry of Industry also indicates how sustainable development has three main branches; economic growth, social welfare and equality, and environmental protection. The governmental policy on sustainable development emphasizes that these branches must be taken together and seeks to maximize the economical and social welfare with minimal damage to the environment. This basic premise is followed in the SEA-report and these three subjects are considered in context.

b) Environmental aspects: The IPA considers that potential environmental impacts on the communities in Northeast Iceland, is missing from Table 11.2 in the SEA-report, and it seems that there is uncertainty on the nature of the impact on these communities.

The Ministry of Industry appreciates that there is uncertainty on the potential impacts on the communities in Northeast Iceland as is e.g. under consideration in Chapter 5 of the

SEA-report. However, potential environmental impacts on the communities in Northeast Iceland, were not considered to belong in Table 11.2 since the metrics that were used there did not apply to impacts on communities.

In Chapter 5 and Section 11.2.2 of the SEA-report the effects on the communities in Northeast Iceland are considered at different phases of activities: prospecting will have limited to no impacts on the communities; exploration will have some positive effects, especially due to services required for the activities; production of hydrocarbons will potentially have large and positive effects on the communities, both as a result of increased need for services for the activities, as well as new jobs that will become available in the production phase. However, it is unclear how many domestic staff will work on potential production of hydrocarbons. The Ministry of Industry points out that this uncertainty will decrease as the activities progress, and expects that prospecting, exploration and production of hydrocarbons will have a large, positive influence on the communities in Northeast Iceland, i.a. due to increased diversity of jobs and increased use of existing facilities and services in the area.

c) Choices, arguments, and further research: The IPA points out that the difference between Alternative 1 of the SEA-report, which involves the offering the entire northern Dreki Area for licensing, and Alternative 2, which involves that limited areas, that are most likely to contain hydrocarbons, would be on offer in the licensing round. The IPA also considers it necessary to give further arguments for the reasons for the choice of Plan 1, i.e. offering the entire northern Dreki Area for exploration and production licenses, given the uncertainty and lack of data that exist on some aspects of the SEA.

The IPA also refers to the environmental research that is proposed in Section 12.3, and points out that it is not clear from the SEA-report whether this research will be conducted prior to the issuing of licenses. If this is not the case, it would be necessary to indicate whether stipulations will be made on environmental research in the licenses, e.g. that exploration and production activities will not begun until the completion of the proposed environmental research programme.

The Ministry of Industry points out that in the SEA-report, Alternative 1 is investigated, i.e. the effects of offering of licenses for the entire area. Limiting the area on offer, in accordance with Alternative 2, will first and foremost reduce the activities during the prospecting phase, whereas the influence on the exploration and production phase will mainly depend on whether there will be drilling and the number of drill holes. Limitation of the area will not necessarily result in fewer drill holes, since the areas on offer would then be the ones that are deemed most likely to result in successful exploration. A decision has been made to choose a different plan, which is a combination of Alternatives 1 and 2: the entire northern Dreki Area will be on offer in the licensing round as in Alternative 1, but with the additional limitations that there will be a maximum of 5 licenses issued, and that the maximum area of each license will be limited to 800 km². As a consequence, the maximum area that will be licensed in this licensing round will be 4000 km², or about 10% of the northern Dreki Area.

The Ministry of Industry also points out that the goal of the SEA-report was i.a. to give recommendations for further environmental research. Following the publication of the

report, the government agreed, in the latter half of 2007, to the suggestion by the Minister of Industry on further environmental research and data gathering in the northern Dreki Area in preparation for the upcoming licensing round for hydrocarbon exploration and production; see section 3 of this summary. If it comes to exploration and production drilling, further research will be necessitated in the process of the environmental impact assessment for the drilling activities. In addition, the Ministry of Industry would like to emphasize that the SEA-process does not assume that all data is available prior to licensing and, based on the existing environmental data, the Ministry considers that there is nothing that indicates that the licensing process should not be continued.

4.15. Environment Agency of Iceland

The Environment Agency of Iceland (EAI) points out that in the SEA-report it is stated that further data is needed on certain environmental conditions the area, e.g. that there is little data available on hydrography and currents, and no information on demersal fish stocks. The EAI considers that environmental research should be initiated in order to acquire a data series and to get a baseline of the environmental conditions for the northern Dreki Area, in order to be able to, at later stages, to estimate the environmental impacts of individual activities in the area.

In accordance with the SEA-report, the EAI considers it necessary that the following environmental research be conducted:

1. Research of the meteorology, currents and wave conditions, in order to be able to i.a. evaluate the weather conditions in the area, e.g. visibility, frequency of fog etc.
2. Basic research on the biota of the area, e.g. whales and birds
3. Research of benthic organisms, including demersal fish
4. Further research should be conducted on phytoplankton, and to process existing data on zooplankton, and get an estimate for the background PAH concentration in zooplankton in the area.

The EAI considers it important that this research be initiated as soon as possible, so this data is available when the time comes to conduct an environmental impact assessment of potential exploration drilling and production.

As has been pointed out above, the government agreed, in the latter half of 2007, to the suggestion by the Minister of Industry on further environmental research and data gathering in the northern Dreki Area in preparation for the upcoming licensing round for hydrocarbon exploration and production; see section 3 of this summary. In addition, the Ministry of Industry would like to iterate that the SEA-process does not assume that all data is available prior to licensing and, based on the existing environmental data, the Ministry considers that there is nothing that indicates that the licensing process should not be continued. As is stated in the SEA-report, if it comes to exploration and production drilling, further research will be necessitated in the process of the environmental impact assessment for the drilling activities.

4.16. Icelandic Meteorological Office

The Icelandic Meteorological Office does not make a comment on the report.