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Decision processes, communication and democracy; The aluminium smelter project in Greenland

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Decision processes, communication and democracy: The aluminium smelter project in Greenland

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Preface

This report is forms part of the research project Knowledge-based tools for the sustainable governance of energy and climate adaptation in the Nordic periphery (K-Based).

From its initiation, the Greenlandic contribution to the Nordic project has been implemented as a team-based project including Klaus Georg Hansen, Freia Lund Sørensen and Steen R. Jeppson, in which each of the team members have had specific tasks to complete. Klaus has managed the project and has had overall responsibility for the Greenlandic segment of the Nordic project. Amongst other things, this has included responsibility for organising the project, securing project progress and maintaining contact with the other Nordic partners in the overall project. In addition, Klaus held a seminar in Sisimiut during the spring of 2008 in which all the Nordic project partners participated. Freia's role in the project team has been to provide assistance with regard to the project's design and organisation, preparing data concerning the aluminium project process and contributing practical and methodological instructions for Steen. Steen's task has been, in cooperation with Klaus and Freia, to identify basic project material; primarily newspaper articles. Steen was also responsible for evaluating the contents of all the articles included in the project.

The second and third phases of the project have taken longer than it was expected. A significant factor in this regard is the fact that the organisational structure within which the project was carried out, i.e. the Greenland Home Rule Government's central administration, is not geared to taking on projects of this nature. It was only because there was access to the granted project funds that it was possible to dedicate a significant proportion of Steen's working hours to the project. The project funds granted have been insufficient to ensure that Klaus or Freia could dedicate themselves to the project and this has had a significant impact on project progress – or lack of progress – particularly in the project's final phase.

The Greenland Team wish to thank Rasmus Ole Rasmussen for the outstanding cooperation we have had during the K-based project. In continuation of this cooperation an extended edition of the report will be published in a joint publication: "Rasmus Ole Rasmussen og Klaus Georg Hansen (red): Demokratisering af planlægningsprocesser som en udfordring i Vestnorden. Case vedvarende energi og storskala industriprojekter. NORS Forsknings-rapporter, Roskilde Universitet". The publication will be available during the fall of 2009.

1. Introduction

Compared to the other Nordic countries, Greenland's democracy is a young one. This results in a number of specific challenges in the relation between the administrative and political decision making processes on the one hand, and public debate on the other. This is not a specifically Greenlandic issue. The potential for opposition between public decision making processes and public debate exists in all counties. What is a particularly Greenlandic issue, however, is the fact that strong traditions relating to information exchange in this area have yet to be established.

In the Greenlandic parliamentary elections held on 2 June 2009, this opposition was a central element in the election campaign. Public dissatisfaction with the lack of clarity in administrative and political decision making processes would seem to have been a significant factor influencing the result of an election in which, for the first time in the Greenland Home Rule Government's 30 year history, Greenland's social democratic party, Siumut, was not the largest party and could therefore not appoint the Greenlandic Prime Minister. For the first time in Greenland's history, the upcoming parliamentary term will see Siumut sitting on the opposition benches.

The party which won the election was elected on a promise to reassess many of the current administrative and political decision making processes. In other words, it would appear that there exists a widely held desire to overhaul some of the more ingrained decision making processes which have been built up during the 30 year history of the Greenlandic Home Rule Government. The timing of this change has an almost symbolic feel to it, as from the 21 June 2009 the framework under which the Greenlandic Home Rule Government operates will be replaced by a revised agreement with Denmark.

1.1 The Project

In this context the most pressing need that this project addresses is to reflect in a more systematic fashion on some of the administrative and political decision making processes which have been practised up till now. In this relation, this Nordic project relating to knowledge-based decision making tools is both highly topical and a relevant scientific analysis framework in connection with the planned revision of the administrative and political decision making processes.

The Greenlandic contribution to this Nordic project consists of a survey of public communication in connection with the establishment of an aluminium furnace in Greenland. This survey takes the form of an analysis of the communicative initiatives and discussions which have arisen in the public sphere since the project began in 2006, including decisions made by public bodies and the rationale on which these decisions were based in relation to the proposed construction of an aluminium furnace in Greenland.

The aim of this analysis is partly to identify the relation, in terms of the times at which they occur, between decision taking and public debate, and partly to identify the stated opinions of the various parties as expressed in the public sphere.

The theoretical basis for this analysis includes theories relating to communication, citizenship and discourses. The project's framework was not sufficient, however, for us to present the theoretical background on which our analysis is based.

Because of the project's relatively modest scope, the primary focus of our methodology has been an analysis of the two national Greenlandic newspapers. Relevant articles have been identified and analysed on the basis of a template (see Appendix 1).

Considered in relation to our method, the results we have achieved indicate that limiting the scope of our analysis to newspapers *is* a limitation, as public communication has also taken place via other media – primarily radio and television. Notwithstanding this it remains the case that 226 datasets were identified and analysed. This relatively high figure is in itself an indication that genuine public debate has occurred. It is possible, using the analysis framework which we have employed, to generate interesting cross tabulations. Our method has also, however, proved limited in some respects, for example in relation to the generation of a thorough stakeholder analysis.

Our analysis indicates that during the period in question (almost three years) levels of public debate relating to the aluminium furnace have gradually risen. A large number of stakeholders have been represented in this debate. In general, however, it would seem that public discussion has been displaced, as it were, as has occurred after administrative and internal political decision making processes have taken place. Considered in relation to the process' democratic character this is, of course, unfortunate.

Analysis also shows that a wide range of opinions have been expressed. There are thus marked differences between the opinions expressed by the various stakeholder groupings. In general terms it is clear that there are groups whose expressed attitude is mostly positive, and groups whose expressed attitude is mostly negative.

The project's aim has been, given the analysis performed and results thereby generated, and based on the concept of knowledge-based decision making tools, to present a model for a potential re-structuring of the information flow in relation to significant political decision making processes; thereby furthering the democratic process.

This aim has been partially achieved. It is unfortunately the case, however, that it has not been possible to carry out a discourse analysis as we had originally intended. This is primarily due to the fact that the data collection process proved more time consuming than anticipated; meaning that the available resources have not been sufficient to cover the planned discourse analysis.

The model employed for a knowledge-based decision tool has focused primarily, therefore, on issues relating to the timing of the three central discussion, analysis and decision making processes – i.e.: public debate, administrative assessment and political decision making.

1.2 Objective

There exist many individual decision making processes suitable for analysis but carrying out such a broad analysis would be far too extensive a project. Our initial objective, therefore, was to limit the scope of the decision making process under consideration in a suitable way. Limiting the project's scope to the decision making process surrounding the proposed aluminium furnace, was an obvious choice. This process has been ongoing since the start of 2006, and is likely to continue for many years to come. If it is implemented, the project will be by far the largest in Greenland's history, and because of its enormous scale it has been the focus of intense public interest.

Our survey is focused on knowledge-based decision making tools in the energy and climatic adaptation areas. We understand the term "knowledge-based decision making tools" as encompassing both the collection of factual and scientific knowledge in support of a decision and the holding of genuine, public and democratic debate relating to the decisions under consideration.

We find that a crucial factor for knowledge-based decision making tools is a description of a number of guidelines and principles relating to the structuring of a process which facilitates constructive public discussion during the decision making phase between the major stakeholders.

Our method takes its point of departure in a mapping of the various communicating parties and their expressed opinions. Our analysis will concentrate on assessing to what extent stakeholders, including the public, interact in both time and space.

The aluminium furnace project is thus a highly suitable subject for our analysis as it is both possible to assess the project's formal development over time and to find suitable discursive material relating to the project in the public sphere.

This objective of our analysis can thus be formally stated in the following terms:

Through a mapping of the aluminium project's formal development and a survey of the accompanying public debate relating to the project, we will carry out an analysis, firstly of the of the actual relation in time between decision and public debate, and thereafter of the various stakeholders' expressed opinions as evident in the public sphere. Finally, and on the basis of the concept of knowledge-based decision making tools, we will present a model for the potential structuring of such processes.

Both our analysis and the model are focused on one part of our understanding of the concept of knowledge-based decision making tools; i.e. a genuine, public and democratic debate relating to the measures under consideration.

This report assumes that genuine public debate relating to undertakings of so extensive societal importance as the aluminium furnace project should take place in advance of any political decisions.

1.3 Theoretical Framework and Model

Fundamentally, our project is about describing paths of communication, citizen participation and power relations. In each of these areas we have undertaken some basic theoretical considerations. In relation to communication paths we have assessed communication theories; in respect of citizen participation we have turned to theories of citizenship; and discourse analysis has formed the theoretical background to our consideration of power relations.

Our communication theoretical basis is "The Lasswell Formula" as formulated by sociologist Harold Dwinght Lasswell in 1948:

"A convenient way to describe an act of communication is to answer the following questions: Who says what in which channel to whom with what effect?" (Lasswell 1948).

<i>Part of the Formula</i>	Who?	Says what?	In which channel?	To whom?	With what effect?
<i>Element in focus</i>	Sender	Message	Medium	Receiver	Effect
<i>Types of analysis to use</i>	Institution and control analysis	Text and contents analysis	Media analysis	Reception analysis	Effect analysis

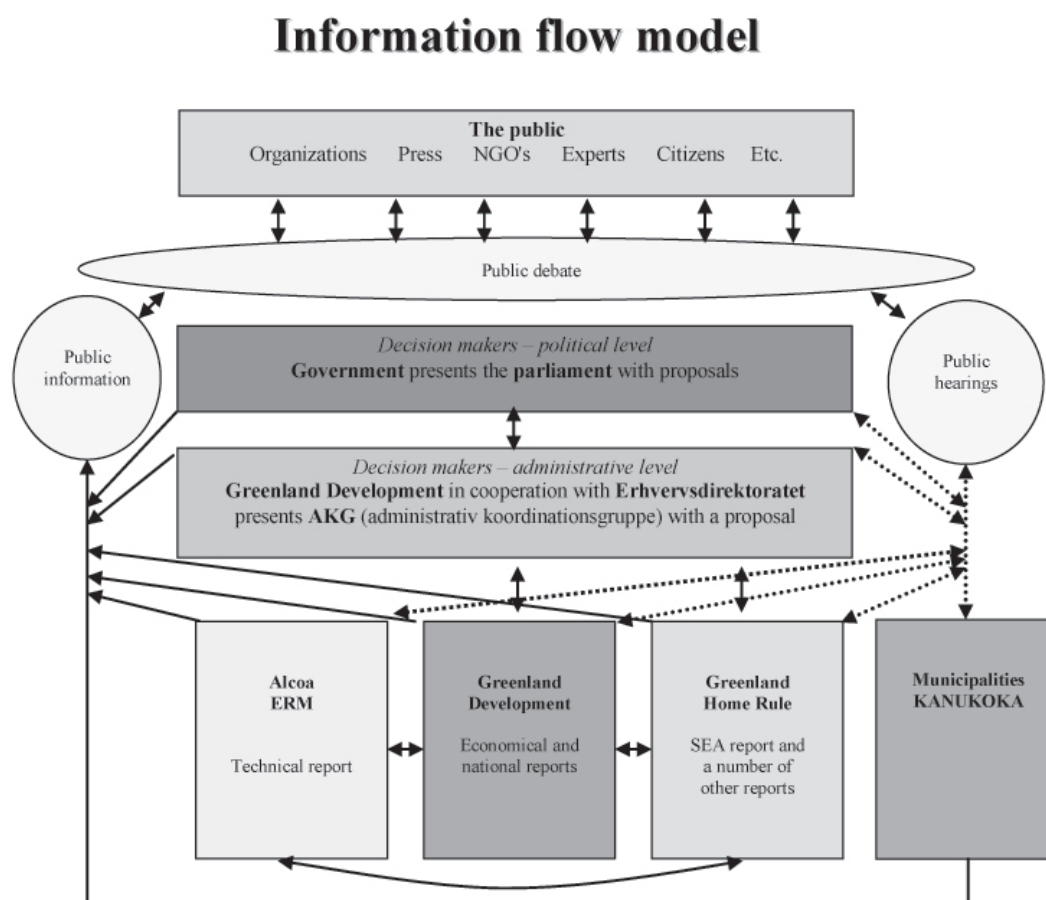
In his article, Lasswell operated with a division of the verbal model into five groups. This division gives a clearer understanding of each section of the formula:

Figure 1. The Lasswell Formula (Lasswell 1948,37).

A discussion of all five elements of the communicative process here would be too extensive for incorporation in this project. We refer instead to a previous discussion in "Communication and Information; technical quantity and quality" (Hansen 2004). We here highlight only some few significant parameters. Our project is particularly focused on an analysis of the first two elements, i.e. Sender and Message.

The second focus of our attention is citizen participation. Our primary source of inspiration in this regard is Jørgen Goul Andersen's discussion of the term 'citizenship'. Andersen proposes three dimensions to citizenship: rights, participation and identities in relation to the individual citizen's commitment (Andersen 2002). This citizenship-based approach is designed to help us outline an objective for the condition of a democracy. This can be achieved by assessing the population's opportunities to participate in and influence the process in question as well as assessing whether particular groups have, in reality, been excluded from public debate. Andersen demonstrates that what is of crucial importance is not whether people in fact participate, but whether they feel themselves cut off from the possibility of participation (Andersen 2002,170-171).

When a situation arises in which there is an expressed desire on the part of one or more groups of stakeholders to participate in a decision making process, but where it is not possible for them to



participate, a situation of democratic deficit can be said to have arisen. "The expression 'democratic deficit' is used loosely to identify decision procedures with insufficient democratic control" (Mandag Morgen 2002).

Figure 2. Model detailing the most significant parties to the communicative process and communication channels in connection with the various aluminium project discussions, analysis and decision making processes. (The authors' own model).

The reasons for which participation in a particular decision making process may not be possible are many and varied. It may, for example, be a result of the fact that the decision making process takes place in a language which the stakeholders do not speak, or that a particular decision making process doesn't take place in the public domain.

Power relations are the third element which we will consider from a theoretical standpoint. Of particular importance to us in this regard are the works of Norman Fairclough (1941-) especially his

critical discourse analysis (2001). Fairclough does not consider his critical discourse analysis to be neutral; rather he sees it as an expression of a critical, analytic approach to communication. It is also an expression of a critical approach that engages with social and societal change, where the attempt is made to describe and identify the discursive practice's effect on the maintenance of unequal power relations. One of Fairclough's central concepts is 'discourse order', which describes the competition existing between different discourses trying to fill out the same terrain, and which, as such, thus come to place themselves between the discourse itself and the discursive field (Tønder 2000).

The nature of the framework under which this project has been undertaken has not allowed us, however, to provide a genuine theoretical background for the analysis carried out. These theoretical considerations are, therefore, only implicit in our analysis.

Partially on the basis of these theoretical considerations, we have established the following model for the flow of information in the case in question – see figure 2 below. The model serves as our point of departure in designing the project's analytical framework.

The model identifies the most significant parties to the communicative process in the public domain. We have found it important to identify all the various parties which we feel play an active and independent role in the process. First and foremost, this involves the political and central administrative level. We have then identified the parties who have been active. We are, of course, aware that Alcoa are not a part of The Greenland Home Rule Government but we feel that it is important that Alcoa are included in the model as an independent party.

1.4 Approach

The project has consisted of three phases. The first phase lasted from the project's start to the summer of 2008 where the project's design was determined jointly by the team. The Sisimiut seminar acted as an excellent catalyst in this regard. The second phase of the project lasted until January 2009, and encompassed the collection of project data consisting in the identification and evaluation of articles. The third phase of the project culminated in June 2009. During this phase, the collected data was analysed and the report written.

Significant methodological considerations relating to the project have been concentrated in the areas of project design and data selection. The basic premiss on the basis of which the project was designed was that the project be based on as simple and transparent a model as possible. From the point of its initiation, the project has been defined as an empirical project. The framework within which the project was carried out, in particular budgetary constraints and the organisational culture the project had to contend with, made it clear to us that it would not be possible for us to incorporate theoretical considerations. The project's theoretical platform is, therefore, of a limited character and includes only general considerations relating to knowledge-based decision making processes, communication, empowerment and popular democratic principles.

Our data selection criteria were focused on securing as much material as possible from the two national newspapers *Atuagagdliutit* (AG) and *Sermitsiaq*. In order to be as comprehensive as possible and to trace developments over time we decided to include material dating right back to the start of 2006. The data collection period culminates in November 2008, meaning that we have almost 3 years worth of material to work with. Our aim has been as a bare minimum to register all the articles in the two national newspapers that relate to the aluminium project. Two methods were used for this registration process: searching the newspapers' online databases using keywords, and manually leafing through all newspapers in their entirety. We have also included articles from the Danish press, but because of the sheer volume of material to be sifted through we have based our selection on existing indexes. In addition, other sources which have provided a specific treatment of the subject in question have been included. This has resulted in a total of 226 individual raw

data items. Each of these has been analysed and indexed on the basis of the same template (see the overview in Appendix 1).

The data thus recovered has been subjected to analysis using selected cross tabulations giving rise to the data set analysed in this report. There are two main trends to this analysis. The first was to establish when public debate has taken place in relation to when the administrative and political decision making process occurred. The second was to determine which opinions were expressed in the texts and other raw data which were the subject of analysis. It would have been interesting to combine these two different analyses so as to determine which opinions were expressed by whom and at which point in the process, but, given the amount of data involved and the resources available this was not practically possible. It has not been our expectation that we would be able to generate sufficient levels of data to be able to produce statistically valid conclusions relating to which opinions have been expressed when. Clearly, such an analysis could also have been carried out on a purely qualitative basis but given the constraints imposed by the project's framework this has not been possible.

2. The Aluminium Project

As far as Greenland was concerned, the aluminium project as currently proposed had its genesis in the beginning of 2006, at which time Alcoa, an American aluminium company, contacted the Greenlandic authorities. Alcoa wished to initiate preliminary surveys whose object was to assess the potential for establishing an aluminium furnace in the central segment of West Greenland in the area between Sisimiut to the North and Nuuk to the South.

To describe the entire aluminium project in all its details would exceed the scope of this report. As mentioned previously, the aluminium project is potentially the most extensive of its type ever to be undertaken in Greenland. In the following presentation it will be sufficient in the first instance to record the most significant project milestones:

Spring 2006	First enquiry by Alcoa.
July 2006	Joint Action Plan (JAP) with Alcoa.
April 2007	First open political decision regarding the plans (Go on).
May 2007	Memorandum of Understanding (MoU) with Alcoa.
May 2008	Open political decision on placement (Maniitsoq).
2010	Open political decision on ownership (partner/concession).
2010	Final political discussion on project (start/not start).
2016	Earliest possible commencement of production - if project approved.

The Greenland Home Rule Government have undertaken a number of significant administrative initiatives during the project phase which have resulted in the creation of both significant independent actors, as well as principles and a framework which have impacted significantly to the project process. The most important of these initiatives are detailed in the following:

Greenland Development A/S

Greenland Development A/S was formally incorporated on the 1 November 2006 as a wholly owned subsidiary of Greenland Tourism and Business Council. In June 2007, the Government of Greenland decided to convert Greenland Development A/S (GD) to a public limited company under the auspices of the Government of Greenland. In early versions of the corporation's articles of assembly its purpose was described as to "work to advance the interests of the aluminium industry in Greenland". The scope of this stipulation was extended following the most recent revision of the corporations articles of assembly on 17 March 2009. GD's tasks include undertaking contact to

Alcoa on behalf of the Greenland Home Rule Government. GD has also produced a number of surveys and reviews primarily in the financial and socio-economic areas.

The Administrative Coordination Group

The Administrative Coordination Group (ACG [in Danish AKG]) was established in August 2007. ACG replaced 'the administrative working group' which was established at the end of 2006. Initially ACG consisted of a few key directors in the Greenlandic central administration. Its composition has been altered on several occasions and it has also been expanded. An example of this is the fact that organisational change from directorates to departments has influenced the composition of ACG such that it is now primarily Permanent Secretaries who sit on the ACG. ACG has overall coordinatory responsibility for Greenland's central administration's participation in the aluminium project. ACG are serviced by the Department for Business and Minerals.

Strategic Environmental Assessment

A Strategic Environmental Assessment (SEA) with accompanying organisation was established in April 2007. Prior to the SEA, the Infrastructure, Environment and Nature working group (IEN working group [in Danish IMN]) performed a screening and subsequently recommended a SEA. SEA has been through several organisational restructurings. The first SEA draft (SEA2007) was published in December 2007. The revised SEA (SEA2008) was published in February 2008. It is expected that a final SEA (SEA2009) will be completed in the autumn of 2009. During the course of the SEA a number of surveys have been completed and seminars and public meetings have been held.

Mobility Survey

A coordinated mobility survey was initiated in August 2008. A number of governmental bodies participated, as did external experts. During the spring of 2009 a number of surveys were carried out whose purpose was to map the population's mobility. It is anticipated that these surveys will be published in the autumn of 2009.

Working Group for a New Residential District in Maniitsoq

In September 2008 ACG formed an interdepartmental working group which drew members from across the public sector, with equal numbers from the central administration and the local authority (Qeqqate Kommunia) in which the aluminium furnace will be located. Qeqqata Kommunia is itself the result of a recent merger of two smaller administrative units: Maniitsoq Kommune and Sisimiut Kommune. The working group's task was to provide coordination of the analysis of investment requirements, burden and task distribution and infrastructure, housing and planning requirements.

Additional governmental working groups have performed further analyses in relation to the aluminium project. These surveys will not be considered separately.

Alcoa

The aluminium project's genesis consisted of a request on the part of Alcoa, and it is therefore appropriate to include a brief description of the company here. The following description was authored by the company:

Alcoa is the world leader in the production and management of primary aluminium, fabricated aluminium and alumina combined, through its active and growing participation in all major aspects of the industry. Alcoa serves the aerospace, automotive, packaging, building and construction, commercial transportation and industrial markets, bringing design, engineering, production and other capabilities of Alcoa's businesses to customers. In addition to aluminium products and components including flat-rolled products, hard alloy extrusions, and forgings, Alcoa also markets Alcoa® wheels, fastening systems, precision and investment castings, and building systems. The Company has 97,000 employees in 34 countries and has been named one of the top most sustainable corporations in the world at the World Economic Forum in Davos, Switzerland. More information can be found at www.alcoa.com (Alcoa 2009).

As of June 2009 the newly elected government will take a decision as to their policy with regard to the development of the aluminium furnace project. Administrators are working on the assumption that the project will continue and that political decisions will be taken with regard to a number of issues of a principle character at parliamentary assemblies in 2010. Amongst these issues is the question of whether Nukissiorfiit (Greenland's publicly owned utility company) should be converted to a PLC, what ownership structure is best suited to the proposed industrial water power stations (which, it is expected, will produce up to 15 times the energy currently used across Greenland) and whether or not the aluminium project should in fact be implemented.

If the aluminium project is given the green light and is located in the Maniitsoq area as proposed, this will, of course, have significant consequences - both for the areas from which manpower resources will inevitably be drawn, and for the area in which the aluminium furnace will be constructed, i.e. Maniitsoq.

For the majority of the first half of the 20th Century, Maniitsoq was the largest town in Greenland. This was primarily attributable to extensive local cod fishery. Towards the end of the last century development occurred primarily in other Greenlandic towns. Today Maniitsoq is the sixth largest town in Greenland.

Opinion in Maniitsoq is that the question of the location of the aluminium furnace will determine whether or not the town will survive. If the furnace is not located in Maniitsoq then the expectation is that it will only be a matter of time before the town will experience a significant fall in population levels. During the past 3 decades population levels have developed as follows:

1980:	3,008 residents in Maniitsoq
1990:	3,135 residents in Maniitsoq
2000:	2,929 residents in Maniitsoq
2007:	2,842 residents in Maniitsoq

From 1990, where resident figures peaked, to 2007 the town's population has declined by almost 10 %.

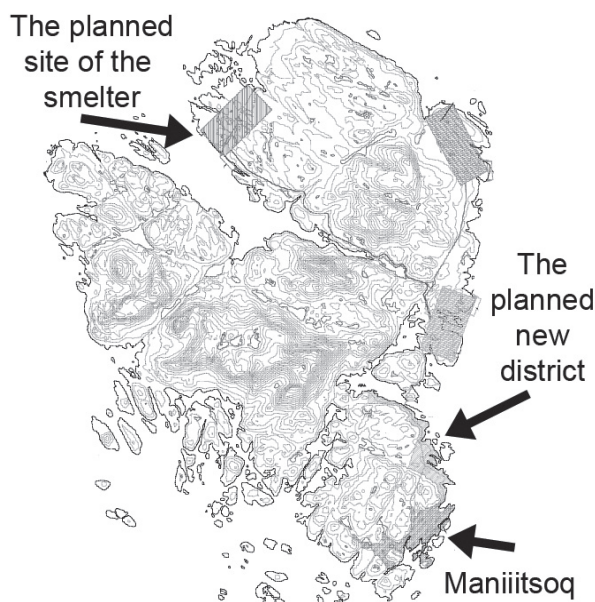


Figure 3: Map of Maniitsoq Island including the location of the existing town, the new district and the aluminium furnace. The furnace is located about 12 km from the town.

The most recent evaluations of the direct and indirect effects on Maniitsoq population levels of the construction of the aluminium furnace are that these will rise by approximately 2,000 individuals. This figure represents the anticipated permanent migration to the area. During the five years in

which the furnace and accompanying infrastructure are under construction approximately 4,000 construction workers will move to the area. It is anticipated that it will be necessary to recruit these workers from abroad, and that they will live in temporary accommodation areas with limited contact to Maniitsoq's residents.

Irrespective of whether the temporary influx of construction workers has a significant impact on the population of Maniitsoq, the town will experience significant changes when the furnace enters operation. The town's prosperity will be totally dependent on the furnace, and there will no longer be a valid financial case for locating a fish processing factory in the area. It is also to be expected that Maniitsoq will come to acquire a number of the other characteristics typical of industrial towns.

It is an open question as to whether the current population of Maniitsoq and migrants to the area will be able to cope with these changes. Little genuine debate has taken place concerning the fundamental changes that Maniitsoq will face in the coming 10 year period if the project is implemented as planned.

2.1 The Administrative and Political Decision Making Processes

As already mentioned, a number of administrative and political decisions have already been taken in relation to the aluminium project. Given the scale of the project (it involves potential investment of the order of 20 billion DKK) it is only appropriate that administrative and political decisions are kept confidential. It is not realistic to expect the same degree of public access to agreements and decisions as would be the case for projects on a smaller scale, which would also typically be covered by planning legislation. This is not the case for the aluminium furnace project.

Even though aspects of the agreement must of necessity be kept confidential this is not to say that the process itself should be kept confidential. The same degree of secrecy is not appropriate to the timing and subject matter of administrative and political decisions.

Typically an individual decision making process takes place as follows: a political statement is issued requiring the assessment or advancement of a given subject area /process. This political statements may take the form of a coalition agreement or parliamentary memorandum. Such political statements are typically loosely formulated. The following "Memorandum Relating to Energy Intensive Industry" (Greenlandic Parliament 2007) which was voted through by the parliament and authored by the government includes the following statement:

"... it [should] also be decided what degree of societal and environmental evaluation it will be necessary to carry out. It is advisable that a regional strategic environmental assessment be carried out in the region between Nuuk and Sisimiut ..." (Landstinget 2007,13).

On the basis of, in this instance parliamentary, backing for a government proposal, the administrative wheels begin to turn and existing knowledge relating to the issue in question is collated and assessed in order to determine whether it will be necessary to carry out additional research in the area in question. In our example, on the initiative of two members of the government, a person was appointed with responsibility for ensuring that the review was carried out and funds were approved for this purpose.

The next step is that the member of the administration with responsibility for the task in question prepares a draft proposal which is often approved in principle at the political level before being sent to internal or external consultation. When a consultation round has been carried out a revised draft is submitted. With regard to the strategic environmental assessment, political approval was secured in principle in October 2007. Internal consultations were held during November 2007, and a

process of public consultation took place between December 2007 and January 2008, with the final proposal being prepared for political approval in February 2008.

The revised draft is then presented to the government, which may have delegated responsibility for the project to an individual member of the government. If the matter in question is of significant import it may be the case that the government can or must submit the proposal to the parliament which then takes the final political decision. In many cases, however, it is the government that takes the final decision. The strategic environmental assessment was included in the total package of background material on which the parliament based its decision of May 2008 regarding the locating of the aluminium furnace in the Maniitsoq area.

There are, of course, innumerable possible variations of this process, and there are a number of factors which have not been included in this overview. In many cases, projects which have been under preparation in the administrative machinery for some time only become public when they are presented to parliament. In the best cases an issue can become public knowledge long before it reaches parliament. This occurs in the instance that a case is taken up at an initial seminar or similar where stakeholders and the public are provided with insight into a particular case. The public were first involved in an organised fashion in the strategic environmental assessment process at a series of open meetings in August 2007.

As mentioned above, a hearing can be made public by ensuring the involvement of stakeholders, including the press. This inclusion of the public, as broadly understood, does not occur in all cases, nor is it necessary in all cases as many cases have little societal impact. In these instances there is no need to introduce wide-reaching democratic initiatives. In some instances it can become apparent under a hearing that insight into significant factors is lacking and in these instances seminars or similar may be held during the course of the administrative process. In our example, towards the end of 2007 it was the opinion of the responsible person within the central administration that there were significant gaps in the knowledge available. A seminar was therefore held in mid January 2008 within the scope of the strategic environmental assessment and was attended by invited Canadian and Scandinavian experts.

There are also instances, however, in which, notwithstanding the fact that a proposal has significant societal consequences, the wider public are not included in the consultation process prior to the finished proposal being presented to the parliament for ratification. In such instances it is our opinion that the decision making process has suffered from a democratic deficit.

2.2 The Process Involved in Determining the Furnace's Location

During its spring session in 2008 the parliament took its most tangible decision yet in relation to the aluminium project. A government proposal was set out which required parliamentary approval. Before the proposal was considered by parliament several months of administrative work had gone into refining it as is evident from the following overview of the political and administrative process:

January 2008	Final material is collected by the administration.
February (start) 2008	Final draft prepared.
February (start) 2008	Draft presented and approved internally.
Mid-February 2008	Confidential memorandum issued for ACG hearing round.
Mid-February 2008	ACG meeting and final approval of draft.
18 February 2008	Parliamentary seminar concerning the aluminium project.
21 February 2008	Governmental decision in relation to the proposal (the executive authority).
21 February 2008	Press meeting upon publication of the proposal.
25 February 2008	Delivery to parliament (the legislative authority).

The government's bill was included as item 83 in the parliament's spring session and was given the following title: "Proposed parliamentary decision relating to the location of the aluminium furnace and decision in principle vis a vis preferred ownership and financing model if at some future time the construction of a water power plant based aluminium manufacturing facility in Greenland is approved". The bill's first reading was on 14 March 2008 and its second reading was on 7 May 2008. A majority of the parliament voted for the bill and it was passed into law.

The decision making process described here is just one of a number relating to the aluminium project. It is also one of the most significant to date. This process will, therefore, also be included in our analysis in the following paragraphs.

3. Public Debate

Public debate in Greenland is very different to public debate in the rest of Scandinavia; for one thing the media landscape is very different in Greenland. There are, for example, no daily newspapers. There are two national papers one of which comes out once a week and one twice a week. There is only one national TV station and one national radio channel. Internet use is widespread but is paid for by volume, and, amongst other things, this has a negative effect on news searches and information retrieval. There is a free press, but it functions only partially as a true fourth estate providing professional, in-depth, critical journalism.

The population of Greenland currently numbers some 56,000 individuals. Population levels have been stable for a number of years. Approximately 50 % of the population has a formal qualification that goes beyond their standard schooling, which percentage is lower than in the rest of Scandinavia. It is estimated that roughly 50 % of the population speak Greenlandic as their first or only language, 25 % speak Danish as their first or only language and 25 % speak both languages with equal fluency.

Cultural factors are also significant. There exists a different debating culture in Greenland to that found in the rest of Scandinavia. Young Greenlanders are still brought up to discuss things in an indirect fashion. Debates often take place with only indirect references to the essence of the matter under discussion or take place in an abstract third-person form (one, it is said that, some etc.). This doesn't make a debate less efficient, but the direct form of debating itself is not a traditional way of addressing conflicts in Greenland and it is to a certain extent the case that a particularly Greenlandic indirect form of debating has developed. A further significant cultural factor is the widespread clan consciousness. In relation to debates this means, amongst other things, that whilst issues may be the subject of lively debate in the private sphere (e.g. close family) in public the stage is left to a particular group of individuals. These are typically politicians, representatives of various organisations and persons with a university education.

It is on this basis that public debate in the traditional mass media currently takes place in Greenland. This is worth remembering when considering the whats, whos and whys of a particular public debate.

As stated above, we feel that knowledge-based decision making tools should always incorporate genuine public and democratic debate relating to the matters under consideration. It is this aspect of knowledge-based decision making tools which is the focus of our analysis. In the following two sections of this report we will first analyse the scheduling aspect of this issue, and thereafter turn our attention to issues relating to the content of debate.

3.1 Analysis of the Timing of Debates

In our analysis we compare the timing of public debates to the timing of administrative and political decision making processes.

Our analysis will uncover the relation between the time at which articles or other material relating to a particular issue are published and the time at which decisions relating to this issue are taken. This section of our analysis makes no assessment of the contents of these articles, only their timing and number.

Our point of departure is this: for a genuine public and democratic debate to have taken place concerning decisions that have been under consideration the majority of articles and other material relating to those decisions should have been published before the administrative and political decisions were taken.

Figure 4 illustrates the timing of all registered articles and other material. It is evident that the project has attracted higher levels of attention for each year that passes; fewest in 2006 and most in 2008.

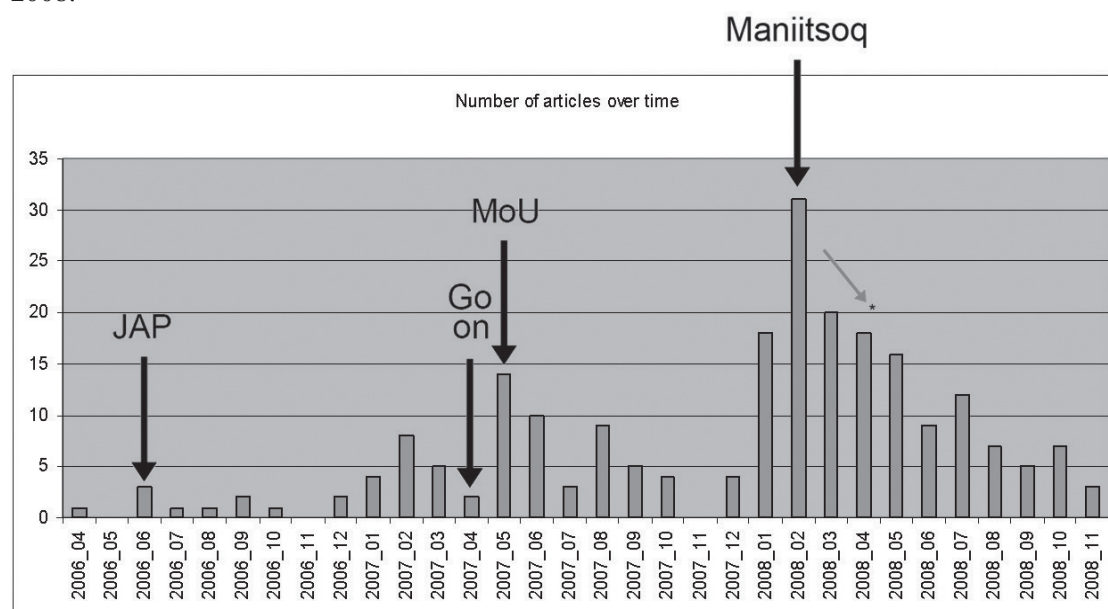


Figure 4. Distribution of articles over time. A total of 225 articles were considered.

If one looks more closely at the distribution of articles there are clear variations in the spread of articles across the year. It is obvious that a large amount of communication has been associated with the four public milestones which the project has crossed hitherto (see the overview in section 2.0).

In July 2006 the first agreement between the Greenland Home Rule Government and Alcoa was signed. It took the form of a so-called Joint Action Plan (JAP). This appeared to provoke a reaction in the public sphere, though it was a very slight reaction. In February 2007 communication levels increased again. February was also a hectic month for administrators. Amongst other things the parliament was informed of the status of the aluminium project and three working groups which had operated across the various directorates delivered their reports to The Administrative Working Group. Not much of this was reported or commented on in public at the time. Media attention was taken up with the visit of Norsk Hydro Aluminium to Nuuk which in January 2007 also entered into a JAP with the Greenland Home Rule Government. Up to May 2007 Norsk Hydro and Alcoa competed on the right to enter into a MoU with the Greenland Home Rule Government. A competition which, as we now know, Alcoa won.

On the 27 April 2007 the government bill: “Memorandum Relating to Energy Intensive Industry” (FM 07/49) (Greenlandic Parliament 2007) was debated in parliament and voted through. On 23 May 2007 the government issued a press release indicating that on 25 May 2007 the Greenland Home Rule Government would enter into a MoU with Alcoa. These two May milestones aroused a good deal of media interest as is evident from Figure 4.

The slight increase in activity in August 2007 can be ascribed to the fact that SEA, the local authorities and Alcoa held joint open meetings in Nuuk, Maniitsoq and Sisimiut. Approximately 200 people attended each of these meetings. This generated a certain amount of brief interest in the media but did not give rise to a broad-based popular debate during the following months, which had otherwise been in particular SEA’s intention as it had been hoped that these public meetings would kick start a debate as to the content of the SEA.

The next serious activity arose in January and February 2008. During January fresh public meetings were held in the three towns, plus an open seminar on regional development was organised by SEA. In February the government published its preferred location for an eventual aluminium furnace: Maniitsoq. The grey arrow in Figure 4 shows the period from the publishing of the government’s recommendation to parliamentary acceptance of this recommendation. One would imagine that a significant level of debate would have been evident during this period, but this does not seem to have been the case.

Mapping these events and milestones in relation to levels of public debate shows clearly that public communication first occur concurrent with or slightly after a milestone is reached at which political decisions are reached. As previously described prior to these political decisions an administrative and political decision making process has taken place. It does not appear to be the case that any significant public debate of these issues has taken place during this period.

As has been mentioned previously, not all decisions lend themselves to public discussion. We live in a representative democracy and it is the function of politicians to take some of these decisions on our behalf. However, though this remains the case, it is still true that the process itself should be the object of a degree of public debate. On the basis of the material here analysed this does not seem to have been the case.

Taken as a whole it would therefore appear that considered from the standpoint of knowledge-based decision making processes, the total process surrounding the aluminium project from its start in the beginning of 2006 up to the end of 2008 has suffered from a democratic deficit.

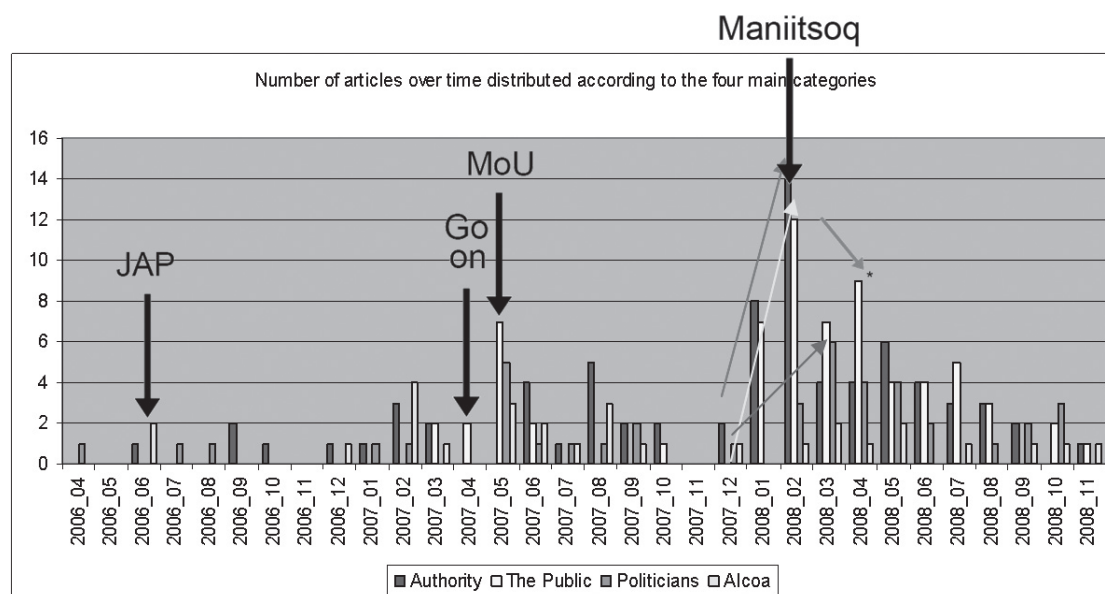
We have also analysed our material to determine the sender of each individual contribution to the public debate. This is illustrated in Figure 5, where senders have been divided into four categories: Authorities, The Public, Politicians and Alcoa.

During the JAP in June 2006 and Norsk Hydro’s visit during February 2007 it would appear that it is primarily Alcoa, that was active in communicating their message. Alcoa have maintained a low but consistent level of information provision throughout the period analysed.

During April and May 2007 it would appear that it was primarily the public (i.e. the press and citizens) who were active. It is interesting to note that the material under analysis records no public activity of note for the entirety of the autumn of 2007. This serves to underline the lack of public debate which attempts were made to reignite during August 2007.

During the period from December 2007 to February / March 2008 all three categories of Greenlandic stakeholders show increasing levels of activity. There seems to be a certain inter-relation between authorities and the public while the number of articles attributable to politicians peaks a month later without ever reaching a significant level. The three increases are marked by red, yellow and blue arrows respectively.

Seen at the general level it is clear that the contributions analysed come from various categories of senders, and that is, of course, in itself positive. If the majority of contributions were attributable to one particular grouping this would have been disturbing. It is a common feature of all the



contributions that they lag behind the administrative and executive decision making process.

Figure 5. Number of articles over time distributed according to the four main categories of sender. Total number of articles: 214.

3.2 Analysis of Debate Content

In the second section of the analysis we assess the opinions expressed in the texts and other material under analysis. The opinions which are ascribed to the individual groups of stakeholders are based on an assessment on our part. We have attempted to ensure that this assessment is as objective as possible. Opinion evaluations occur in accordance with the instructions included in Appendix 1.

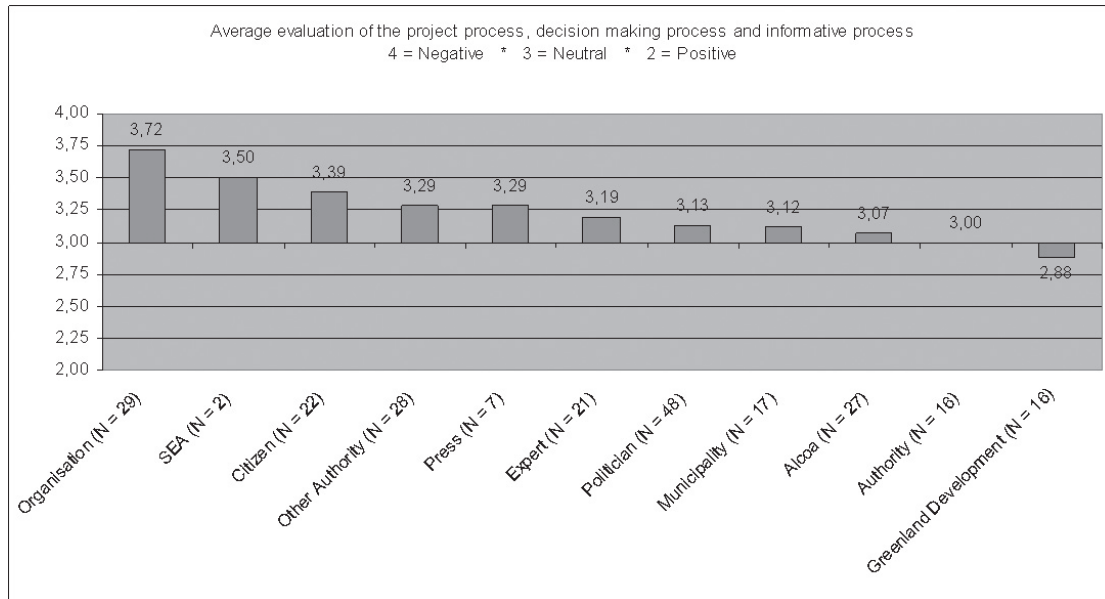
Only the themes which the individual stakeholders have touched on in the texts analysed are included in our data set; meaning that if a stakeholder hasn't mentioned a particular theme then this opinion will not have been registered.

In the analysis we assess which opinions are expressed within two general categories: the aluminium project's processes, and selected societal issues.

3.2.1 Opinions Relating to the Aluminium Project's Processes

The first of the two general areas to be assessed is those opinions which relate to the aluminium project's processes. This includes opinions in relation to the project process, decision making process and informative process. The three processes are registered independently but there are too few opinions expressed in our material for it to make sense to separate them. For this reason, the three categories have been united.

What is immediately evident from Figure 6 is that of the eleven groups considered nine have a negative opinion of aluminium project processes. Authorities maintain a neutral standpoint and only Greenland Development A/S consistently expresses a positive attitude to aluminium project processes. A total of 233 opinions expressed also indicate that this is a subject which has been of



importance to many stakeholders.

Figure 6. Average evaluation of the aluminium project's project process, decision making process and informative process by stakeholder group. Total N= 233.

There should not, of course, be accorded too great a significance to the various degrees of positive or negative opinions. However, it is interesting to note that the 'organisation' group has been particularly negative in its assessment of aluminium project processes.

It has not been possible within the constraints of this project to extend our analysis to an evaluation of what these positive and negative opinions have been expressed in regard to.

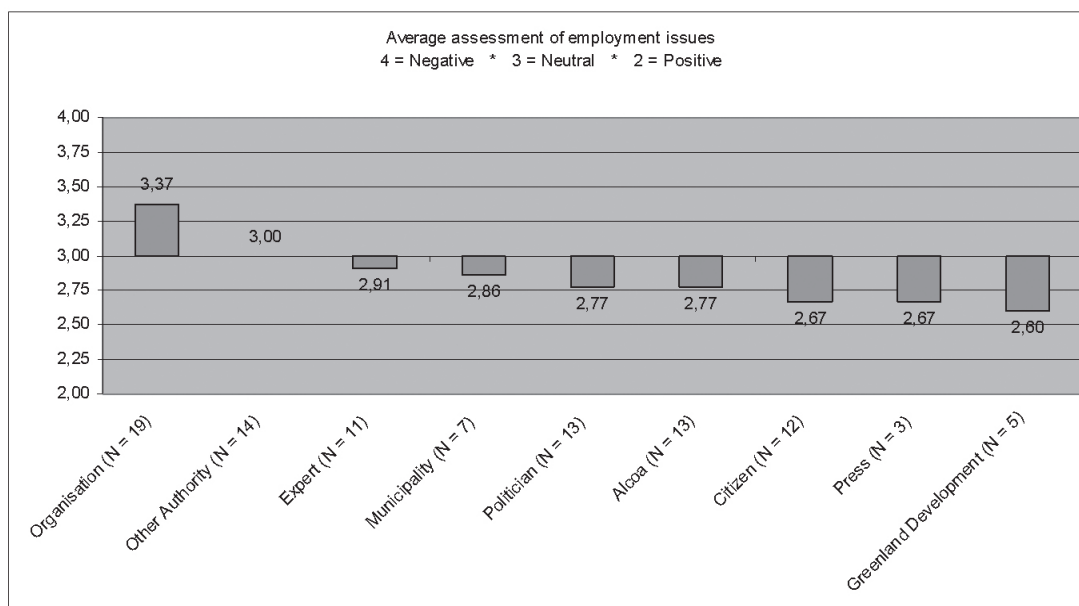
3.2.2 Opinions Relating to Selected Societal Issues

The second general subject area to be the subject of analysis are opinions expressed in relation to societal issues. This analysis is more extensive than the above which related to opinions expressed concerning aluminium project processes.

Our analysis starts with an assessment of opinions expressed in relation to nine separate themes. These results will then be commented on. The nine separate themes are as follows: employment, training, health, finances, independence, regionalism, the environment, CO2 and cultural and historical issues.

Employment

With a total of 97 expressed opinions, employment is an issue which has attracted a relatively high degree of attention. The figures in Figure 7 indicate that the majority of the opinions expressed in this regard have been positive. It is only 'organisations' which have a negative opinion of this issue, and the

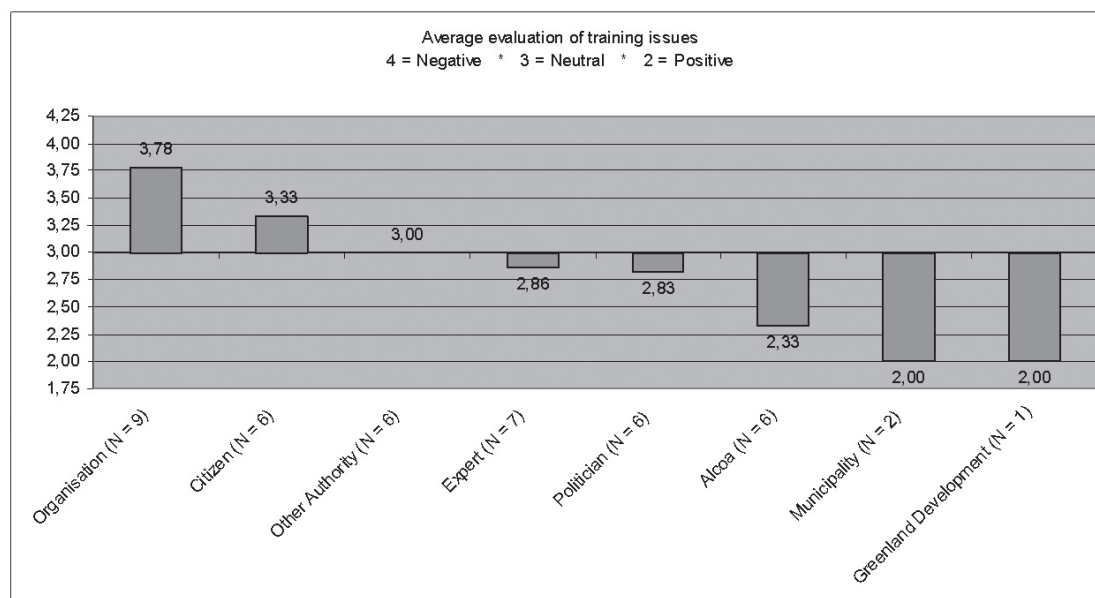


opinions of The Association of Greenlandic Employers have a marked influence in this regard.

Figure 7. Average assessment of the employment related effects of the aluminium project distributed by stakeholder group. Total N = 97.

Training

This theme covers opinions expressed in relation to effects on training. Figure 8 indicates, amongst other things, that of all the analyses presented, the issue of training is the most divisive. There are 1.78 'opinion points' between the most positive (local authorities and GD) and the most negative (organisations). Only 43 opinions were expressed in relation to this area, however, meaning that it



is not a subject which has been particularly significant.

Figure 8. Average evaluation of the effect on training of the aluminium project distributed by stakeholder grouping. Total N = 43.

Social and Health

The social health issue has not attracted significant attention in public debate. Only 25 expressed opinions were registered. Furthermore, the majority of these opinions have been neutral. This may be a reflection of the fact that this is one of the areas in which knowledge is scarce. Large sums

of money are currently being used to collect additional information such that it will be possible, in some year's time, to arrive at an assessment of the likely consequences for public health of the aluminium furnace development.

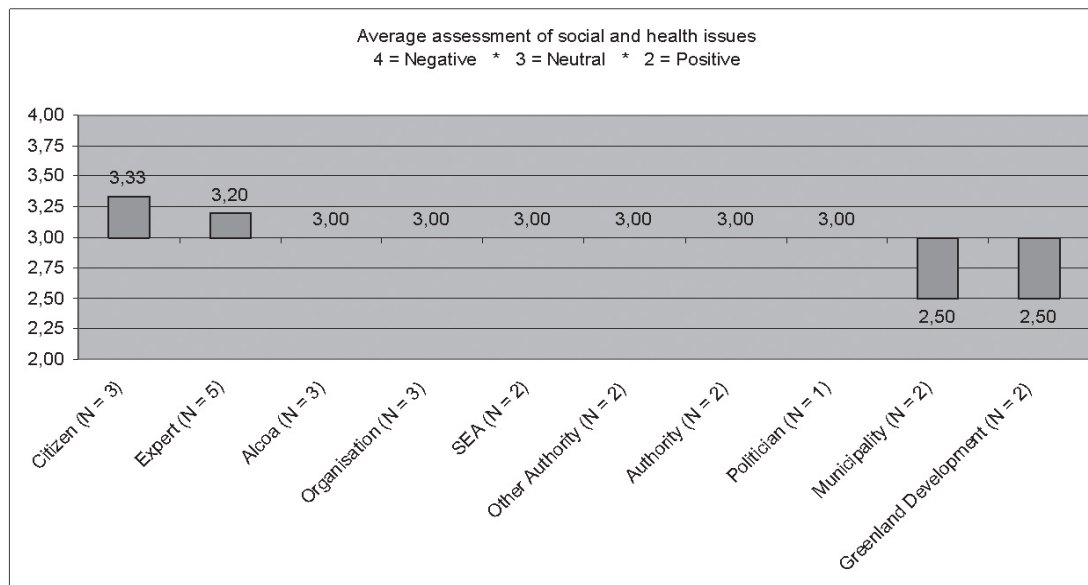


Figure 9. Average assessment of the consequences for public health of the aluminium project by stakeholder groups. Total N = 25.

Finances

The likely financial effects of the proposed development are an issue which has attracted a good deal of attention. A total of 96 expressed opinions have been registered. Seen from a Greenlandic standpoint, Alcoa have maintained a neutral attitude to financial issues. Both GD and local authorities have been consistently positive in their attitude to the financial consequences of the proposed aluminium furnace. At the other end of the spectrum it is worth noting that SEA's attitude is negative. Only one recorded opinion was expressed by SEA. Organisations, the general public and the press have all expressed negative opinions in this regard.

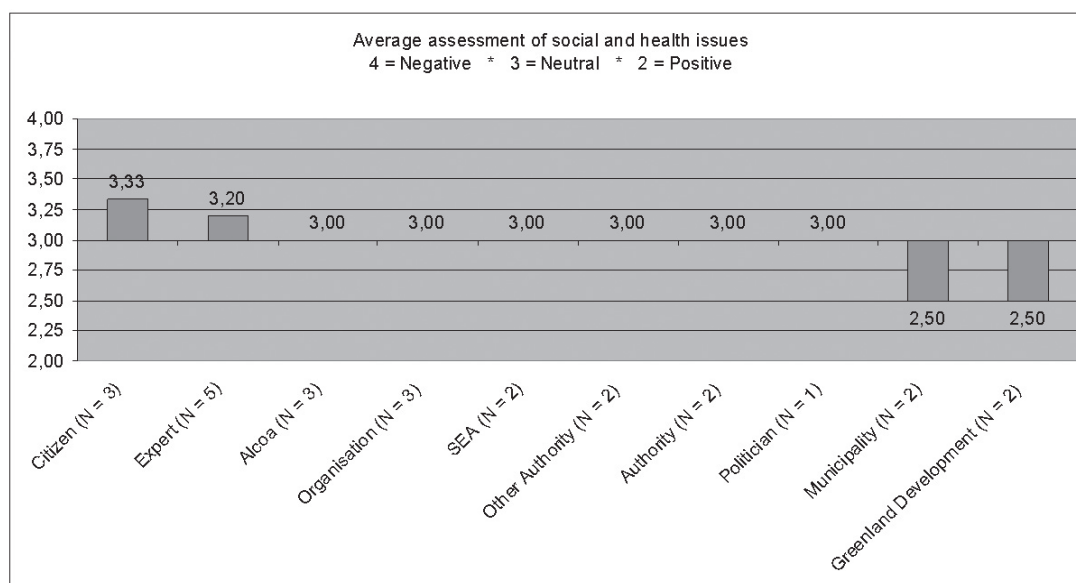
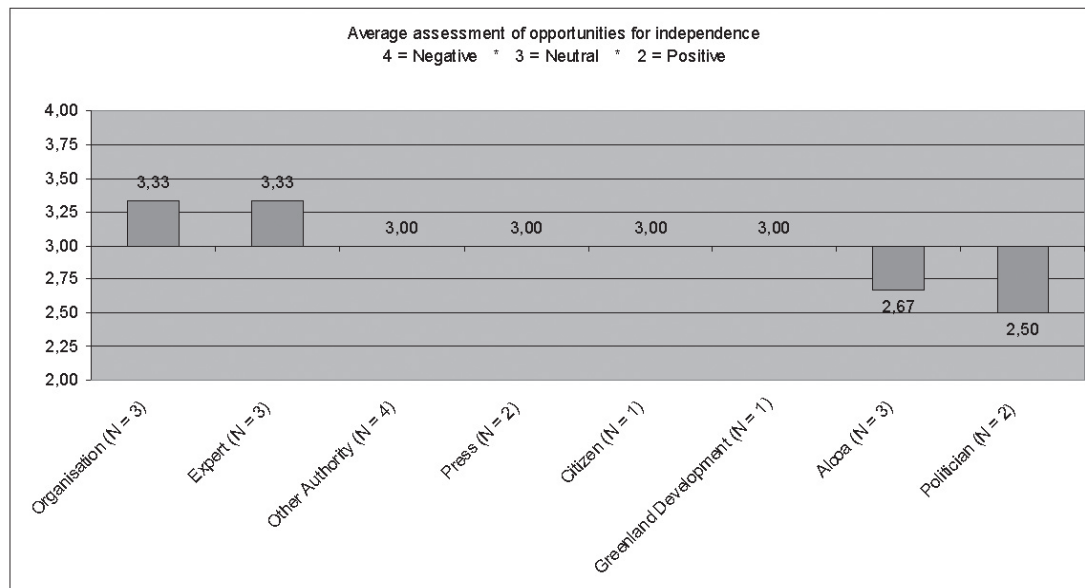


Figure 10. Average assessment of the financial effects of the aluminium project by stakeholder group. Total N = 96.

Independence

The issue of independence is not one which has enjoyed a prominent place in public debates in relation to the proposed aluminium furnace. Only 19 opinions were registered in this area. Figure 11 indicates that the general opinion with regard to this question is a positive one. In other words, it is the general opinion that the potential for independence will increase if a furnace is established. Interestingly, it is



politicians and Alcoa who are positive in this regard while the sum of expert opinion is negative. This is also the issue which the most groups have expressed a neutral opinion in relation to.

Figure 11. Average assessment of the possibility for increased independence as a consequence of the aluminium project by stakeholder group. Total N = 19.

Regional

The following data is of particular interest. Opinions expressed with regard to the issue of the effects of the aluminium furnace project at the regional level are unusually negative. Our analysis of this theme relies on very small quantities of data. In the same way that SEA had a very negative assessment of the likely financial consequences of the establishment of an aluminium furnace; it is noticeable that Alcoa have a very negative evaluation of this issue. No assessment has been made of what this attitude is founded on. A more specific textual analysis of the text in question could have revealed the context in which this information was expressed.

A total of 27 registered opinions indicate that this theme has not attracted significant attention in public debate. It has been a generally accepted truism that an aluminium furnace would benefit the region surrounding Maniitsoq, but that it may have a negative effect on the other regions in Greenland. It is likely that it is this issue which the majority of the recorded opinions have been expressed in relation to. The regional issue has been one of the themes which SEA have addressed and one would have expected them to have registered a number of opinions in this regard, however, only one neutral opinion was recorded.

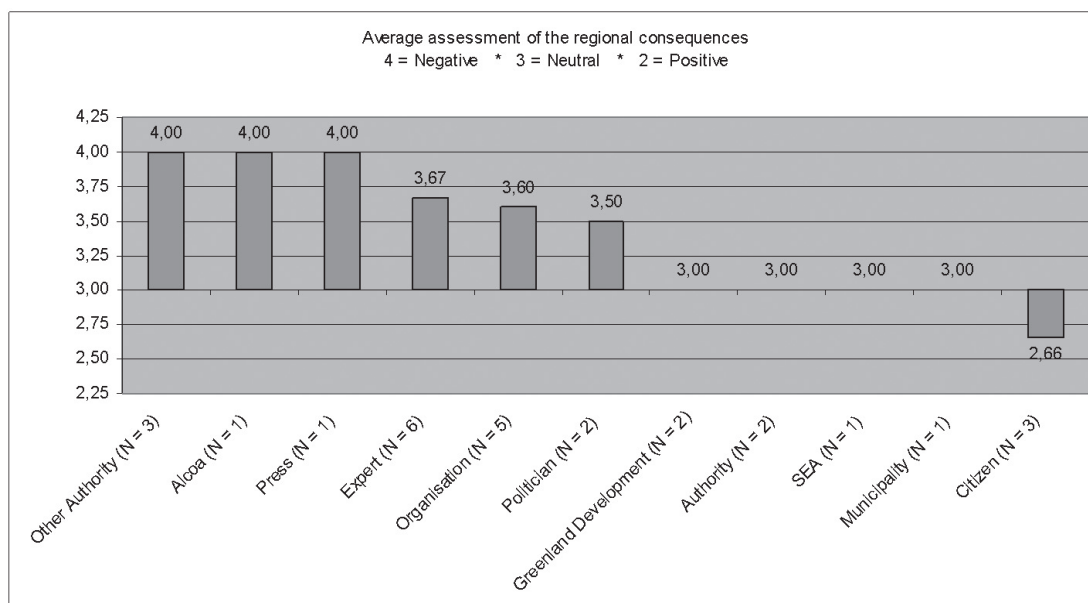


Figure 12. Average assessment of the regional consequences of the aluminium project by stakeholder groups. Total N = 27.

The Environment

The question of whether the construction and operation of an aluminium furnace would have a negative effect on the environment is one of the issues which has attracted most interest. Our analysis has identified 84 expressed opinions. It is an issue which has proved particularly interesting for citizens and experts, and there seems to be - on a cautious assessment - general concern about this issue amongst contributors to the debate.

As is characteristic of many of the issues analysed here, Alcoa, Local Authorities and Greenland Development have expressed positive opinions in relation to the environmental consequences of the aluminium furnace project.

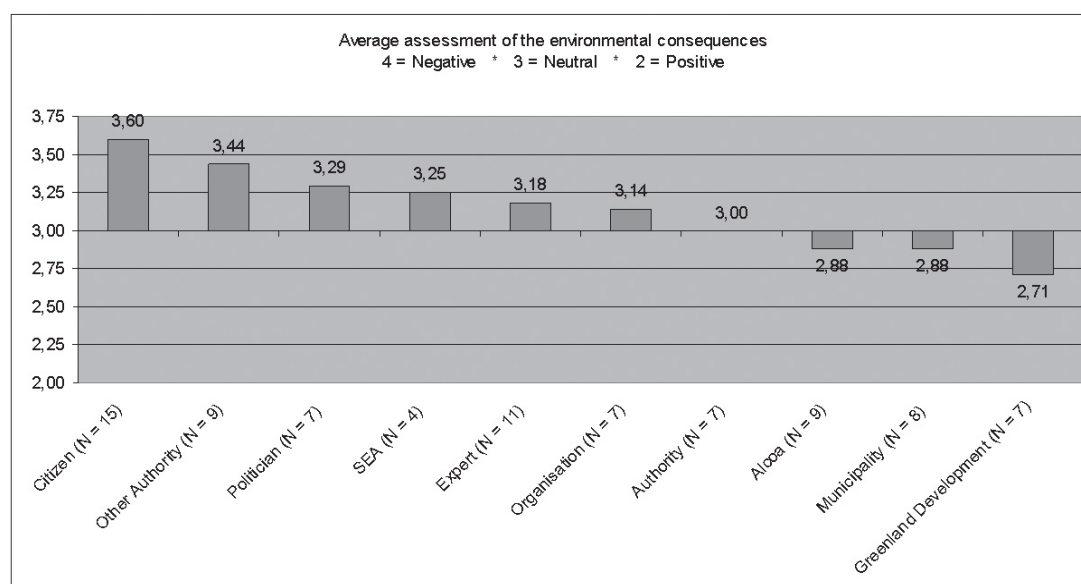


Figure 13. Average assessment of the environmental consequences of the aluminium project by stakeholder groups. Total N = 84.

CO2

It is interesting to note in regard to discussion of the issue of CO₂ emissions that it is clearly in this area that the majority of positive opinions have been expressed. Given the fact that it is an established fact that the CO₂ emissions attributable to an aluminium furnace will, roughly speaking, double total Greenlandic CO₂ emissions it might seem peculiar that this issue scores so highly. It is highly probable that opinions with respect to this issue have assessed the total global impact rather than focusing on Greenland alone. It is a generally held opinion in Greenland that siting an aluminium furnace in Greenland would lead to lower total emissions than if the furnace was located elsewhere in the world. Interestingly it would appear that it is this view which is the focus of disagreements in the ongoing negotiations between Greenland and Denmark concerning the climatic summit to be held in Copenhagen in December 2009.

The most critical group in relation to the CO₂ issue are members of the public who are the only group to express a generally negative opinion. At the other end of the scale are the press, which, together with GD, experts and local authorities have shown an exceptionally positive attitude in relation to the CO₂ issue.

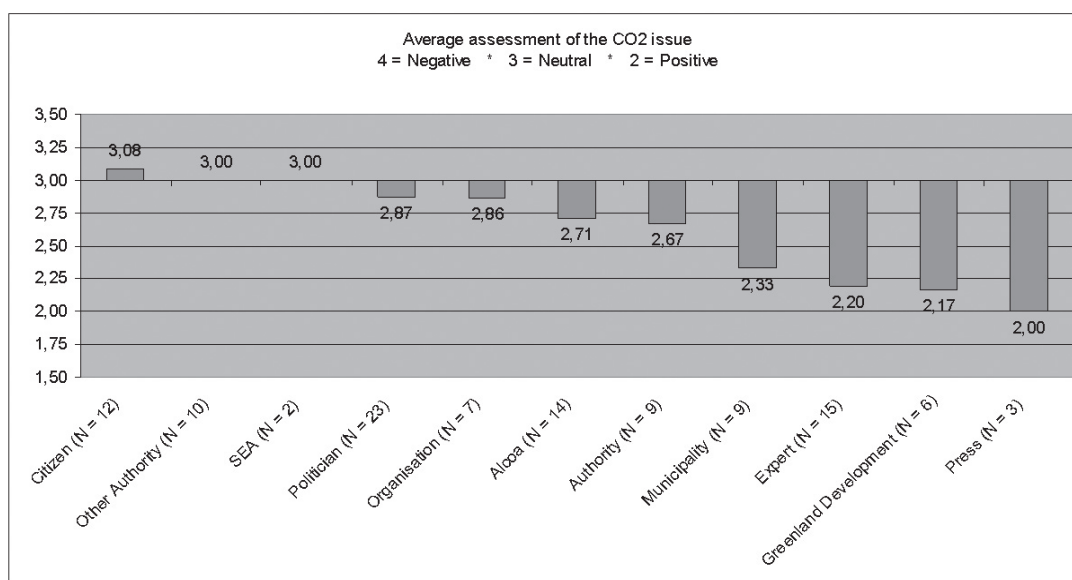


Figure 14. Average assessment of the effect on CO₂ emissions of the construction and operation of an aluminium furnace by stakeholder group. Total N = 110.

Cultural and Historical Issues

The topic which has attracted the fewest comments is the issue of the consequences the project will entail for the island's current culture and cultural history. This is a topic which has attracted significant interest in the process of assessing the aluminium project. For three years now, archaeological and cultural-historical assessments have taken place in the areas in Greenland's interior which are most likely to be affected when artificial lakes are created to service the enormous water power stations. Many of the opinions expressed are neutral though GD and the organisations have expressed generally positive opinions. This is one of the few topics which has attracted a generally positive response from the organisations.

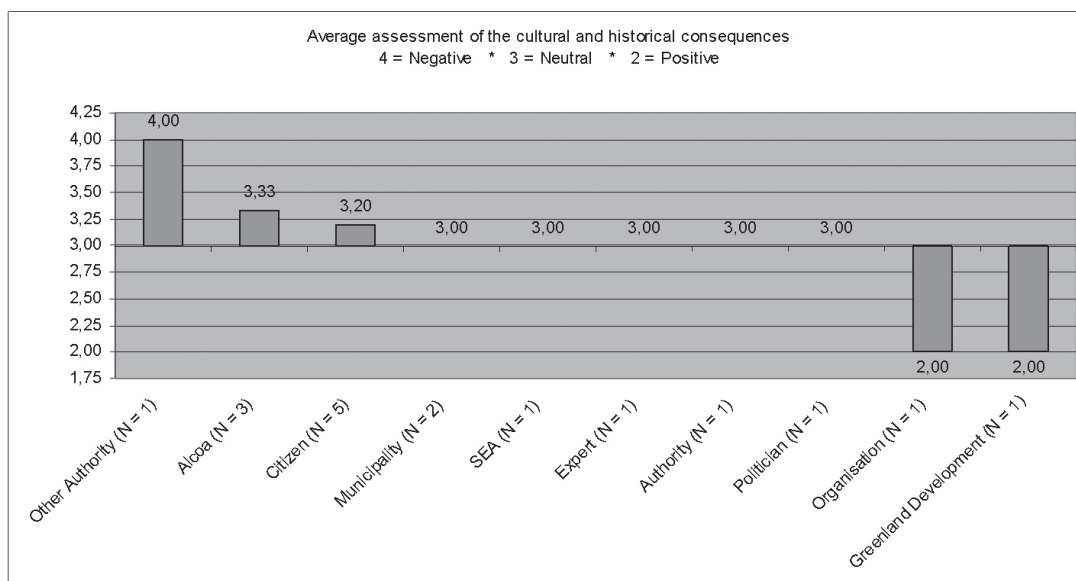


Figure 15. Average assessment of the cultural and historical consequences of the aluminium project by stakeholder group. Total N = 17.

Assessment of Societal Issues Generally

In the above analysis, registered societal issues are analysed independently. This has given a clear indication of which group of stakeholders have expressed a generally positive attitude and which a negative attitude in relation to the individual topics. In itself, this provides an interesting insight into the attitudes of the individual groups of stakeholders in relation to the various topics.

The collected information can also be presented in another way. By combining all the expressed opinions from each of the eleven stakeholder groupings it is possible to gain an insight into which of these groups of stakeholders have, generally speaking, expressed the most positive attitudes and which have been negative.

In the 'authority' category no less than 80 of the expressed opinions have been neutral. This is to the authority's credit. Authority is also the only group which considered generally maintains a neutral standpoint. The most negative groups of stakeholders, in rank order, are 'organisation,' SEA and the general public. At the other end of the spectrum, Greenland Development, municipality and Alcoa have been the most positive. In a number of debates which have taken place in public it has been these two blocks of stakeholders which have opposed each other with respect to the various aspects of the aluminium project. In this sense, the survey merely serves to underline the fact that there are clear conflicts of interest between the various groupings.

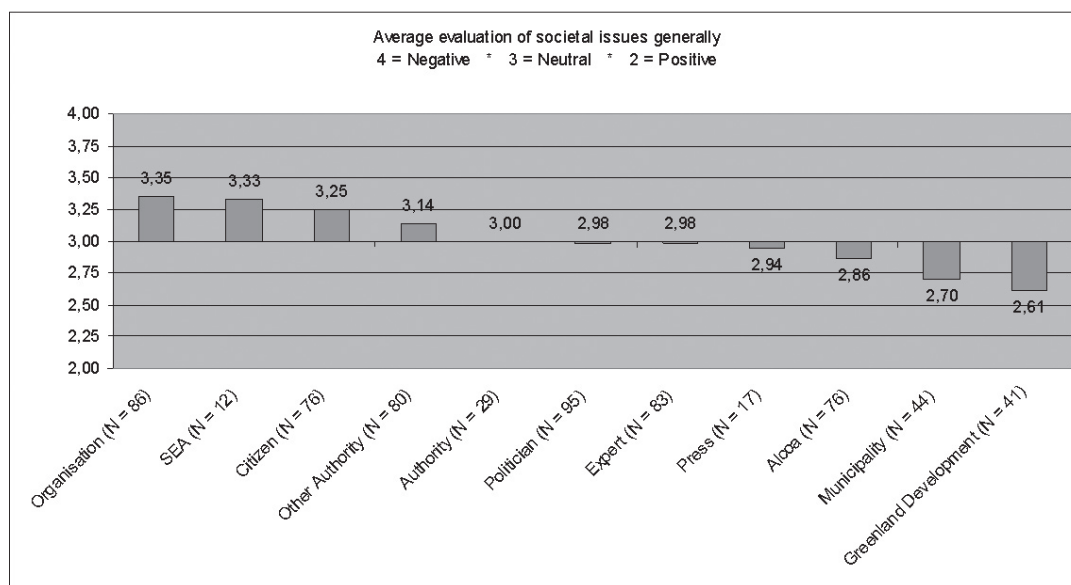


Figure 16. Average evaluation of aluminium project societal issues generally by stakeholder grouping. Total N = 639.

3.2.3 Total Analysed Topics

In the foregoing section of this paper a total of thirteen different topics have been the subject of analysis. The total average opinion for each group of stakeholders is evident from Figure 17.

It is worthy of note that of the thirteen themes assessed only two have produced a generally positive reaction. This is the case, perhaps unsurprisingly, for the issues of CO₂ and unemployment. Issues relating to the discussion of CO₂ have been discussed above. The generally positive attitude to the employment issue is more than likely a reflection of the fact that it is anticipated that the aluminium furnace will provide direct employment for about 500 people, making it a very significant employer by Greenlandic standards.

At the other end of the spectrum, attitudes towards regional issues are clearly the most negative of those assessed. The three different aspects of the project process also reflect a generally negative attitude. If any lesson can be learned for the further development of the process it is that the individuals responsible should focus on those areas in which there is a generally negative attitude to the project.

In the final section of this paper we present a model for knowledge-based decision making tools which constitutes our recommendation for how negative attitudes to the project process itself can best be avoided in future projects.

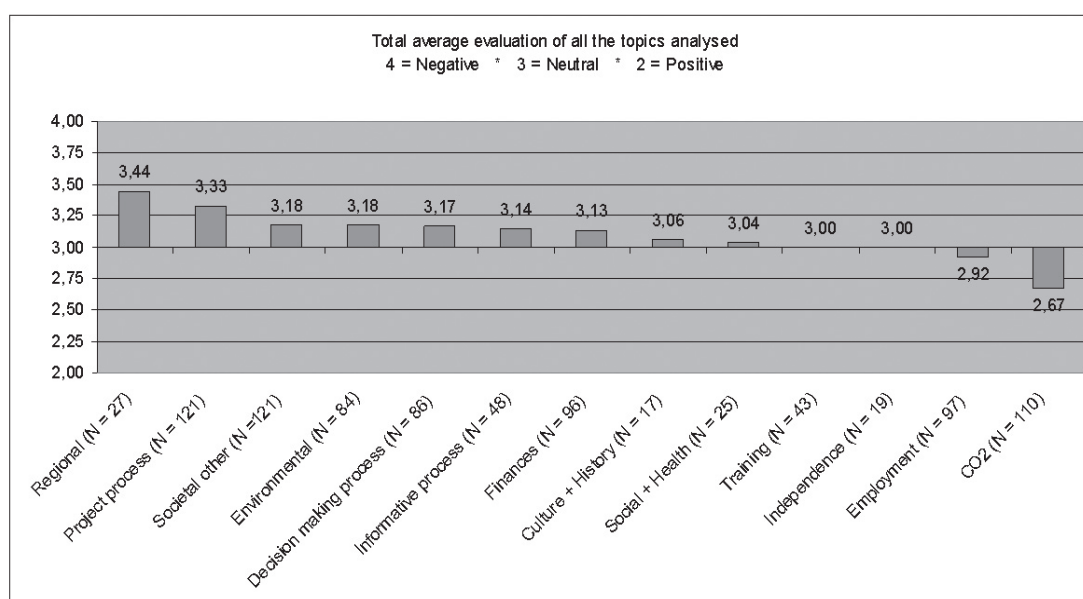


Figure 17. Total average evaluation of all the topics analysed. Total N = 639.

3.2.4 Total Stakeholders Analysed

Some additional comments are appropriate in relation to the groups of stakeholders analysed. Figure 18 indicates that there is a wide spread in relation to the number of opinions the groups analysed have contributed.

Politicians	143
Organisations	115
Other Authority	108
Experts	104
Alcoa	103
Citizens	98
Local Authorities	61
Greenland Development	57
Authorities	45
The Press	24
SEA	14

Figure 18. Total number of opinions expressed for each of the assessed groups of stakeholders.

It is clear from the above figures that politicians have given widespread expression to their opinions with 143 statements of opinion. A total of five other groups have contributed to the debate with between 98 and 115 statements of opinion. This is the case for organisations, citizens, experts and Alcoa. Three groups have given expression to their opinion between 45 and 61 times, these being the municipality, GD and authority.

The groups who have contributed least are the press with 24 and SEA with only 14 expressions of opinion. The lack of participation in the public debate is surprising, particularly as one would expect the press to contribute critical journalism, and because SEA have, supposedly, made a priority of entering into a process of dialogue with citizens. This dialogue has not been particularly evident in the press.

4. Conclusion – Democratic Deficit and Discourse Analysis

An analysis of the timing of the debates which have taken place during the past three years indicates clearly that debate flourishes after significant decision making processes have been completed at the administrative and political level.

In addition, it would appear that no active debate has taken place in those periods during which information has been made publicly available and various groups of stakeholders have had an opportunity to express their opinions. This is evident in the spring of 2007, where at public meetings held in August an attempt was made to initiate public debate. It is also evident in the period from February 2008, during which the government (the executive authority) published its bill suggesting a preferred placement of the aluminium furnace, to May 2008, when the Parliament (the legislative authority) passed the bill into law.

On this basis it is evident that there are indicators which suggest that there exists a democratic deficit in relation to the timing of significant administrative and internal political decisions on the one hand, and public debate on the other.

As mentioned previously, the expression ‘democratic deficit’ is used here to characterise decision procedures with insufficient mechanisms to ensure democratic control. Our focus is here directed only toward the conditions enjoyed by mechanisms for democratic control of the process. We vouch no opinion whatsoever as to the content of these decision making processes.

It is our assessment that a democratic deficit is evident in these cases. It is also our opinion that the difficult conditions under which mechanisms for democratic control operated can primarily be ascribed to a lack of public information regarding which decision making processes had been initiated at which times. Decision making processes were first made public after administrative and internal decisions had been taken.

When these decision making processes occur without democratic control, i.e. without a public debate concerning the processes in question, the risk is that the necessary insight into how political decisions are actually arrived at is lacking. In other words, it is the decision making process qua process for which democratic control is lacking.

In reality, the public have no way of knowing which aspects of the decision making process are delegated to which external partners by the administrative system. This is, of course, potentially problematic in relation to a project in which the stakes are so high. We are not asserting that any actual delegation of the decision making process to external partners has in fact taken place, but rather that, because the necessary control of the democratic process has been lacking, the risk is that doubts will begin to surface in connection with particular issues.

In terms of the content of the analysed debates, no democratic deficit has been identified. This is true both with respect to attitudes regarding the aluminium project’s processes and attitudes to societal issues relevant in relation to the aluminium project.

It is evident from the, in some areas, very open differences of opinion that we have registered that in our survey that a relatively open debate has been possible in which the various groups of stakeholders have expressed their opinion. It is further evident from the high number of op-eds and reader’s letters that it has been possible for the general public to contribute their opinion should they wish to do so. The survey indicates, furthermore, that if articles and other material are distributed according to the stakeholder group that authored them all groups are well represented.

No precise analysis has been performed but a rough qualitative run through of the data registered points to the fact that a number of the individuals who have contributed to public debate have made a significant number of contributions. This means that participation in public debate is not as broad as the number of articles under consideration would seem to suggest. This may be because, as we have previously mentioned, large sections of the population are reluctant to participate in public debate. This may in turn be because they allow others to speak on their behalf, in the sense that these social groups may ally themselves with an individual who already takes part in public debate. Whether this is in fact the case is not something which this survey has attempted to assess.

If the constraints of this project had allowed it, a thorough discourse analysis relating to the material collected would have been a natural extension of the work presented here. A discourse analysis would have allowed us to identify the various discourses (i.e. opinions) expressed in the debate surrounding the aluminium project.

Such a discourse analysis would, at best, have been able to identify fundamental opinions with respect to the project as a whole. It can not be excluded that an analysis could identify a discourse that the decision making must be open and inclusive and also identify a discourse that the decision making must be closed and exclusionary. It is conceivable that the debate features a discourse which holds that the aluminium project must be implemented, and a discourse that holds that it is necessary to assess whether the aluminium project should be implemented. A theme which the analysis in this project has not touched on is the various opinions expressed with regard to which ownership model is most appropriate to the extensive industrial power stations which will be required to power the furnace. It is conceivable that there exists a discourse which sees Greenlandic ownership in a positive light and a further discourse which is of the opposite opinion.

It is important to identify the differences between discourses that exist between stakeholders, but no such analysis has formally taken place in relation to the aluminium project. Given this, and the democratic deficit that has been identified with regard to administrative and internal decision making processes, it may be advisable to call a halt and re-think the framework employed with respect to some of the decision making processes involved in this extensive industrial project.

5. A Model for Knowledge-Based Decision Making Processes

On the basis of the above considerations we feel that we are in a position to identify the elements which could be improved in the democratic decision making process relating to projects such as the aluminium furnace project. For us, this entails the devising of a suitable model for knowledge-based decision making processes. That a decision making process is characterised as "knowledge-based" entails, as far as we are concerned, that factual and scientific knowledge is gathered to support the decision making process and that a genuine public and democratic debate takes place with regard to the decisions under consideration.

As previously mentioned, we here concentrate our efforts on the second of these two parameters, which is why it is also this aspect we focus on in our model for knowledge-based decision making processes. The first parameter has been included in our model, but only in general terms (see "collection of factual information") in association with the administrative processing of the decision making process.

Our model for knowledge-based decision making processes is a four stage process model, the four stages being as follows:

- The executive authorities administrative system.
- The executive authority / internal political stages.
- The legislative authority / external political stages.
- The public domain.

It is the communicative processes which take place between these various process stages which are key to our interest in the project. Communication between the administrative system and the executive authority is at the heart of a political decision making process. This process has been highlighted in the model with blue horizontal arrows. All significant decisions which the executive authority wishes to see implemented have to be submitted to the legislative authority. Communication between the executive and legislative authorities is marked by horizontal red arrows. The fourth stage of the model is the public domain. Communication between the public domain and the model's other stages is indicated by green horizontal arrows.

One could say that it is characteristic of a number of the decision making processes described in our analysis that the early communication processes (those at the base of our model) have been weak or have been lacking altogether. The most significant aspect of our model is therefore a concentration on and strengthening of the early communicative processes in the decision process. By strengthening these aspects of the decision making process, the necessary democratic control over these processes will also be strengthened.

It is especially the element of the model relating to 'Early dialogue between the executive authority and the legislative authority' and that relating to 'Early involvement of stakeholders' that, as far as we can see, are important in relation to a strengthening of democratic potential if this is desired. By strengthening these two elements in the model the opportunity for participation will be strengthened, and thereby the potential will exist for increased public participation leading to a strengthening of the democratic aspects of the process.

The forming of a new coalition government in June 2009 follows on the epoch-making election result of the 2 June. For the first time in the history of the Greenland Home Rule Government Siumut will not participate in government, which has resulted in some very interesting developments in Greenlandic parliamentarianism. During the election campaign the government then in office

was the subject of repeated attacks across a broad front because of perceived nepotism and secretive government practises. The opposition as was indicated that it was their intention to alter these practises if they were elected, which of course they now have been.

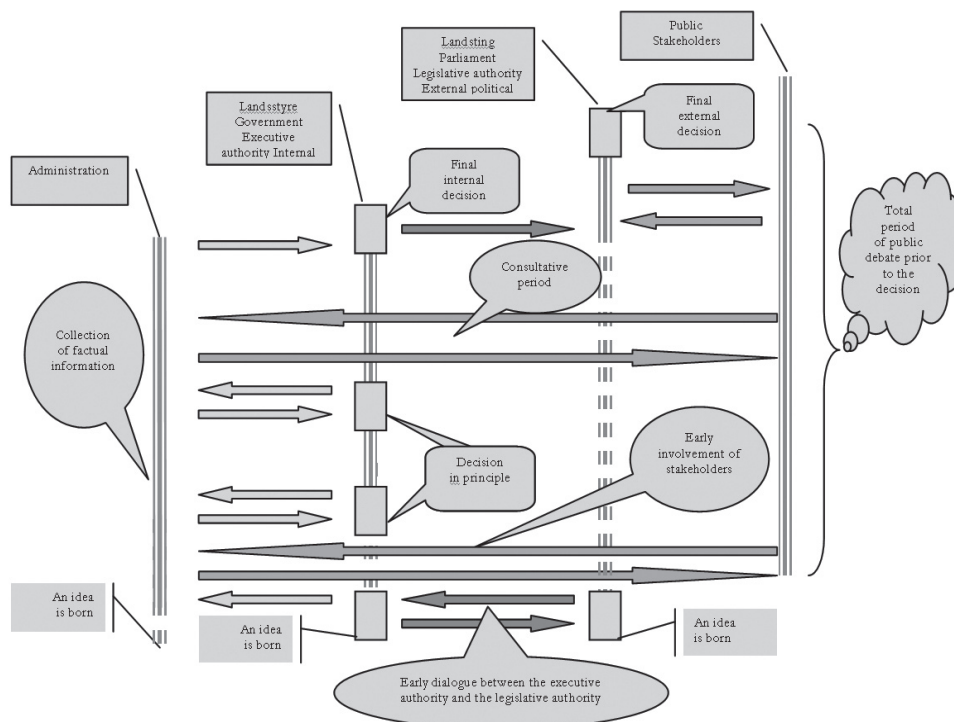


Figure 19. Four stage model for knowledge-based decision making process. (The authors' own work).

In this connection it was very interesting to note that one of the first actions of the new government has been to initiate activity to strengthen early stage communication between the executive and legislative authority. The government has introduced, as something new in Greenlandic politics, coordinatory committees consisting of three highly-placed government politicians and three highly-placed politicians from the governing parties' parliamentary groups. The declared intent of these measures is to ensure a significant improvement in the communication between these political bodies at an earlier stage in the process.

Since 2007 the central administration has been through extensive organisational changes. One of these changes has been the adoption of a more project-oriented working practise. This is a process which is gradually beginning to take shape. For example, in mid-June 2009, a report was published detailing aspects of the existing project organisation. This analysis concluded that the central administration's performance in relation to performing stakeholder analyses and including stakeholders in decision making processes has been very poor (Munck 2009). This is precisely the same conclusion that our analysis has reached.

In our opinion it is thus of crucial importance to the democratic process that focus is directed to that aspect of our model entitled "Early involvement of stakeholders".

In this area some interesting projects have been initiated by the central administration since, in connection with the added focus on project work, it has been decided that a project management model called PRINCE2 will be utilised. One of the areas identified as of significant importance by PRINCE 2 for successful projects is the early inclusion of stakeholders (PRINCE2 2007).

There are thus a number of factors that indicate that the development of the administrative and political situation in Greenland has reached a stage where it is ripe for the inclusion of knowledge-based decision making models such as that described in this report in the coming year's political and administrative work.

6. Discussion

In conclusion we wish to include some considerations relating to the model and the rest of Scandinavia especially the Scandinavian periphery. It is our opinion, that there are at least two areas in which the situation in Greenland is comparable to that in the rest of the Scandinavian periphery.

Greenland is characterised in some areas by a markedly reserved form of public debate. The reasons for this are, in our opinion, to be found in the specific cultural traditions relating to the exchange of opinions, and, in the sparsely populated regions of Scandinavia, the characteristic reserve which, by outsiders, is often mistaken for indifference.

Furthermore, the peripheral and sparsely populated areas of Scandinavia, including Greenland, are generally characterised by a lack of strong NGOs or a truly critical and independent press which can provide the sort of democratic criticism necessary and expected from the fourth estate in the local public arena in which locally rooted debates often take place in relation to local political decisions.

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