GREENLANDIC ICE CAP WATER
HEADING FOR THE WORLD MARKET

Comprehensive strategy is to strengthen the export of Greenland’s unique ice and water products

Greenlandic ice cap water heading for the world market
Comprehensive strategy is to strengthen the export of Greenland’s unique ice and water products


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Published August 2018

The corporate tax rate in USA (Alaska) changed with effect from 2018. The text has thus been updated accordingly.
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Foreword

Having the world’s largest fresh water resources Greenland has a large-scale unexploited potential for production and export of ice and water. If we develop and exploit this potential in the right way, we will not only obtain increased growth and employment, but our revenue base will increase as well; a scenario that will be entirely consistent with the Government of Greenland’s ambition to become financially more self-sustaining.

A number of market analyses show that there is a global market and even a growing market for the sale of bottled water. But huge water resources in a potential export country combined with increasing demand world-wide for water products is not necessarily the same as easy penetration of the international market.

It is a market characterised by intense competition. If Greenland is to be an active player, it is absolutely crucial that we are able to attract producers and investors who have a strong presence as regards capital, marketing and distribution.

If we are to be successful on the export markets, we should focus on good quality Greenlandic ice cap water in large quantities. It should be possible to start up an economically viable production even with only minimum-volume production. Obviously, that does not rule out continued export campaigns for high-profile niche products.

These objectives are built around three main tracks:

– **First**, suitable and relevant meltwater deposits need to be mapped. These locations are identified on the basis of various selection criteria that take into account the special challenges prevailing in Greenland in terms of geography and infrastructure while the drinking water must at the same time obviously be of a high quality.

– **The second track** concerns possible adjustments of the tax and royalty level so that the total government take does not end up getting in the way of developing the water export. This work is based on a benchmark analysis of the tax and royalty models applied in various peer countries as well as scenario calculations of possible tax and royalty models.

– **The focus of the third main track is** on the optimisation potential of the legislative framework within the ice and water area with the aim of making it more business-friendly, e.g. by introducing tender procedure (licensing rounds) as a supplement to the existing application procedures which are based on the first-come first-served principle.

It is also essential in this connection to strengthen the marketing efforts within the ice and water area. Concurrently with the mapping of the water deposits, marketing material must be prepared and contact established with international operators (producers, investors and distributors).

*The Government of Greenland*
More and more consumers worldwide prefer bottled water

Today’s consumers in nearly all parts of the world prefer to an increasing extent natural and low calorie soft drinks. This is a fact that can be inferred from the statistics of how global consumption of bottled water has developed in the last five years alone.

In 2010, global consumption of bottled water reached nearly 168 billion litres, whereas consumption in 2015 had increased to 228 billion litres. This corresponds to an increase of around 35% during a five-year period or just over 6% on average per year.

One region in particular stands out from the other regions, see table 6. Having nearly doubled its consumption from 2010 to 2015, Asia takes a leading position. The region now takes a share of almost 34% of global consumption of bottled water. This means that Asia accounts for every third litre of bottled water consumed worldwide with China being the region’s most dominant market.

China is thus also the country in 2015 with the highest consumption of bottled
water compared with a number of other countries, see table 5.

But will recent years’ almost explosive increase in the consumption of bottled water continue?

Probably yes. Several surveys show that consumer focus on products connected with healthy hydration will increase in the next few years.

In China, for example, consumers have a high awareness of water source quality and as such mineral water saw a robust growth thanks to the perception that it is healthier than table water. Another important market, Indonesia, also saw more growth for bottled water, thanks to increasing consumer awareness of healthy and natural soft drinks.

Overall, global growth in the consumption of bottled water over the next five years is expected to be around 6%.

### Table 6: Bottled water consumption by region
(Source: GlobalData)

<table>
<thead>
<tr>
<th>Consumption (million litres)</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016 F</th>
<th>Compound annual growth rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>167.892,20</td>
<td>178.664,90</td>
<td>191.082,40</td>
<td>201.396,00</td>
<td>214.244,70</td>
<td>228.563,80</td>
<td>241.530,60</td>
<td>6,20 %</td>
</tr>
<tr>
<td>Africa</td>
<td>6.327,70</td>
<td>6.753,30</td>
<td>7.159,80</td>
<td>7.613,60</td>
<td>8.160,80</td>
<td>8.828,90</td>
<td>9.779,50</td>
<td>7,50 %</td>
</tr>
<tr>
<td>Asia</td>
<td>44.998,20</td>
<td>52.628,20</td>
<td>60.329,20</td>
<td>68.018,80</td>
<td>75.230,20</td>
<td>81.917,70</td>
<td>88.949,60</td>
<td>12,00 %</td>
</tr>
<tr>
<td>Oceania</td>
<td>715,80</td>
<td>728,40</td>
<td>763,10</td>
<td>831,50</td>
<td>898,50</td>
<td>1.022,80</td>
<td>1.126,90</td>
<td>7,90 %</td>
</tr>
<tr>
<td>East Europe</td>
<td>17.341,70</td>
<td>17.450,00</td>
<td>18.13630</td>
<td>18.417,40</td>
<td>18.969,80</td>
<td>19.485,10</td>
<td>19.926,60</td>
<td>2,30 %</td>
</tr>
<tr>
<td>Latin America</td>
<td>14.815,30</td>
<td>15.758,10</td>
<td>16.688,90</td>
<td>17.554,50</td>
<td>18.531,80</td>
<td>19.315,20</td>
<td>20.020,10</td>
<td>5,10 %</td>
</tr>
<tr>
<td>Middle East &amp; North Africa</td>
<td>9.775,20</td>
<td>10.629,50</td>
<td>11.094,10</td>
<td>11.570,30</td>
<td>12.336,70</td>
<td>13.327,70</td>
<td>14.454,60</td>
<td>6,70 %</td>
</tr>
<tr>
<td>North America</td>
<td>28.641,90</td>
<td>28.965,90</td>
<td>31.135,30</td>
<td>32.234,10</td>
<td>34.404,80</td>
<td>36.431,40</td>
<td>38.231,10</td>
<td>4,90 %</td>
</tr>
<tr>
<td>West Europe</td>
<td>45.276,50</td>
<td>45.751,50</td>
<td>45.775,50</td>
<td>45.155,80</td>
<td>45.910,00</td>
<td>48.235,00</td>
<td>49.042,30</td>
<td>1,30 %</td>
</tr>
</tbody>
</table>

### Table 5: Consumption of bottled water in benchmark countries
(Source: GlobalData)

<table>
<thead>
<tr>
<th>Consumption (million litres)</th>
<th>Total (global)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>37.959,80</td>
</tr>
<tr>
<td>USA</td>
<td>33.878,50</td>
</tr>
<tr>
<td>Germany</td>
<td>14.396,00</td>
</tr>
<tr>
<td>India</td>
<td>11.465,50</td>
</tr>
<tr>
<td>Indonesia</td>
<td>10.306,60</td>
</tr>
<tr>
<td>France</td>
<td>8.087,10</td>
</tr>
<tr>
<td>Brazil</td>
<td>6.578,80</td>
</tr>
<tr>
<td>Nigeria</td>
<td>5.125,10</td>
</tr>
<tr>
<td>Russia</td>
<td>4.009,70</td>
</tr>
<tr>
<td>Japan</td>
<td>3.646,60</td>
</tr>
<tr>
<td>Canada</td>
<td>2.552,90</td>
</tr>
<tr>
<td>UK</td>
<td>2.126,70</td>
</tr>
<tr>
<td>South Korea</td>
<td>2.012,00</td>
</tr>
<tr>
<td>Other countries</td>
<td>86.418,50</td>
</tr>
</tbody>
</table>
If you combine the expectations of increasing demand world-wide for bottled water with Greenland’s huge ice and water resources, the very first prerequisite for the future export of ice and water seems to have been achieved.

However, there are other prerequisites – and requirements – that must be achieved before Greenland will be able to penetrate the competitive international market that is currently dominated by four multinational companies.

The strategy for export of ice and water (2017-2018) makes various suggestions as to what could pave the way for Greenland achieving export success.
The three main tracks of the strategy

Track 1: Mapping of relevant and suitable meltwater deposits
The strategy is built around three main tracks. First, suitable and relevant meltwater deposits need to be mapped. Suitable refers to locations of large-scale potential for exploitation of glacial meltwater for export.

In preparation for this work, the Geological Surveys of Denmark and Greenland (GEUS) has prepared a report for the Ministry of Industry and Energy. The report sets up three overall criteria as well as a number of more specific criteria for whether a location can be identified as suitable.

First of all, a location must offer sufficient water quality, secondly it must guarantee reliability of supply and, thirdly, it must be accessible.

Within the next few years, a number of field studies will be carried out to find out whether the meltwater deposits on Greenland’s west coast meet the criteria. The plan is to make a study of five potential deposits each year.

The extensive studies and analyses will follow the below project plan prepared by GEUS and the Ministry of Industry, Labour, Trade and Energy:

Preliminary identification of locations
- GIS analysis of digital maps and satellite data
- Drawing up a longlist of locations and determining a ranking method
- Liaising with possible local informants in relation to access routes etc. and other local knowledge

Accessibility
- Grading in relation to use of existing infrastructure and labour
- Evaluation of accessibility etc. from the sea based on existing nautical charts
- Expected spreading of sea ice, geographically and seasonal
Glaciological analysis

- Calculation of probable hydrological catchment areas of the identified locations
- Assessment of the risk of changes in catchment area due to ice withdrawal
- Assessment of the risk of sudden drainage of ice-dammed lakes or sudden subglacial outburst flooding
- Calculation of probable water supply from precipitation and deglaciation over the year
- Estimating the age of the source ice by means of numerical ice modelling

Risk profile

- Ensuring that there is no risk of radioactivity or toxic minerals by means of existing geological maps
- Pre-assessment of sedimentation at identified locations
- Expected presence of icebergs

Environmental and cultural sensitivity

- Risk of impact on sensitive ecosystems
- Reservations and limitations due to proximity to archaeological locations
- Field-work and laboratory preparations
- Formulation of requirements to field studies
- Plan for laboratory analysis of field samples with an overview of when clarification is expected – a number of technical tests should thus be made to determine the water quality of such meltwater deposits
- Draft for the first round of field studies based on prioritisation of locations
Track 2: A more business-friendly tax and royalty level
A country’s tax and royalty level plays a rather important role to a potential exporter of ice and water. According to a benchmark analysis carried out by PwC comparing taxes – corporate tax, dividend tax as well as indirect taxes (royalty) on the production of bottled water in various countries – Greenland has a relatively high level of taxation.

Greenland’s corporate tax rate of 31.8% is roughly on a level with France and Germany, but higher than that of Canada, Denmark, Fiji, Iceland, Italy, Norway and the UK. Only USA (Alaska) was significantly higher at the time when the analysis was carried out. However, the corporate tax rate has been reduced for USA (Alaska) since preparation of the strategy.

When adding Greenland’s royalty of DKK 0.10 per litre bottled water production, the total government take level in Greenland is among the highest of the benchmark countries.

Any future export of high-quality bottled water in large volumes will probably require for Greenland to move a couple of levels further down the government take scale. Below are some of the ways to achieve this:

- Introducing a simpler and more competitive government take model for export of ice and water in Greenland. The benchmark analysis shows that it is necessary to reduce the total government take if Greenland is to be an attractive alternative to its most obvious competitors.
• Introducing a government take model which implies a total corporate/dividend tax of 25% as well as a revenue royalty of 4%, which cannot exceed, however, a fixed unit tax of DKK 0.04 per litre.

• Introducing statutory authority for the Government of Greenland to grant up to five years of royalty exemption. It is crucial to Greenland’s possibilities of attracting investment to the water export area that the overall government take is at a competitive level. Furthermore, it is crucial that producers with the necessary capital strength are attracted as the market for bottled water is highly competitive. In certain cases, a need may therefore arise to provide some flexibility, and one way of doing so would be to grant royalty (unit tax) exemption during a start-up phase where potentially costly investments in facilities and infrastructure are required. Such an incentive structure is seen in many other countries wishing to support an industry or an export zone during a start-up phase.
Track 3: A more business-friendly legislative framework for the export of ice and water

As the legislative framework is an important competitive parameter in the quest to attract businesses and investors, some updating, amending and adjusting of the provisions will be required.

Recommendations concerning amendments to the Exports of Ice and Water Act:

From the first-come first-served principle to open-door procedures

Today, applications for a prospecting and exploitation licence are considered on an ongoing basis and according to a first-come first-served principle. The decisive factor in the evaluation of competing applications is therefore, in practice, the date of submission instead of other parameters such as distribution and capital strength. Consideration should be given to whether it would be advantageous as a supplement to the existing application models to use open-door procedures (licensing rounds) in connection with licensing of mapped and analysed water resources.

If that was the case, clear evaluation criteria would also have to be drawn.

Highlights of the Greenlandic Exports of Ice and Water Act

The Greenlandic Exports of Ice and Water Act includes provisions on:

- Grant of prospecting licences, see section 3
- Grant of exploitation licences, see section 4
- Approval of business and closure plan prior to the utilisation and establishment of the related facilities and other measures, see sections 8-9
- Assignment of an exploitation licence requires approval, see section 23
- Provision on the possibility of charging royalties, see section 26
up so that potential applicants would know in advance the criteria on which they would be evaluated. For example, the criteria could concern the level of ambition, business plan, capital strength, distribution network as well as experience. Open-door procedures would also support the Government of Greenland’s future marketing campaigns directed at multinational producers and others which by reason of their internal decision-making procedures typically need to have predictable milestones along the process in the form of deadlines and dates.

**The possibility of barring applications for exploitation licences for specific areas**

In the expectation of open-door procedures being introduced, it is important to introduce statutory authority to the Government of Greenland – in connection with the preparation and launching of licensing rounds – to temporarily bar applications for the area in question. Otherwise, an applicant might seek to get ahead of others by submitting an application before the licensing round actually begins or ends.

This authority is important to ensure administrative transparency – although an applicant has no legal claim to be granted an exploitation licence.

**It should be possible to have more than one licensee for a specified area**

Under the current Exports of Ice and Water Act, licences for exploitation of the ice and water resources of a land area for export purposes are granted only to one party, a so-called licensee.

It would be expedient if exploitation licences could be granted to more than one party in the situations where a water resource proves to have the potential required to be exploited by multiple licensees. This would ensure that Greenland’s water resources are exploited in the best and most expedient manner possible and at the same time avoid that a given potential is wasted. However, it is still to be possible to grant exclusive exploitation licences for a specific area if deemed necessary and appropriate.

**Transport by sea of ice and water to be exempted from Royal Arctic Line’s sole concession**

The Royal Arctic Line (RAL) owns the concession for most sea transport of cargo to, from and within Greenland. However, the sole concession does not extend to all transport by sea and does not apply, for example, to oil transport by tankers and transport of own cargo by own vessel as part of non-transport activities.

It is recommended in the strategy that RAL’s sole concession is not to apply to transport by sea of ice and water resources covered by the Exports of Ice and Water Act. Flexibility for the licensee in terms of transport of ice and water resources by sea is only one of a number of important factors which would impact the attractiveness of Greenland for existing and potential ice and water exporters as well as investors. It is expected that the exemption from the sole concession will make it more financially attractive to invest in the exploitation of ice and water in Greenland for export and thereby enhance Greenland’s competitive position.

The whole exercise of updating the Exports of Ice and Water Act is to improve the conditions for exploiting ice and water resources and thereby generate increased growth and create jobs in Greenland.
The planned activities and initiatives for a new and more business-friendly government take model as well as legislative framework cannot stand alone. They will have to be backed by corresponding initiatives within the marketing area.

As mentioned above, extensive studies and analyses have just been launched with the aim of mapping suitable glacial meltwater deposits; i.e. deposits meeting the criteria of high-quality water, guaranteed reliability of supply and accessibility.

Based on the deposits that have been studied and analysed, product catalogues and marketing material will be drawn up which contain the results of the water samples and other relevant technical data as well as information about infrastructure and locations at a more general level.

The purpose of the product catalogues as well as other marketing material is to strengthen the marketing of Greenland’s unique ice and water products abroad.

International as well as regional trade fairs within the area of bottled water, and in particular with a focus on the Asia and the Middle East, are obvious platforms for an active marketing of Greenland’s deposits of glacial meltwater. Relevant trade fairs include:

- Global Bottled Water Congress
- Events under the auspices of the International Bottled Water Association
- Annual Canadian Bottled Water Association (CBWA) Convention and Trade Show
- China International High-end Drinking Water Industry Expo
- SBW Expo - China International High-end Drinking Water Industry Expo
- IBWA Annual Business Conference - International Bottled Water Association

The more general marketing initiatives should be followed up by proactive efforts aimed at a select group of multinational players (producers, investors and distributors). As mentioned, the international market for bottled water is characterised by intense competition and it is thus crucial that the right players are attracted to Greenland. In other words, companies with the required capital strength and marketing and distribution channels.
Furthermore, experience from other countries shows, e.g. Iceland’s production of bottled water, that it is first and foremost in partnership with the multinational producers of bottled water that a commercial breakthrough on the export markets can be expected.

**Greenland can learn from Fiji and Iceland – both countries are successfully exporting bottled water**

The market for bottled water is dominated by big multinational producers of bottled water such as Danone, Nestlé, Coca-Cola and PepsiCo. They all have a business model that is based on the development of a portfolio of, for example, regional brands of bottled water. Danone, for example, is behind the brands Evian, Badoit, Volvic and Aqua D’or (a Danish brand).

Even if the big multinational groups of companies have a very strong presence in the market of bottled water, some independent producers have succeeded nevertheless to penetrate the market.

Fiji Water Bottling Company on Fiji is one of them. The company exports water originating from a local ground-water reservoir. Once the water has been tapped, it is shipped primarily to the US, where the company is incidentally headquartered.

Fiji Water Bottling Company is interesting from Greenland’s perspective as it has proven that it is possible for an independent producer to succeed with exporting over long distances, like in this case to the US.

Another interesting example – although with another type of business model than the producer on Fiji – is Icelandic Water Holding on Iceland. The company sells bottled mineral water from one of Iceland’s many springs – the Ólfus Spring – under the Icelandic Glacial brand.

Icelandic Water Holding was formed in 2004. Only three years later, the company partnered up with the big multinational group Anheuser-Busch InBev which bought an ownership interest of 20%. AB InBev has since 2007 been in charge of distribution of the Icelandic spring water in the US.

Icelandic Water Holding is a good example that under the right circumstances and with the right concept it is possible to negotiate a partnership with a big international player within only a few years.

The entry into cooperation or partnership agreements with major market players may also for Greenland turn out to be the key to future export success.

**Figure 3: Strong competition from regional operators**

(Source: EuroMonitor International)
Recommendations concerning mapping of Greenland’s ice and water potential

**Recommendation 1**
Identify suitable locations based on criteria concerning water quality, reliability of supply and accessibility for the purpose of drawing up a longlist of potential deposits.

**Recommendation 2**
Annual field studies should be carried out to study potential deposits, including the taking of samples and surveying, starting in 2017.

**Recommendation 3**
Laboratory and modelling work to determine water quality should be carried out based on the field studies of potential deposits, starting in 2017.

Recommendations concerning a more competitive government take model for export of ice and water

**Recommendation 4**
A simpler and more competitive government take model should be introduced for export of ice and water in Greenland.

**Recommendation 5**
A model should be implemented which implies a total corporate/dividend tax of 25% as well as a revenue royalty of 4%, which cannot exceed, however, a fixed unit tax of DKK 0.04 per litre. The model implies that each year the Greenlandic corporate and dividend tax paid is deductible from the revenue royalty/unit tax payable.

**Recommendation 6**
Statutory authority should be introduced for the Government of Greenland to grant up to five years of royalty exemption as from the date of grant. The fundamental conditions for being granted such exemption should be laid down directly in the Act or in an executive order.

Recommendations concerning possible changes and adjustments to the Greenlandic regulatory framework for export of ice and water

**Recommendation 7**
Statutory authority should be introduced to allow the grant of non-exclusive exploitation licences for land areas.

**Recommendation 8**
Consideration should be given to whether it should be possible in an exploitation licence to specify the maximum volume of ice and water that may be exploited under the licence.

**Recommendation 9**
It should be possible for the licensee and the Government of Greenland to change exploitation volumes, if so provided for in the exploitation licence.

**Recommendation 10**
Consideration should be given to whether there is a need to authorise the Government of Greenland to issue orders for coordinated exploitation where two or more ice or water resources are shared by different licensees.
Recommendation 11
Provisions should be amended to authorise the Government of Greenland to lay down terms requiring a licensee to pay the Self-Government by way of a royalty (unit tax) for exploitation and export of ice and water, including terms concerning exemption from payment in certain periods. In addition, provisions should be introduced to authorise the Government of Greenland to lay down terms governing exemption of licensees from direct and indirect taxes (fiscal taxes) in certain periods and on certain terms and conditions.

Recommendation 12
Consideration should be given to whether there are sufficient advantages involved in introducing a protected designation of origin, e.g. by making designations such as “ice cap water” protected foodstuff designations.

Recommendation 13
It should be examined whether there is a need to update the requirements for export water standards so as to be consistent with international standards at all times for the purpose of reducing compliance costs and boosting confidence in Greenland export water.

Recommendation 14
Consideration should be given to whether it would be advantageous to use open-door procedures (licensing rounds) in connection with licensing of the water resources analysed and newly mapped by the Self-Government. In this connection, clear evaluation criteria should also be introduced.

Recommendation 15
Introduction of application periods in connection with the processing of applications according to the open-door principle instead of the existing application procedure, which is based on the first-come first-served principle.

Recommendation 16
Statutory authority should be introduced to allow the Government of Greenland to bar applications for exploitation licences for specific areas.

Recommendation 17
A provision should be introduced to establish that legislation concerning cargo transport by sea to, from and within Greenland does not apply to transport by sea of ice and water resources covered by the Exports of Ice and Water Act.

Recommendation concerning promotion subsidies
Recommendation 18
Industrial promotion funds should be provided for establishing contact and launching marketing campaigns to support small Greenlandic players’ efforts to engage in partnership with multinational producers.

Recommendations concerning marketing activities as well as branding of Greenlandic water
Recommendation 19
Marketing material should be prepared, including a product catalogue, concerning the opportunities presented by Greenlandic meltwater deposits for the purpose of strengthening marketing efforts abroad.

Recommendation 20
Greenland’s meltwater deposits should be marketed actively at international and regional trade fairs etc., including with a particular focus on the Middle East and Asia.

Recommendation 21
Proactive marketing efforts should be aimed at a select group of multinational producers in order to attract producers or investors with the required capacity, including in terms of capital strength and marketing and distribution capacity.