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WE LOOK FORWARD™

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**2010 Survey:**  
**Climate Change Awareness**  
**in the Shipping Industry**

Respondent:

**Dear Sir/Madam:**

The ProBorea Corporation is researching Climate Change impact awareness levels in your industry. We invite you to participate in our study and would appreciate your help in completing the enclosed survey. The survey should take no more than 8 minutes of your time.

Responses will be used to analyze the total industry and to draw conclusions about general trends. A detailed breakdown by company, or any individual answers, will not be made public. The collated analysis of these surveys will be distributed in press releases to international news outlets and industry groups. The results will also be made available on our website.

**What You Gain**

Once we have compiled the returned surveys, we will send you a free report showing both the industry wide average as well as your individual average. This will help you understand how your company aligns with your industry and competition. Because these issues greatly affect competitive capabilities and the future viability of your company, we hope these statistics will help guide your leadership in this area. With your permission, we will credit you with any insightful quotes you wish to provide in the written section. This is an opportunity for you to differentiate yourself and gain recognition for the work you may already be doing.

**Returning the Survey**

Print the survey, fill it out, and mail or email back to us. It's that simple. Feel free to contact us ([survey@proborea.com](mailto:survey@proborea.com)) with any questions, comments, or concerns. Thank you for your time and effort. We look forward to sharing the results with you.

**Who We Are**

ProBorea is a business consulting firm focusing on the issues of Sustainability and Climate Change. We are evaluating climate change awareness and sustainability in several key industries including investments, transportation, agriculture, and real estate development. We are dedicated to helping business adapt and succeed in a changed world.

## 2010 Survey: Climate Change Awareness in the Shipping Industry

### Industry Synopsis

Shipping companies face the most immediate threats and the clearest opportunities resulting from climate change. Climate change presents a wide range of physical, social, and economic challenges which will ultimately impact your operations. Some of these factors and considerations are as follows:

**Sea Level Rise** will affect port access, port relocation, vessel size access, ocean salinity, coastal erosion, revisions to nautical charts, navigation, and adjustments to international boundaries.

**Increased Storm Intensity** will affect maintenance budgets, depreciation of assets, catastrophic losses, insurance premiums, and scheduling delays.

**The Opening of the Northwest Passage and Northeast Passage** will decrease shipping distances, decrease fuel use, open new ports and markets, and eliminate canal fees.

**Social Forces** (including customers, regulators, bankers, investors, and industry groups) will mandate CO<sub>2</sub>e emissions reductions, sustainability guidelines, corporate social responsibility reports, and increased energy efficiency.

It is the intention of this survey to determine your awareness of these issues as well as your general level of preparedness in relation to your competition.

### Survey

#### Rising Sea Levels

	Yes	No
Have you considered which ports will be most affected by rising sea levels?	<input type="checkbox"/>	<input type="checkbox"/>
Have you determined which ports will have increased draft, allowing larger ships?	<input type="checkbox"/>	<input type="checkbox"/>
Have you investigated where ocean salinity will change?	<input type="checkbox"/>	<input type="checkbox"/>
Has this factor been figured into your loan amortization with regard to hull damage?	<input type="checkbox"/>	<input type="checkbox"/>
Has it been incorporated into your maintenance budget?	<input type="checkbox"/>	<input type="checkbox"/>
How often do you purchase new charts or related navigation software?		
Have you evaluated how increased ocean depth will improve your navigation options?	<input type="checkbox"/>	<input type="checkbox"/>
Have you evaluated how coastal erosion will effect your navigation?	<input type="checkbox"/>	<input type="checkbox"/>
Have you evaluated changes to the international boundaries in which you operate?	<input type="checkbox"/>	<input type="checkbox"/>
Have you investigated the possible conflict zones which could arise due to these changes?	<input type="checkbox"/>	<input type="checkbox"/>

#### Increased Storm Frequency

	Yes	No
Is increased storm frequency built into your budget forecast?	<input type="checkbox"/>	<input type="checkbox"/>
Have you evaluated how increased storm related delays will effect scheduling?	<input type="checkbox"/>	<input type="checkbox"/>
Have you set aside contingency funds to cover storm related delays?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a plan to increase this contingency on a regular basis?	<input type="checkbox"/>	<input type="checkbox"/>
Has increased wear and tear been incorporated into your maintenance budget?	<input type="checkbox"/>	<input type="checkbox"/>
Does increased storm damage figure into your loan amortization or depreciation figures?	<input type="checkbox"/>	<input type="checkbox"/>
Does your amortization deduction on your hard assets account for environmental stress?	<input type="checkbox"/>	<input type="checkbox"/>

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**The Northwest Passage and the Northeast Passage**

	Yes	No
Have you looked into the Northwest Passage or the Northeast Passage as a route option?	<input type="checkbox"/>	<input type="checkbox"/>
Do you think your competitors will be using the Passages?	<input type="checkbox"/>	<input type="checkbox"/>
Have you used the Northwest Passage or Northeast Passage?	<input type="checkbox"/>	<input type="checkbox"/>
Have you investigated new ports based on the opening of these Passages?	<input type="checkbox"/>	<input type="checkbox"/>
Have you investigated new markets based on increased access to arctic regions?	<input type="checkbox"/>	<input type="checkbox"/>

**Social Forces**

On a scale of 1-5*, how aware is your <i>industry</i> on the topic of climate change?	_____
On a scale of 1-5, how aware is your <i>company</i> on the topic of climate change?	_____
On a scale of 1-5, how aware are your <i>customers</i> on the topic of climate change?	_____
On a scale of 1-5, how important is environmental stewardship to your executive team?	_____

\*1=Not at all; 2=Thinking about it; 3=Somewhat; 4=Actively; 5=Very

	Yes	No
Have you taken measures to increase your status as a “green” company?	<input type="checkbox"/>	<input type="checkbox"/>
Has your company produced a sustainability report?	<input type="checkbox"/>	<input type="checkbox"/>
Have you performed an evaluation of your greenhouse gas (GHG) emissions?	<input type="checkbox"/>	<input type="checkbox"/>
Do you participate in a carbon trading program?	<input type="checkbox"/>	<input type="checkbox"/>
Do you participate in a carbon offset program?	<input type="checkbox"/>	<input type="checkbox"/>
What percentage of your electricity use comes from renewable resources?	_____	_____
Have you had an independent agency evaluate your energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>
Is your company included on investor’s lists of socially responsible companies?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have in-house staff dedicated to sustainability and climate change issues?	<input type="checkbox"/>	<input type="checkbox"/>
How many staff members focus on sustainability issues as a job function?	_____	_____
Does your industry association inform you of new carbon/climate regulations?	<input type="checkbox"/>	<input type="checkbox"/>
Which organizations are most helpful to you?	_____	_____

**Economic Factors**

	Yes	No
When you invest in new assets, does energy efficiency play a role in your decision?	<input type="checkbox"/>	<input type="checkbox"/>
Have you investigated new technology that would lower your energy bills?	<input type="checkbox"/>	<input type="checkbox"/>
When you invest in new assets, does climate change play a role in your decision?	<input type="checkbox"/>	<input type="checkbox"/>
Have you considered how climate change will affect your upstream supply chain?	<input type="checkbox"/>	<input type="checkbox"/>
Have you modified your insurance coverage based on climate change impacts?	<input type="checkbox"/>	<input type="checkbox"/>
Does your budget accommodate increasing insurance rates annually?	<input type="checkbox"/>	<input type="checkbox"/>
Are your vessels equipped with CO2 scrubbing technology (e.g. CSNOx)?	<input type="checkbox"/>	<input type="checkbox"/>
If so, what percentage of your fleet has this technology installed?	_____	_____
Do you plan to install such a technology in the next year?	<input type="checkbox"/>	<input type="checkbox"/>
When you invest in new vessels, does fuel efficiency play a key role in your decision?	<input type="checkbox"/>	<input type="checkbox"/>
Do you incorporate alternative energy propulsion on your vessels (e.g. SkySails)?	<input type="checkbox"/>	<input type="checkbox"/>

