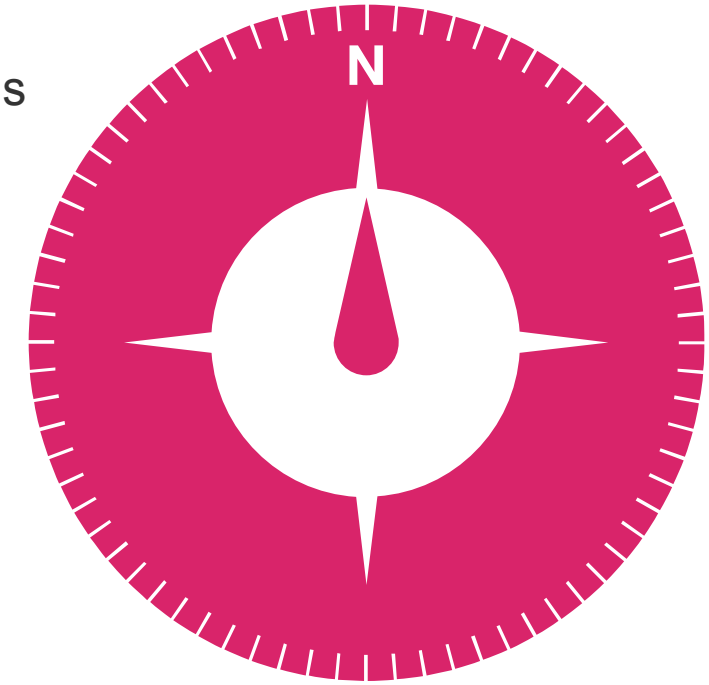
Operationalising the Polar Code in the Arctic Ocean: Insurance Industry Contributions

Go further

6th Symposium on the Impacts of an Ice-Diminishing Arctic on Naval and Maritime Operations



Navy Heritage Centre and US Naval Memorial

Washington .D.C

USA

15.07.2015

Michael Kingston

Marine Trade & Energy DWF LLP

15 July 2015

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

The Polar Code – Entry into force January 2017

- The Polar Code is not a stand alone Convention. It will come into force as an amendment to 3 existing Conventions:

- International Convention for the Prevention of Pollution from Ships (MARPOL)

  Adoption: 1973 (Convention), 1978 (1978 Protocol), 1997 (Protocol - Annex VI); **Entry into force: 2 October 1983** (Annexes I and II).

- The Safety of Life as Sea Convention (SOLAS) 1974

  Adoption: 1 November 1974; **Entry into force: 25 May 1980**

- The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 (STCW)

  Adoption: 7 July 1978; **Entry into force: 28 April 1984**; Major revisions in 1995 and 2010

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Deep Water Horizon – Criminal Charges

BP oil spill: Criminal cases largely unresolved 5 years after Deepwater Horizon blowout

Robert Kaluza, second from right, a BP well site leader from the Deepwater Horizon oil rig explosion, arrives with his legal team at Federal Court to be arraigned on manslaughter charges in New Orleans, Wednesday, Nov. 28, 2012. (AP Photo/Gerald Herbert)

Sponsored by: D·R·HORTON America's Builder

GOOTEE

At Gootee, the most important thing we build is trust.

CLICK TO LEARN MORE

Most Read

Komodo dragon bite sends Nebraska zoo worker to hospital

Strong thunderstorm enters Baton Rouge area with hail, high winds; flooding possible

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Deep Water Horizon – Further Problems

Spike in dead dolphins 'linked to BP oil spill disaster'

A SPIKE in the number of dolphins dying in the Gulf of Mexico may have been a direct result of the BP oil spill disaster, new evidence suggests.

By Levi Winchester
PUBLISHED: 14:27, Thu, May 21, 2015 | UPDATED: 16:42, Thu, May 21, 2015

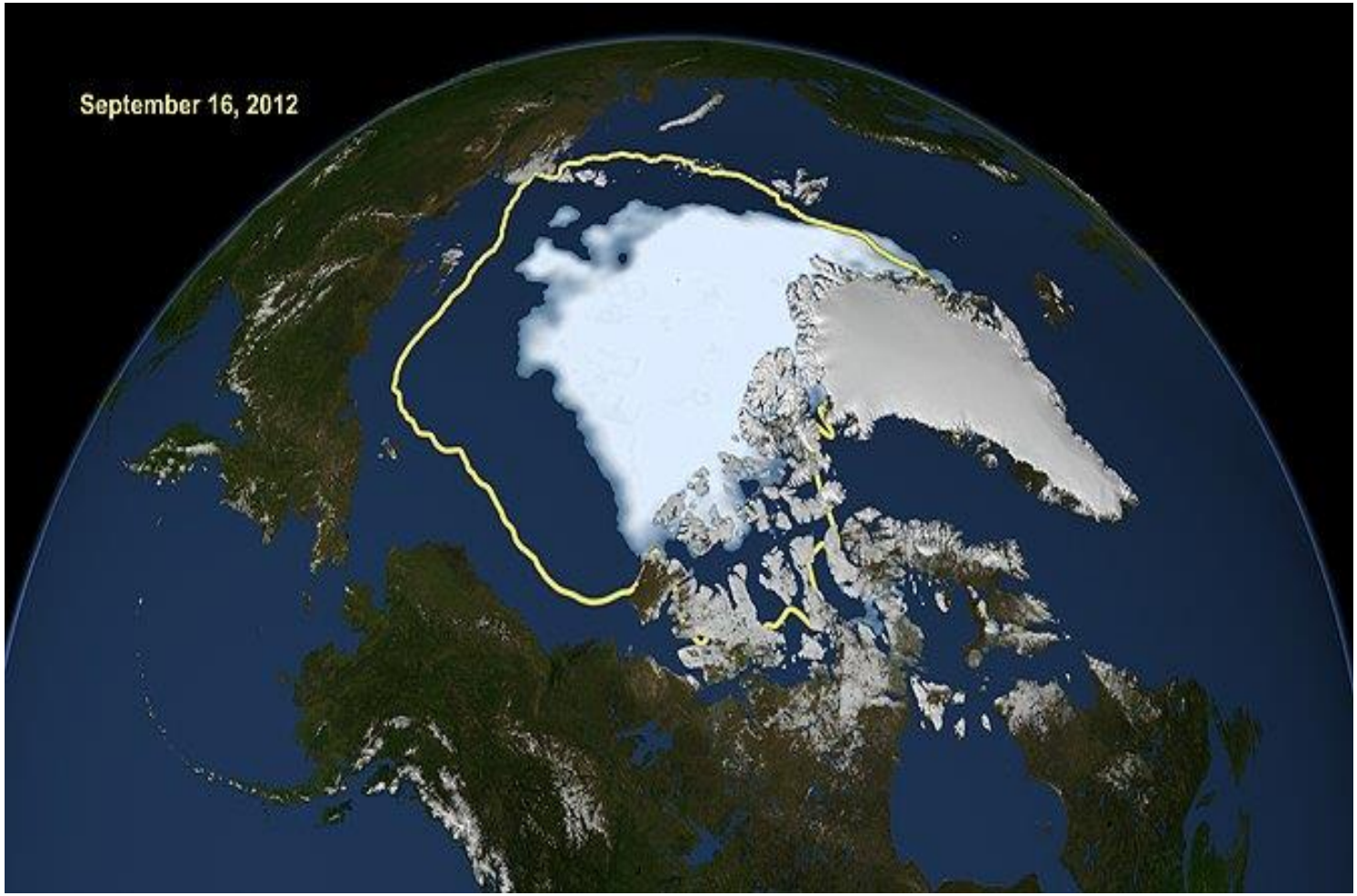
SHARE TWEET 12 4

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Polar Code –A Brief History

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

September 9th 2012 – Arctic Sea Ice Hits Smallest Extent In Satellite Era (Photo Courtesy of NASA)



Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Deepwater Horizon 2010

- 20 April 2010
- 11 people killed
- Result – high level review of regulation on an unprecedented level

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

In Memoriam

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Deep Water Horizon US Commission Report

- The Gulf Oil Disaster and the Future of Offshore Drilling
- US Commission Report to the President
- 11 January 2011

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Piper Alpha, UK North Sea 1988

- July 1988
- 167 people killed
- Result –high level review of UK regulatory regime

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Alexander L Kielland 1980, Norway

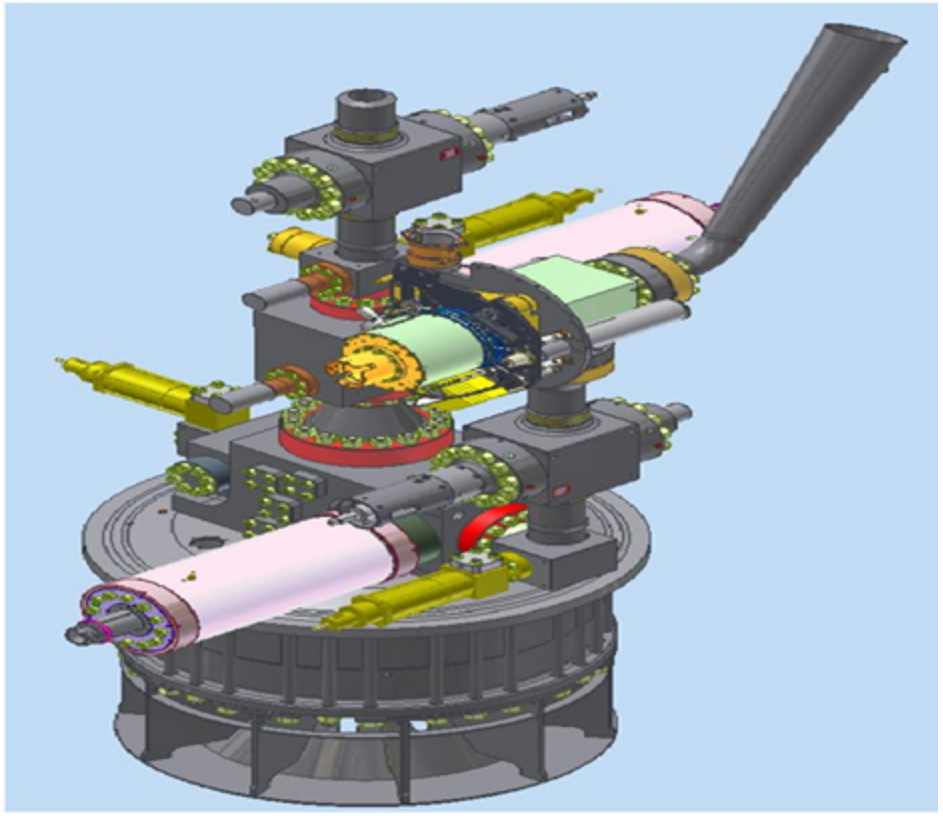
- 27 March 1980
- 123 people killed
- Result – High level review of Norwegian regulation

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

International Convention on Civil Liability for Oil Pollution Damage resulting from Exploration for and Exploitation of seabed Mineral Resources – in draft since 1977

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

UK Review



OSPRAG Capping Kit

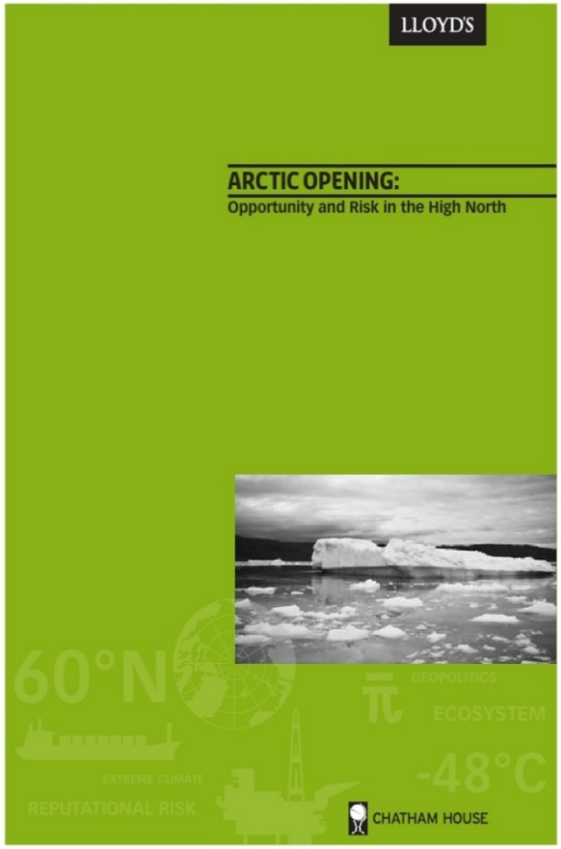
Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Lack of Consistency in Liability Regimes Across World

	UK	US	Brazil	Australia	Russia
Extent of government involvement	High	High	High	High	High
Standard response procedures in place?	Yes	Yes	Yes	Yes	Yes
Legal process	Efficient & experienced	Efficient & experienced	Slow & unpredictable	Efficient & experienced	Mixed bag
Pollution Liability – strict or fault based	Strict up to OPOL limit Fault based there after	Strict up to OPA 90 limit	Strict	Fault based under OPGGS Act 2006	Strict
Limitation of liability for operators of vessels	It depends on the definition of a vessel? Is drilling ship/ Little Jewel a vessel?	Yes	No	No	Yes
Punitive damages	No	Yes	No	No	No but Moral Damages
Are exclusion clauses enforceable?	As a general rule, yes, subject to the precise wording. Liability to an injured party for personal injury/death cannot be excluded.	Yes, save for gross negligence or wilful misconduct	Difficult in this situation	Yes but often circumstances under CAA 2010	Yes but not EG: personal injury
Criminal liability	Yes	Yes	Yes	Yes	Yes

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Executive Summary



- Rapid and Disruptive Change presents uneven prospects
- Arctic likely to attract potential $100BN investment
- **Significant knowledge gaps**
- Arctic conditions remain challenging and unpredictable
- **Environmental consequences** of disasters likely to be worse than other regions
- Politics of Arctic economic development controversial and fluid
- **Continued development** of Governance frameworks with reinforcements where possible
- **Risk Management** is fundamental

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

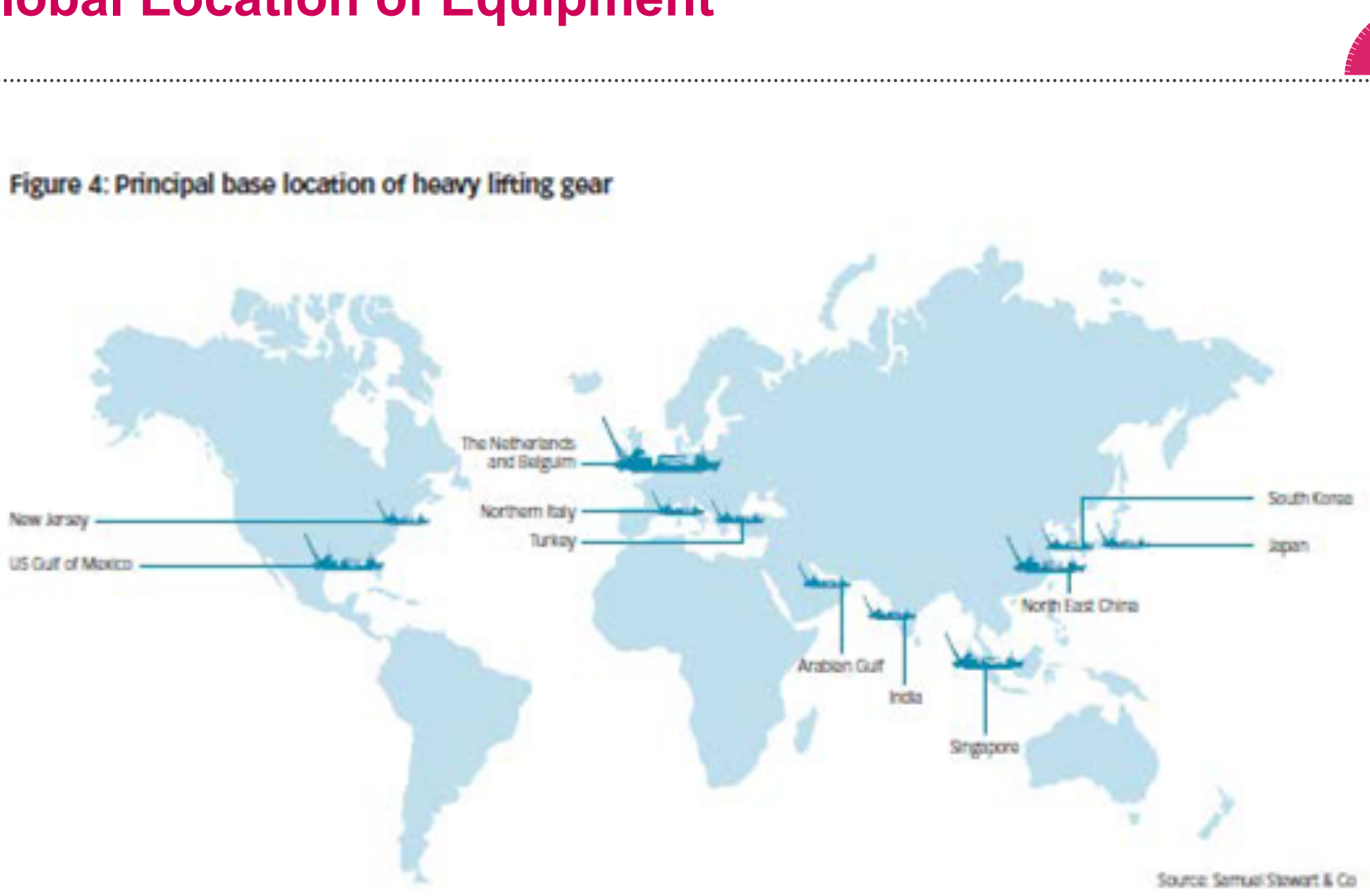
Delimitation, according to IMO Guidelines for Ships Operating in Polar Waters

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Wreck Removal – The Costa Concordia

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Global Location of Equipment

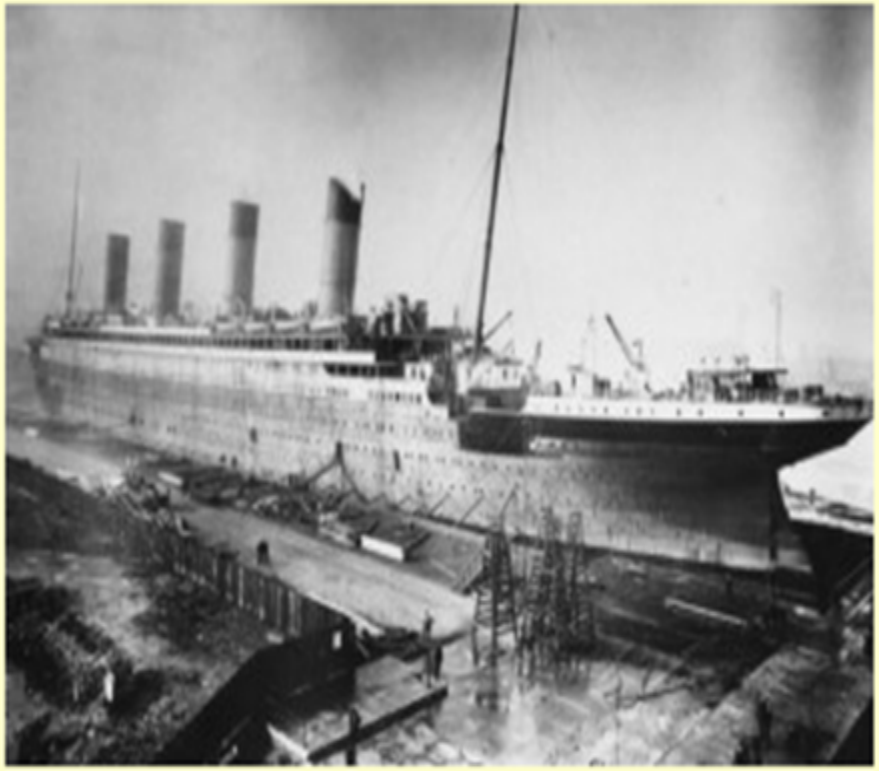


Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Political Legitimacy

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Titanic – Departed Southampton 10.04.1912
Sank off Newfoundland 15.04.1912



Unsinkable Titanic

A modern marvel of construction, the Titanic was the largest and most luxurious passenger vessel of its time. Thought to be unsinkable, the Titanic was equipped with eight watertight compartments on the hull of the boat that would close if water entered them allowing the Titanic to stay afloat. The sheer size and technological advancements present on the Titanic was the main reason why passengers and crew believed the ship to be unsinkable.

Private & Confidential. Not for distribution.
©DWF LLP 2014 www.dwf.co.uk

Human Error – responsible for 75% of incidents

→ FATIGUE

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

International Maritime Organisation (IMO)

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Cruise Ship off the Greenland Coast

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Nordvik – Northern Sea Route 2013

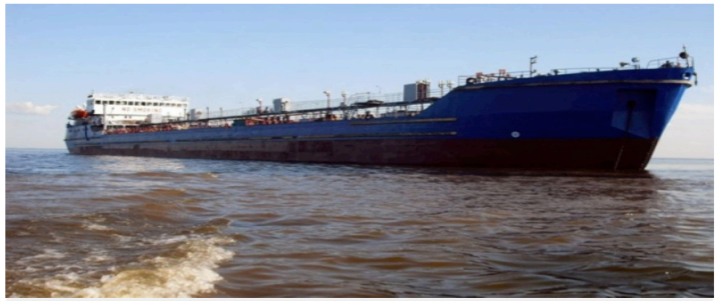
Tanker accident on Northern Sea Route | Barentsobserver

Barents Observer

About | Contact

Energy Security Nature Business Arctic Culture Borders Politics Society

Tanker accident on Northern Sea Route



The fully loaded tanker "Nordvik" hit an ice floe when sailing in fragile Arctic waters. (Photo: hmtp.ru)

A tanker loaded with diesel fuel was holed by an ice floe on the Northern Sea Route and suffered ingress of water. There are no reports on any oil leakage and the tanker is now slowly sailing towards Murmansk.

By **Trude Pettersen**
September 09, 2013

Like 15 Tweet 87 Share 1

The 138 meter long, 6403 dwt tanker "Nordvik" was struck by ice while sailing in the Matisen Strait to the north of the Taimyr Peninsula on September 4. The vessel, which was loaded with diesel fuel, struck an ice floe and started taking in water. "Nordvik" was built in Bulgaria in 1985.

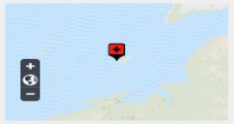
The vessel is sailing towards Murmansk at 4 knots. There is no information on any oil leaks or other damages to the environment.

According to information from the Northern Sea Route Administration's web site, the vessel had permission to sail in the Kara Sea and the Laptev Sea.

The Seafarer's Union of Russia says the tanker should never have sailed in the area, and blames the ship owner, Khatanga Commercial Port, for putting the crew's and the fragile Arctic ecology in danger.

"Yesterday's accident was a direct threat to the lives of sailors and the ecology of the Arctic", Aleksander Bodnya says to the union's web site. "Vessels like that should not be sailing on NSR, simply

Location:



Related content:

- Russia opens first Arctic search and rescue center
- "Northern Sea Route comes to life"
- First container ship on Northern Sea Route
- First Chinese merchant ship on Northern Sea Route
- Towards commercial breakthrough for Northern Sea Route

Tanker accident on Northern Sea Route | Barentsobserver

because they are not capable of withstanding the ice conditions."

The Seafarer's Union underlines that the system for search and rescue is not yet fully developed in the area where the incident happened, and that a serious accident could have been crucial for the crew. "Not to forget the ecology – a large amount of diesel fuel could have leaked out into the sea, and who would be there to clean it up, is quite unclear."

"Nordvik" is an Ice 1 class (L4) tanker and is only allowed to sail on the Northern Sea Route (NSR) in light ice conditions. The ice conditions in the northeastern parts of the Kara Sea were regarded as "medium" by Roshydromet in the period when the accident happened.

"Nordvik" is an Ice 1 class (L4) tanker and is only allowed to sail on the Northern Sea Route (NSR) in light Ice conditions. The ice condistions in the northeastern part of the Kara Sea were regarded as "medium" by Roshydromet in the period when the accident happened.

Akademik Shokalskiy – Antarctic January 2013

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

IACS Polar Class Rules - Interpretation

- How can these be
- applied to a real
- operation?

- Where can a vessel
- operate?

- When can it
- operate?

Polar Class	Ice Description (based on WMO Sea Ice Nomenclature)
PC 1	Year-round operation in all Polar waters
PC 2	Year-round operation in moderate multi year ice conditions
PC 3	Year-round operation in second-year ice which may include multi-year ice inclusions
PC 4	Year-round operation in thick first-year ice which may include old ice inclusions
PC 5	Year-round operation in medium first-year ice which may include old ice inclusions
PC 6	Summer/autumn operation in medium first year ice which may include old ice inclusions
PC 7	Summer/autumn operation in thin first-year ice which may include old ice inclusions

Private & Confidential. Not for distribution.
©DWF LLP 2014 www.dwf.co.uk

Insurers' attitude to insuring above 70^0 North

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

So what can we do about this to make it work?

- The Arctic should be divided into distinct geographical areas – based on ice conditions
  - Not to detailed to start
- There shall be a number of seasons established in a year – perhaps 3-4 – that captures ice seasons with ice coverage and hardness
  - Keep it simple
  - Parameters reflects IACS and IMO Polar Code
- Avoid politics – each Arctic country responsible for rules in their “sector” of the Arctic.
- Justification: The Arctic SAR agreement signed by Arctic Council member states.

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Conference on Sustainable Arctic Shipping and Marine Operations – London, March 11th 2014

REGERINGSKANSLIET
Ministry for Foreign Affairs
Sweden

POLARFORSKNINGS SEKRETARIATET
SWEDISH POLAR RESEARCH SECRETARIAT

SVERIGES AMBASSAD
London

norden

Conference on Sustainable Arctic Shipping and Marine Operations

11 March 2014
London

Private & Confidential. Not for distribution.
©DWF LLP 2014 www.dwf.co.uk

Bridging the Arctic Marine Risk Gap – The need for a cross Arctic Ice Regime – Lloyd's Adam Room 12th March 2014

LLOYD'S

POLARFORSKNINGS SEKRETARIATET
SWEDISH POLAR RESEARCH SECRETARIAT

Cefor The Nordic Association of Marine Insurers

The Swedish Club

Workshop on

Bridging the Arctic marine risk gap - The need for a cross Arctic Ice Regime – linking ice conditions to ice class requirements

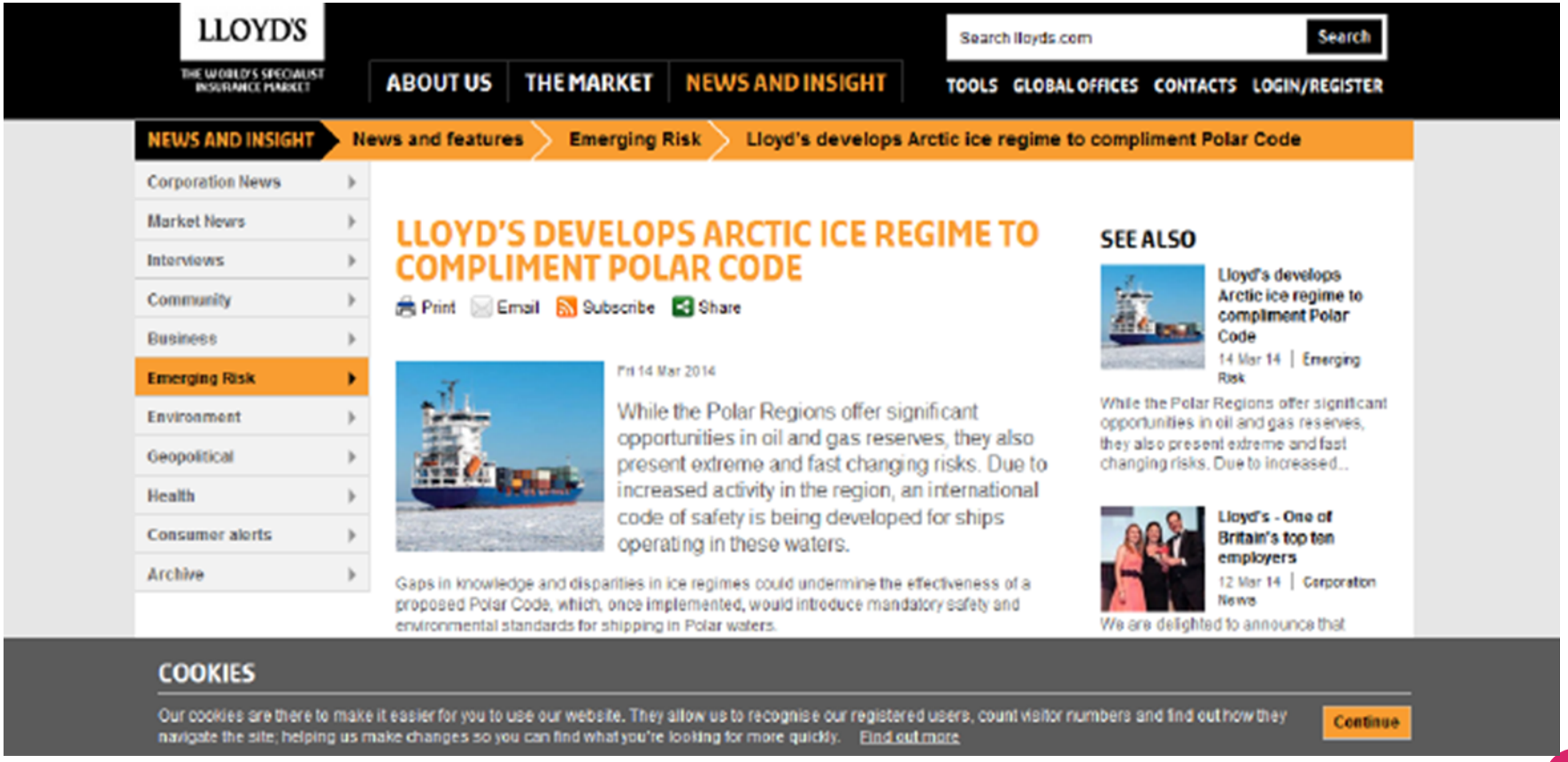
12 March 2014

London – Lloyd's Adam's Room, One Lime Street
London, UK, EC3M 7HA

dwf

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Progress – Recommendations for an Ice regime and forum for best practice made to the Arctic Council in time for meeting with IMO General Secretary



Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

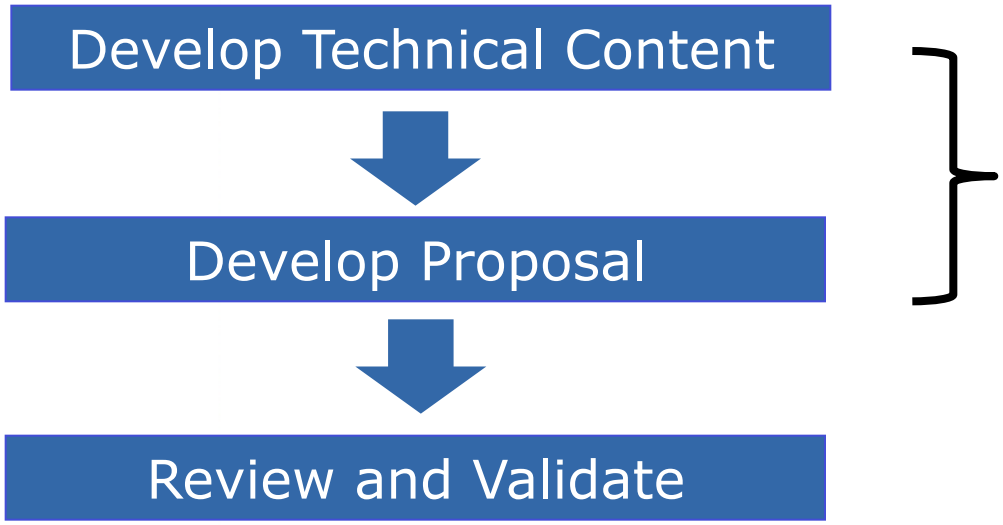
Developments in Working Group at MSC93 – June 2014 – 'Arctic wide ice regime developments'

- **MSC93: Agreement that limitations for operating in ice to be included on the Certificate**
- **MSC93 proposed initial guidance on limitations for operating in ice:**
- MSC93/WP.7/Add1, Para 10: in order to include the operational limitations in ice in the certificate, the group included a guidance in square brackets in part I-B of the draft Code, which will need to be further developed in conjunction with section 1.5 of part I-A, before the adoption of the Code (see part I-B, Additional guidance to chapter 1, Limiting ice capabilities for the Polar Ship Certificate).

- **In this context, the group noted that the observer from IACS stated that IACS would be willing to undertake further work on the guidance with the intention to submit a document to MSC 94. The group also noted that some interested delegations would cooperate with IACS on this necessary and urgent work.**

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Participants and structure of informal group



Technical Group

Informal CG

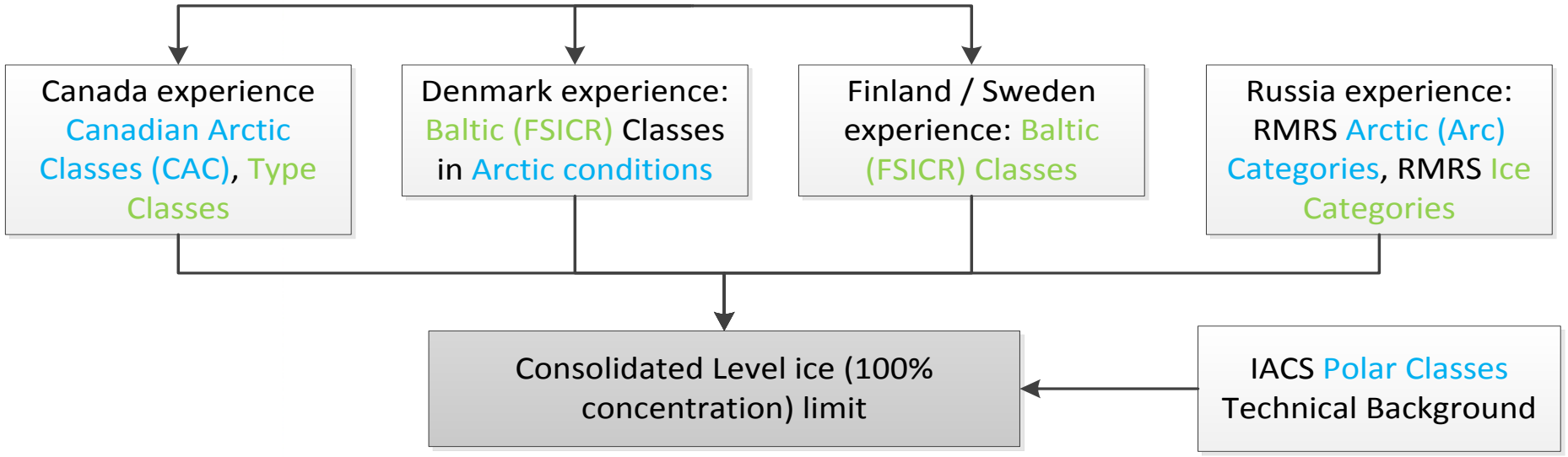
Technical Group: IACS, Canada, Denmark, Finland, Russia, Sweden

Informal Correspondence Group: email group consisting of volunteer members from MSC93 WG

Consolidation of Existing Experience

Key Concepts: Consolidation of existing experience

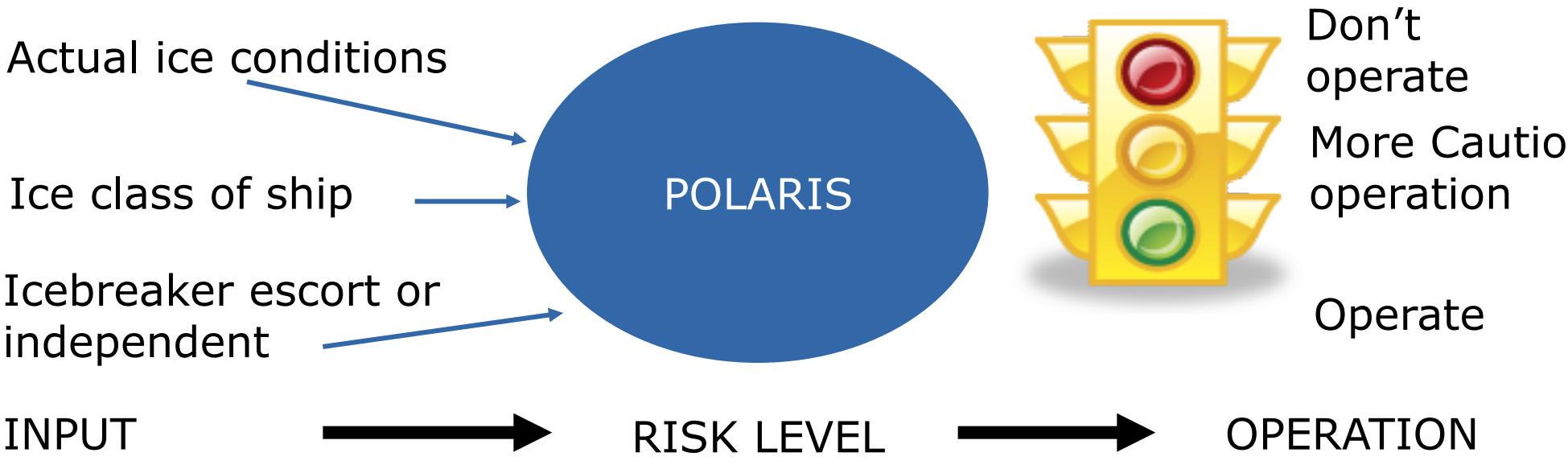
Technical group's experience with ice class rules and ship operations in ice overlaid on initial MSC93 proposal



Goal of Technical Group:

Develop a decision making system that can be used for voyage planning *and* "on the bridge" that uses the actual ice conditions, ice class and operational mode

Polar Operational Limit Assessment Risk Indexing System (POLARIS)



POLARIS: Evaluation Criteria (Independent Operations)

RIO_{SHIP}	Category A & B (PC1 – PC7)	Category C (below PC7)
RIO ≥ 0	Operation Permitted	Operation Permitted
-10 ≤ RIO < 0	Limited Speed Operation Permitted (See Table 1.3)	Operation Not Permitted
RIO < -10	Operation Not Permitted	Operation Not Permitted

POLARIS: Speed reduction in Negative RIOs

Table 1.3 Marginal capability speed limitations

Ship Category (ice class)	Independent Operation Speed (knots)	Escorted Operation Speed (knots)
A (PC1 – PC2)	NA	NA
A (PC3 – PC5)	5 knots	5 knots
B (PC6 – PC7)	3 knots	3 knots
C (IA Super - IA)	NA	3 knots
C (below IA)	NA	NA

- Acknowledges that there is not a finite point when the ship cannot operate
- Based on IACS ice class rule formulations

Key Concepts: Partial Ice Concentration Approach

Increasing ice thickness (severity)

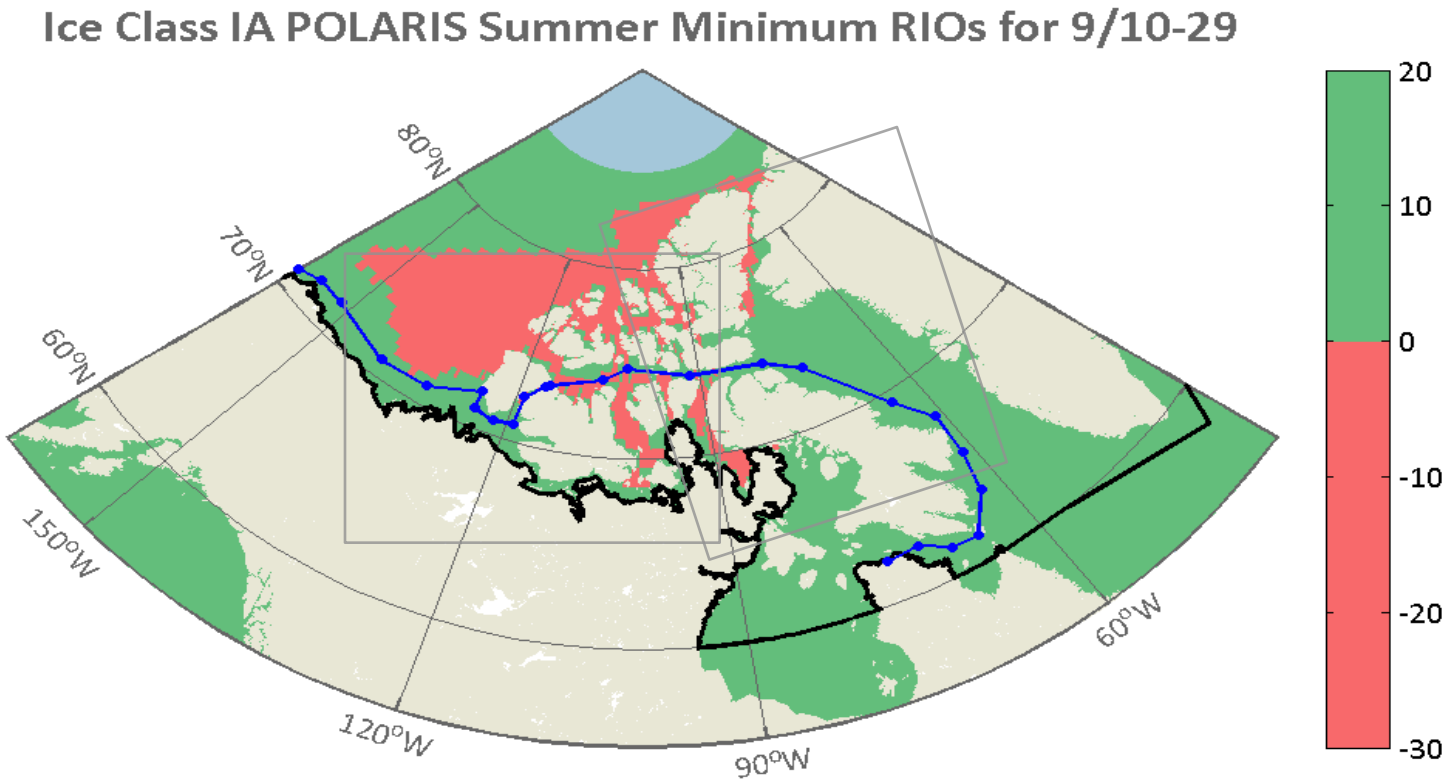
Increasing ice class

Increased Risk

WINTER RISK VALUES (RVs)													
POLAR SHIP CATEGORY	ICE CLASS	ICE FREE --	NEW ICE 0-10 cm	GREY ICE 10-15 cm	GREY WHITE ICE 15-30 cm	THIN FIRST YEAR 1ST STAGE 30-50 cm	THIN FIRST YEAR 2ND STAGE 50-70 cm	MEDIUM FIRST YEAR 1ST STAGE 70-95 cm	MEDIUM FIRST YEAR 2ND STAGE 95-120 cm	THICK FIRST YEAR 120-200 cm	SECOND YEAR 200-250 cm	LIGHT MULTI YEAR 250-300 cm	HEAVY MULTI YEAR 300+ cm
A	PC 1	3	3	3		2	2	2	2	2	2	1	1
	PC 2	3	3	3			2	2	2	2	1	1	0
	PC 3	3	3	3	3			2	2	2	1	0	-1
	PC 4	3	3	3	3	2			2	1	0	-1	-2
	PC 5	3	3	3	3	2	2		1	0	-1	-2	-2
B	PC 6	3	2	2	2	2	1			-1	-2	-3	-3
	PC 7	3	2	2	2	1	1	0		-2	-3	-3	-3
C	IA Super	3	2	2	2	2	1	0	-1	-2	-3	-4	-4
	1A	3	2	2	2	1	0	-1	-2	-3	-4	-4	-4
	1B	3	2	2	1	0	-1	-2	-3	-3	-4	-5	-5
	1C	3	2	1	0	-1	-2	-2	-3	-4	-4	-5	-6
	NO ICE CLASS	3	1	0	-1	-2	-2	-3	-3	-4	-5	-6	-6

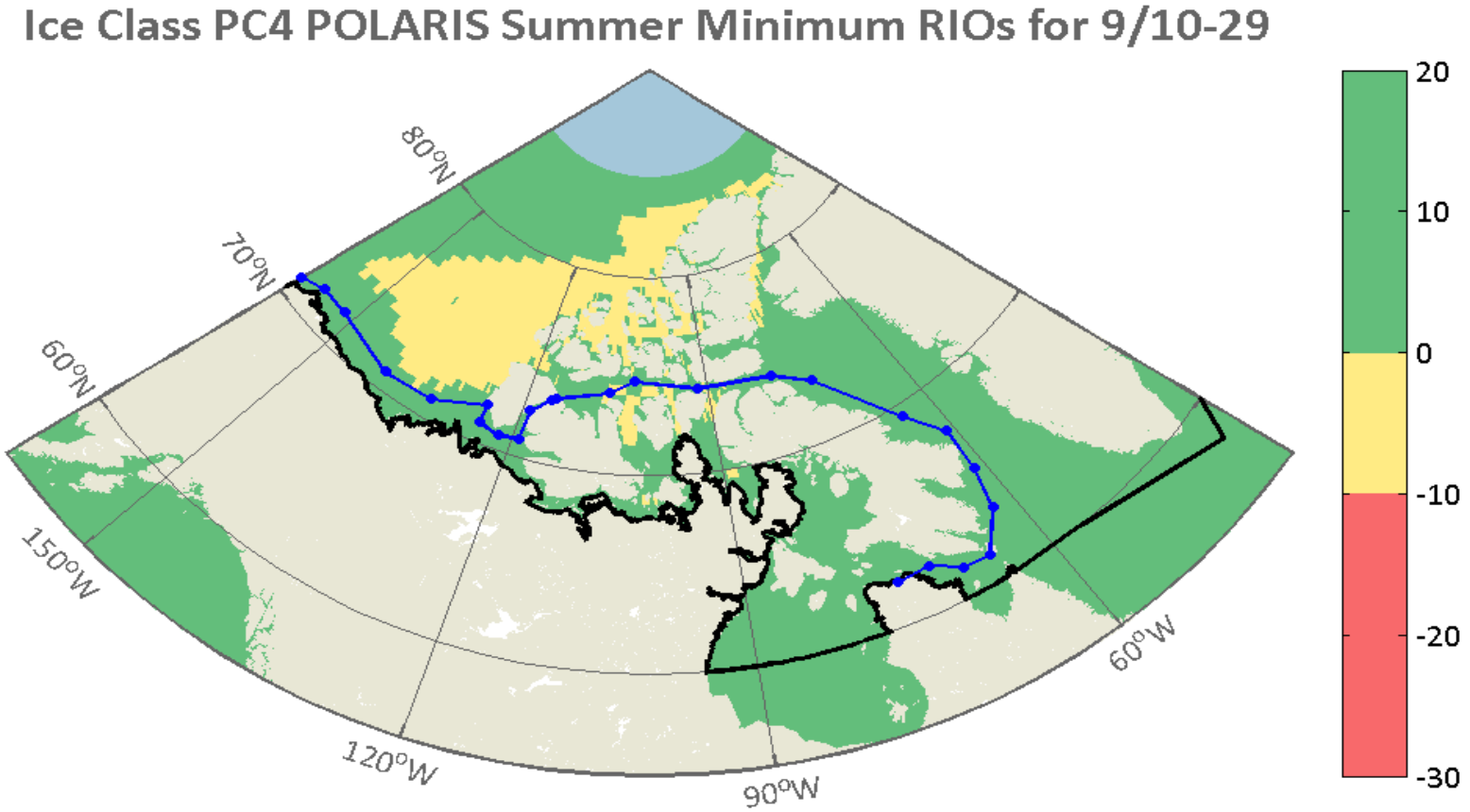
POLARIS: An operations / planning tool

- Considering a voyage through the Northwest Passage at the time of year that historically coincides with minimum ice extent **(10-29 Sep 2014)**
- Two ice charts used (CIS Canadian Arctic – East & West) plot overlays the minimum RIOs from each of three specific days (Sept 15, 22 and 29)
- Ship ice class = Baltic 1A
- NO GO!



POLARIS: An operations / planning tool

- Consider the same voyage and the same ice charts
- Change ship to ice class = PC 4
- GO! - slow speed (cautious operations) for part of the trip



More Work to –be done – Tragedy in the Bering Sea 31 March 2015

“More than 50 fishermen feared dead in Bering Sea trawler tragedy”

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Shell Heads for the Arctic Again

The Telegraph

Barack Obama gives Shell go-ahead to drill for oil in Alaskan Arctic

Anglo-Dutch oil giant to return to the Chukchi Sea in search for oil despite concerns for the environment

Shell's Kulluk drilling rig ran aground in the Arctic Photo: AP

By Andrew Critchlow, Commodities editor
9:13PM BST 31 Mar 2015

Private & Confidential. Not for distribution.
©DWF LLP 2014 www.dwf.co.uk

Learning from the lessons of history

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

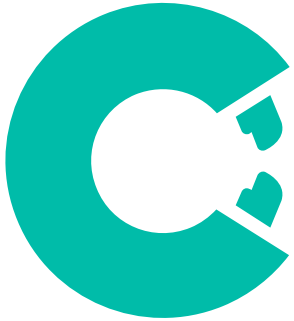
Insurers' attitude to insuring above 70^0 North

Polar Code
+
Ice Regime
+
Best Practice
=
Insurance
=
Trade & Investment
=
Sustainable Arctic Development

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

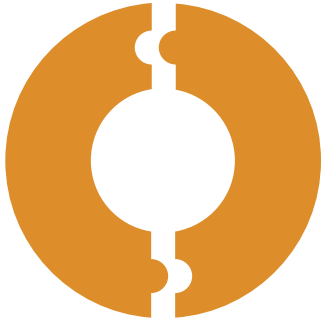
Values

Our firm is driven by its core Values which focus on:



Our Clients

Our People



Our Community

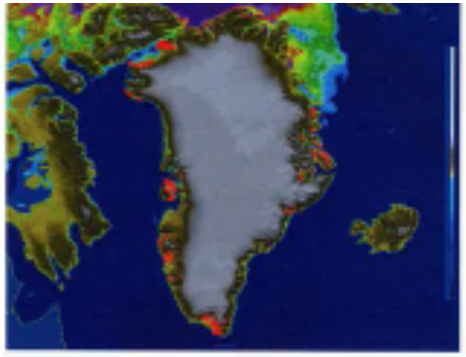
Our Environment

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

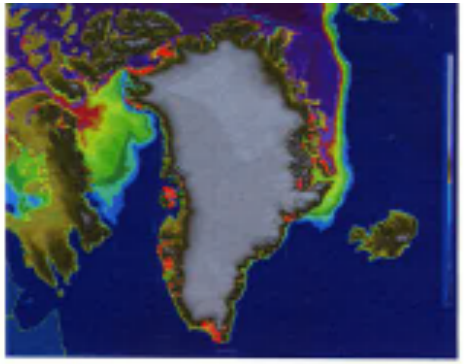
The Korean Ferry Tragedy – A collective failing – International Regulation / Industry / Governments

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

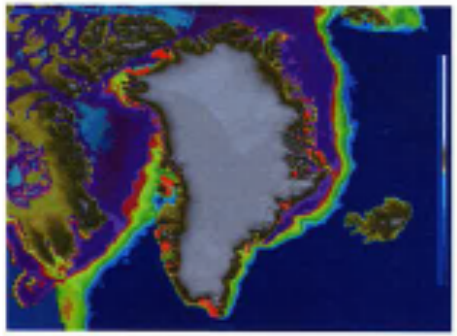
Ice Coverage Around Greenland



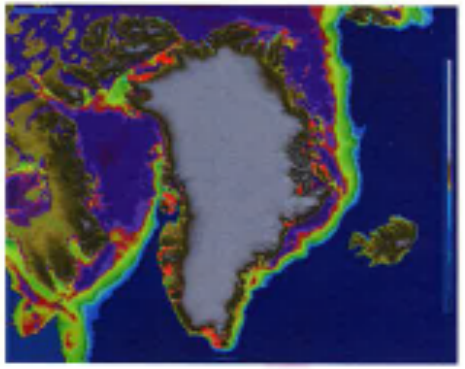
August – "Ice Free"



November – Icing up



February – heavy ice



May

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Map of location Citronen project Northern Greenland

Private & Confidential. Not for distribution.
©DWF LLP 2014 **www.dwf.co.uk**

Prevention – Norwegian Coastal Administration

Traffic Separation System - TSS