ACCESS
Arctic Climate Change
Economy and Society

Project no. 265863

ACCESS

Arctic Climate Change, Economy and Society

Instrument: Collaborative Project

Thematic Priority: Ocean.2010-1 “Quantification of climate change impacts on economic sectors in the Arctic”

D2.72 – User requirement for shipping in the Arctic

Due date of deliverable: **30/11/2014**

Actual submission date: **27/05/2015**

Start date of project: **March 1st, 2011** Duration: **48 months**

Organisation name of lead contractor for this deliverable: **NBC**

Project co-funded by the European Commission within the Seventh Framework Programme (2007-2013)		
Dissemination Level		
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

ACCESS Project
ACCESS WP2 Tasks 2.7.2
by Nordic Bulk Carriers A/S
February 2015

Index

Status on Arctic Shipping

Nordic Bulk Carriers A/S (NBC) has so far performed 17 transits in the Northern Sea Route (NSR) and one (1) in the North West Passage (NWP).
This makes NBC the most active user of these new Arctic shipping routes, however, NBC's volume has been decreasing the last two years, as well as the overall volume – and this is despite that the user requirements have been softened and the process has become much easier.
However, we have seen a change in how the Russians measure the number of transits. It used to be the actual number of transits, and even that was reported too high. At least during the last two years, vessels that have required icebreaker escort have been included in the transit figures, which give an unrealistic picture of the development. We believe that the actual number of vessel transits in 2014 is as low as 8-12.
This shows that there is a Russian interest to make this new sea route more available and more economical than it actually is – why and what does the future bring.

We believe that the Arctic has become a major part of a geopolitical issue, and all countries want to take part of this new available land. This is driven more on fear of missing an opportunity than based on a long scientific feasibility study.
Shipping, and especially the transits, was just a very symbolic picture of anopen Arctic, but it did not open in 2010 – for years oil majors have secured the right for drilling for oil, and test drills have been performed. The same goes with other natural resources – but only very few projects have been commenced – any why – the Arctic is a very harsh area – pure infrastructure and long distance to the rest of the civilized world - the development will come, but not as fast as it was expected and as fast as the Russians had dreamt of.

The shipping world is also affected by geopolitical issues, but even more affected by supply and demand.
Shipping is a very non-regulated business, except for safety and environment regulations. This means that trading volumes and patterns change when the world or local economies change.
There is no shipping segment that gets more affected from these changes than Dry Bulk shipping - the segment where the world's dry raw materials are being transported. Supply and demand and very volatile commodity prices change the trades several times a year.

The last two (2) years with continued decrease in many commodity prices and a slower demand have also changed shipping and thereby the trading patterns. This have affected the dry bulk market a lot and thereby had an impact on the NSR traffic (we can only comment on the dry bulk market).
Lower market in general reduces the upside for NSR transits, and the last couple of months' heavy fall in oil prices and thereby in fuel costs also makes the NSR savings less.
The fuel cost savings from Kirkeness to Yokohama ***(Ref Access task 2.6.3)*** have changed as follows:

Year	Fuel saving in mts	Fuel price pmt in USD	Total fuel savings in USD
2012	600	700	420.000
2015	600	300	180.000

As above graph shows, the reduction in fuel savings has been reduced by USD 240.000 due to the dramatically fall in oil prices – an interesting comparison is that the costs for the ICEBREAKER in the NSR is about USD 300-350,000.

Below these full calculations:

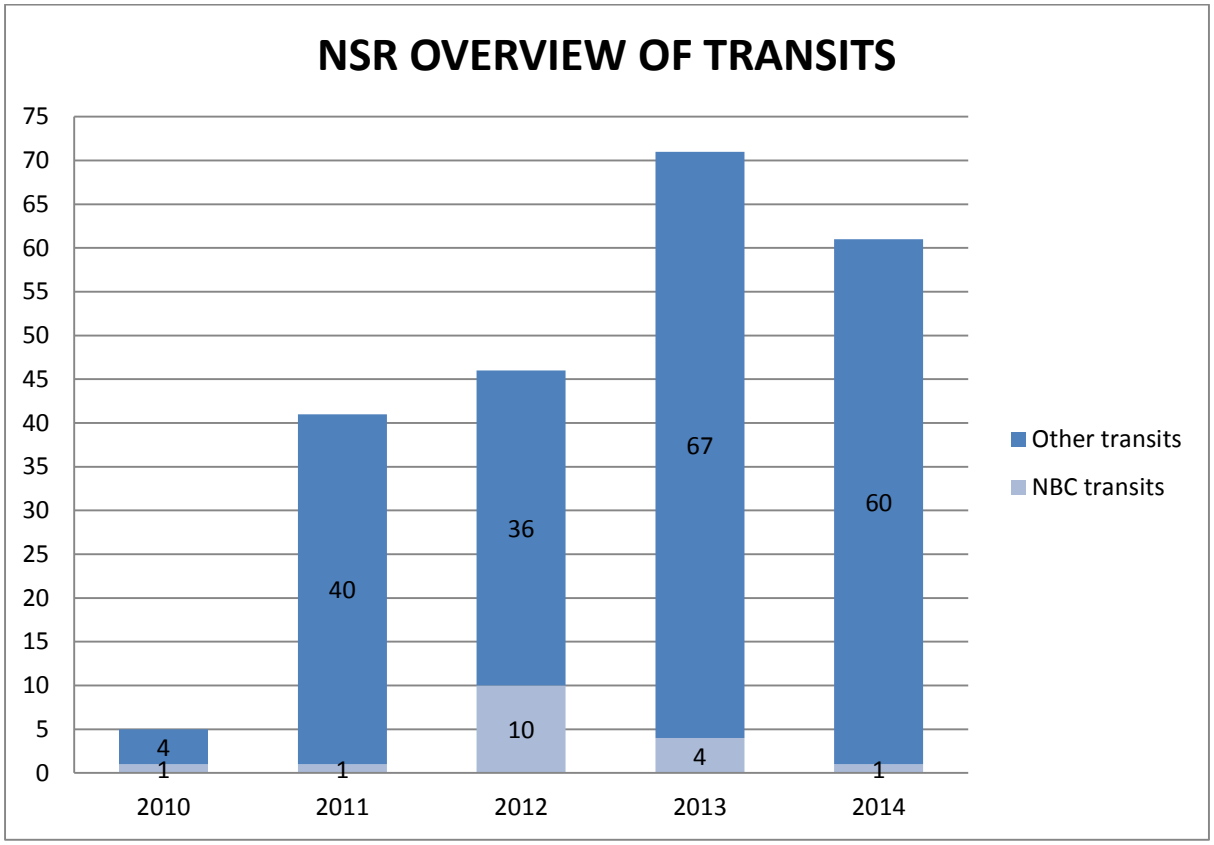
Table 2: Bunker consumption and costs

Costs	Budget		Actual		Estimate Suez Canal
	Nordic Barents	Nordic Odyssey	Nordic Barents	Nordic Odyssey	Nordic Odyssey
Total bunker consumption (ton IFO)	1091,6	1193,5	846,4	914,94	1619,3
Total bunker consumption (ton MDO)	-	-	3,9	0,65	-
Price IFO 3,5% 380 cSt ($/ton)	$431	$621 - $628	$431	$621 - $628	$675
Price MDO 0,1% ($/ton)	$700	$1.050	$700	$1.050	$1.050
Bunker costs (IFO)	$474.034,80	$771.378,16	$364.834,38	$590.688,71	$1.093.047
Bunker costs (MDO)	-	-	$2.730	$650	-
Total bunker costs	**$474.034,80**	**$771.378,16**	**$367.564,38**	**$591.338,71**	**$1.093.047,25**

Table 3: Comparison of bunker consumption and costs

Costs	Estimate Suez Canal	Difference			
	Nordic Odyssey	Nordic Barents Budget / Actual	Nordic Odyssey Budget / Actual	Nordic Odyssey NSR / Suez (Budget)	Nordic Odyssey NSR / Suez (Actual)
Total bunker consumption (ton IFO)	1619,3	-245,2	-278,6	425,8	704,4
Total bunker consumption (ton MDO)	-	-	-	-	-
Price IFO 3,5% 380 cSt ($/ton)	$675				
Price MDO 0,1% ($/ton)	$1.050				
Bunker costs (IFO)	$1.093.047	$109.200,42	$180.689,45	$321.668,84	$502.358,29
Bunker costs (MDO)	-	-	-	-	-
Total bunker costs	**$1.093.047,25**	**-22,5%**	**-23,3%**	**29,4%**	**45,9%**

Historically development in NSR Transits



Above graph shows the official transits according to Northern Sea Route Administration and the actual transits done by Nordic Bulk Carriers A/S.

Application Procedure

Since we started our activities in the Arctic, the application procedure has changed a lot. We started in 2010, being pioneers when there was no formal procedure to get an approval and we spent several months locating the right contact person within the Northern Sea Route Administration.
The two (2) following years we have known who to contact, but the procedure has still been very bureaucratic and slow.

In 2013 it was more formalized. The Federal State Institution "Administration of the Northern Sea Route" was established according to the Order of the Government of Russian Federation (March 15, 2013), to organize navigation in the water area of the Northern Sea Route.

The main targets of the Institution are ensuring safe navigation and protection of marine environment from the pollution in the water area of the Northern Sea Route.
The main functions are the following:

- Obtaining and considering the submitted applications and issuing the permissions for navigation through the Northern Sea Route;
- Issuing the certificates of the ice conventional pilotage on the Northern Sea Route;
- Researching weather, ice, navigational and other conditions on the Northern Sea Route;
- Coordination of installation of navigational aids and harmonization of regions to carry out hydrographic survey operations on the Northern Sea Route;
- Assistance in the organization of search and rescue operations in the water area of the Northern Sea Route;
- Assistance in eliminating the consequences of pollution from vessels of harmful substances, sewage or garbage;
- Rendering the information services in relation to the water area of the Northern Sea Route, for example, about the organization of navigation, requirements of safe navigation and others;
- Making recommendations about development of routes of navigation and using icebreaking fleet in the water area of the Northern Sea Route, ice and navigational conditions there;
- Timely data retrieval from Russian hydrometeorological service about hydrometeorological forecast and ice analysis.

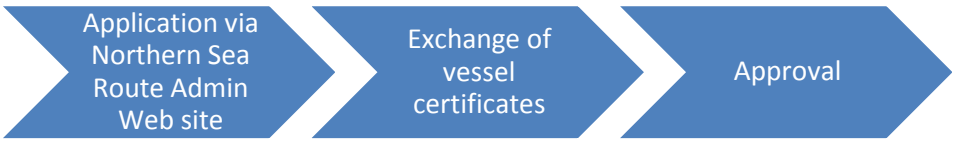
These new targets have changed the procedure a lot. Applications are now made online and the approval procedure is much more harmonized and fast.

The Old Procedure

2010-2012 – Time frame: 3-4 months

The New Procedure

2013-2015 – Time frame: 2-3 weeks



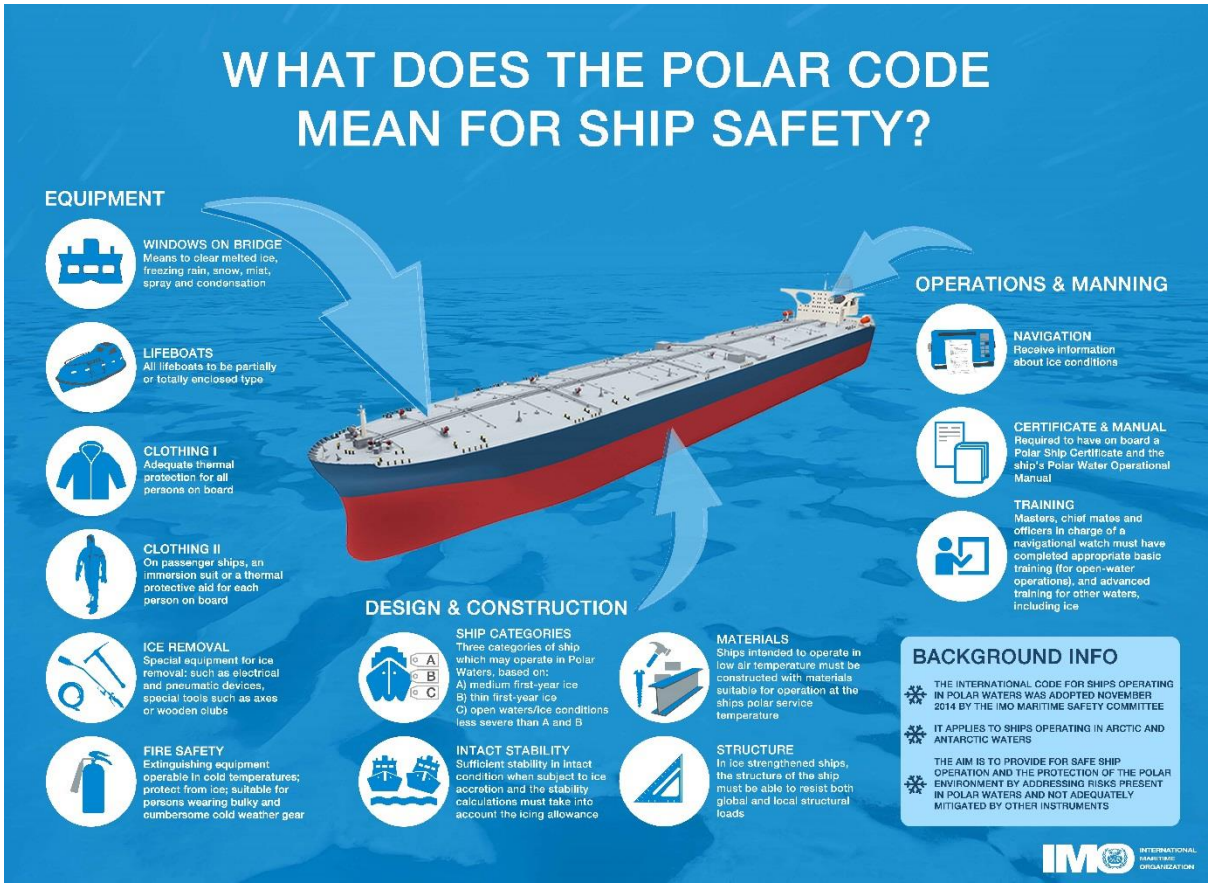
Insurance issues

This is the official approval procedure towards the authorities, but our biggest challenge has always been insurance – to get approval and enter into an undiscovered area. In 2010 we spend lots of time convincing our insurance providers to approve our transit and insure it. We had several meetings and finally got the approval, but with a big premium. Since then it has been slightly easier, but it is still very time consuming. The insurance companies have no record of the Arctic and these approvals are being handled separately.

The future – any request for improvements?

The past five (5) years have learned us a lot about ice in the Arctic, but it is still too early to give a clear picture of the annual ice conditions. The same applies to the rules and regulations. We are all waiting for the Polar Code, which is scheduled to go into force in 2017. The Polar Code will set the overall guidelines for Arctic shipping, but it is too early to comment on the impact and also to select which countries whom will support and acknowledge its content.

Below is a picture showing the Polar Code's impact according to IMO, which we believe is a good start, but the final result is a light version of the originally idea. Environment groups have already claimed that IMO have failed to address key issues – like the ban for heavy fuel, which is already in force in Central Europe, Baltic Sea, USA and Canada in the so called ECA Zones – Emission Control Areas (see separate graph below)



From a ship owner's prospective the impact can be seen in two (2) ways:

1) The ice trading shipping market is already dominated with companies with ice experience from other areas, like Canada, Bay of Bothnia and Greenland – they already operate with ice classed vessels. For them the rules will have a very limited impact – they have the right equipment (vessels) and can continue without major complications.

2) If ice trading is a new business opportunity for a shipping company, the Polar Code has made the barrier of entry more difficult – there are more rules and regulations, but they have been standardized and thereby more transparent.

It is important to highlight that the impact can change from shipping segment to segment, cruise ships have other issues with passenger safety, lack of infrastructure, etc.These issues do not have the same impact on dry bulk for instance.
For the same reason the final result of the Polar Code is very wide. Many nations have to find a common ground and many segments need to be aligned. We expect and hope that 2nd or 3rd version will be more strict – despite the fact that we as ship owners must comply with the rules, the same rules are also there to protect us, against competition from companies with less sophisticated equipment.

Copenhagen, February 2015

Christian Bonfils, Managing Director
Nordic Bulk Carriers A/S

Sources:

DNV GL www.dnvgl.com
IMO www.imo.org
American Nautical Services www.amnautical.com
Northern Sea route Information office www.arctic-lio.com/nsr_nsra

ECA Zone map: