

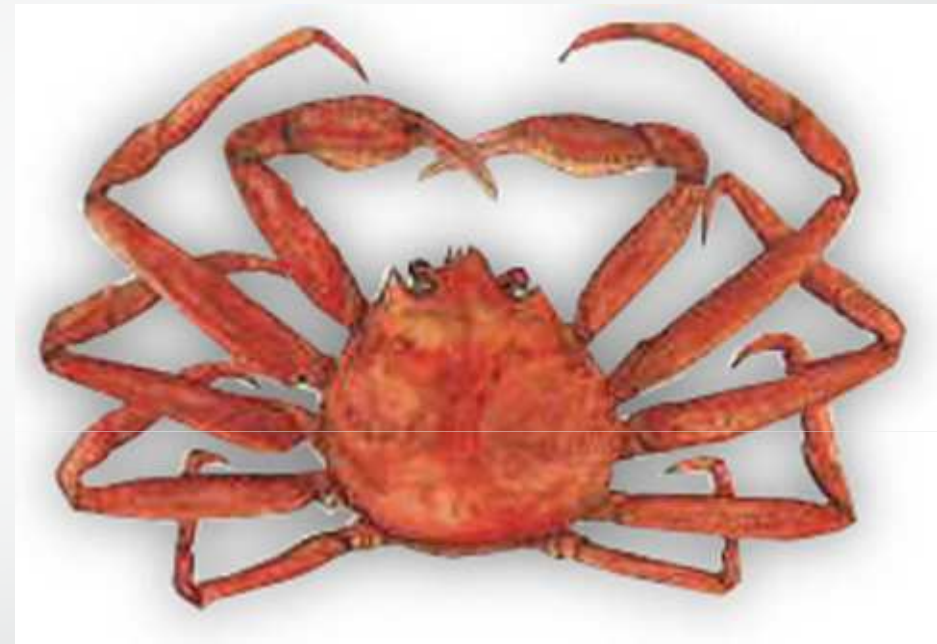
# Position on crab industry and fishing in the Svalbard zone.

Joint Position of all EU companies involved into snow crab  
fishery in Barents Sea .

Prepared by JCS Arctic Fishing

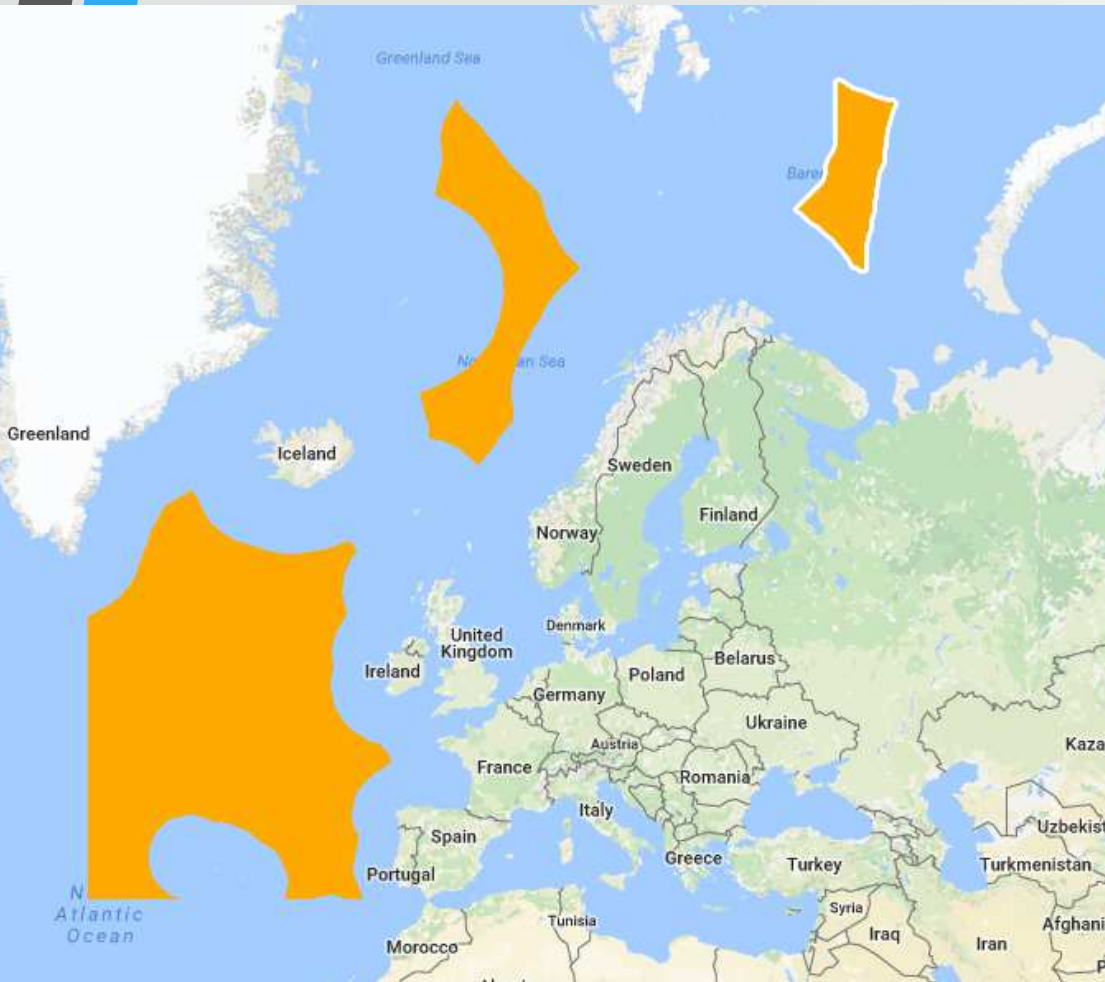
# Snow crab, *Chionoecetes opilio*

- Snow crab (*Chionoecetes opilio*) – is a new invasive crab species becoming an important and potentially dangerous player in the Barents Sea ecosystem. “The snow crab (*Chionoecetes opilio*) is the second and most recent large non-native decapod (crustacean of the order Decapoda, such as a shrimp, crab, or lobster) that has become invasive to the Barents Sea, in addition to the red king crab.



The snow crab is naturally distributed in the north Pacific, the Sea of Japan, in northwest Atlantic, and in coastal areas of eastern Canada and Greenland and it is cryptic how it entered the Barents Sea. (ICES CM 2014/F:04)

# The beginning



- Arctic Fishing and other EU vessels were the ones that discovered and started crab fishery in NEAFC RA following the confirmation by NEAFC that such fishing can be conducted with national permits and notification to NEAFC. EU vessels involved in this fishery were notified by EC to NEAFC for 2015-2016. The EU crab fleet in the area is the important player ranked same as Russian and Norwegian. The vessels involved in snow crab fishery are: (year of start fishing)
  - Lithuania: Karalius (2014) Juros Vilkas (2014) Zalgiris (2014)
  - Latvia: Solvita (2014) Solveiga (2014) Saldus (2014) Senator (2015) Kalmar (2014) Dubna (2015) Valka (2015) Memele (2015)
  - Spain: Adexe Primero (2013)

**Figure 1.** The map of NEAFC regulatory areas and all closures including NEAFC RA 3 (XBS/Loophole) (indicated by white color).

# NEAFC RA<sub>3</sub>

- The snow crab fishery in NEAFC RA was constantly affected by efforts by Norway and Russia to limit the participation of EU vessels in this fishery despite the fact that it was conducted in international waters that belong to NEAFC regulatory area. Sedentary species are included into scope of NEAFC managed resources. Nevertheless, in 2015 both Norway and Russia objected exploratory fishing applications for new bottom fishery area from Lithuania, Latvia and Spain, supported by their national scientific institutions. Those objections were based on the shelf resources regulation principles established by UNCLOS. Despite the fact that up to the date Russia has not fulfilled its requirements by UNCLOS to confirm its extended shelf in Barents sea, on Sep 2 it informed EU that based on its domestic regulation it will enforce Russian rules in the international NEAFC waters immediately as it considers it now as Russian continental shelf. Same did Norway back in January 2016. On Sep 4 EU crabbers had to leave the area and halt all operation under the threat of Russian arrest.
- From that date all EU crabbers stay in port and experience a severe economic impact. The perspectives of solving this issue either by dialog of EC with Russia and/or Norway seem unclear.

# Regulatory area 3 and VME zone



According to the "Recommendation on the protection of vulnerable marine ecosystems in the NEAFC Regulatory Area" (Rec 19 2014: Protection of VME in NEAFC RA), NEAFC closed part of Regulatory Area 3 for fishing and left it only for scientific research.

JSC "Arctic Fishing" ordered scientific study („Potential impact of crustacean traps on benthic habitats and species of vulnerable marine ecosystems (VME) in the Barents Sea“) in Lithuanian University „Klaipėdos Universitetas“. The study proved that crab pot fishing gear does no damage to the bottom environment and confirmed possibilities to conduct exploratory crab pot fishing In accordance with "Recommendation on the protection of vulnerable marine ecosystems in the NEAFC Regulatory Area" article 6.6 (Rec 19 2014: Protection of VME in NEAFC RA)

Still, we did not get the license for exploratory fishing and were forced to keep crab fishing on the reduced NEAFC regulated area.

**Figure 2.** The map of NEAFC regulatory area 3 (Loophole) (indicated by black color) and areas closed to protect VME, BAR1 (indicated by red color).

# Svalbard treaty

- By 9 February 1920 the Spitsbergen Treaty was signed in Paris during the Versailles negotiations after World War I. In this treaty, international diplomacy recognized Norwegian sovereignty (the Norwegian administration went in effect by 1925) and other principles relating to Svalbard. All three snow crab catching EU nations are participants of this treaty.

## One of the treaty clause states:

- Non-discrimination: All citizens and all companies of every nation under the treaty allowed to become residents and to have access to Svalbard including the right to fish, hunt or undertake any kind of maritime, industrial, mining or trade activity. The residents of Svalbard must follow Norwegian law though Norwegian authority cannot discriminate against or favor any residents of any given nationality.
- Starting summer 2015 most of Norwegian crabbers moved their activity to Svalbard waters bordering NEAFC RA as snow crab expanded there. This area is often seen as an extension to NEAFC RA crab fishing grounds but it is governed by completely different regime.

- The most likely future distribution of this Arctic cold water species suggests that most of these catches will be in the east part of the Svalbard zone which still probably will be rather cold even in times of global warming (Hvingel and Sundet, 2014). *Misun O.A., et al., Norwegian fisheries in the Svalbard zone since 1980. Regulations, profitability and warming waters affect landings, Polar Science (2016), <http://dx.doi.org/10.1016/j.polar.2016.02.001>*
- Assessment and management of invasive crab stocks in the Barents Sea. Workshop, Stockholm, 3-6 September 2014, Spatial issues in Arctic Marine Resource Governance, Sergey Bakanov Polar Research Institute (PINRO), Murmansk, Russia

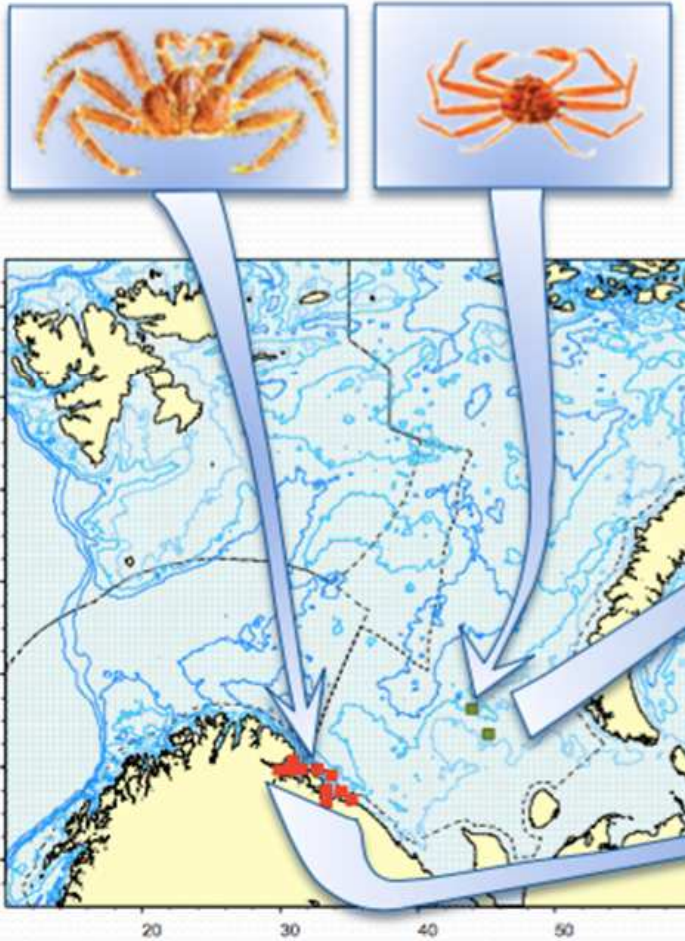


# Occurrence of commercial crabs in the Barents Sea

## No crabs before 1965

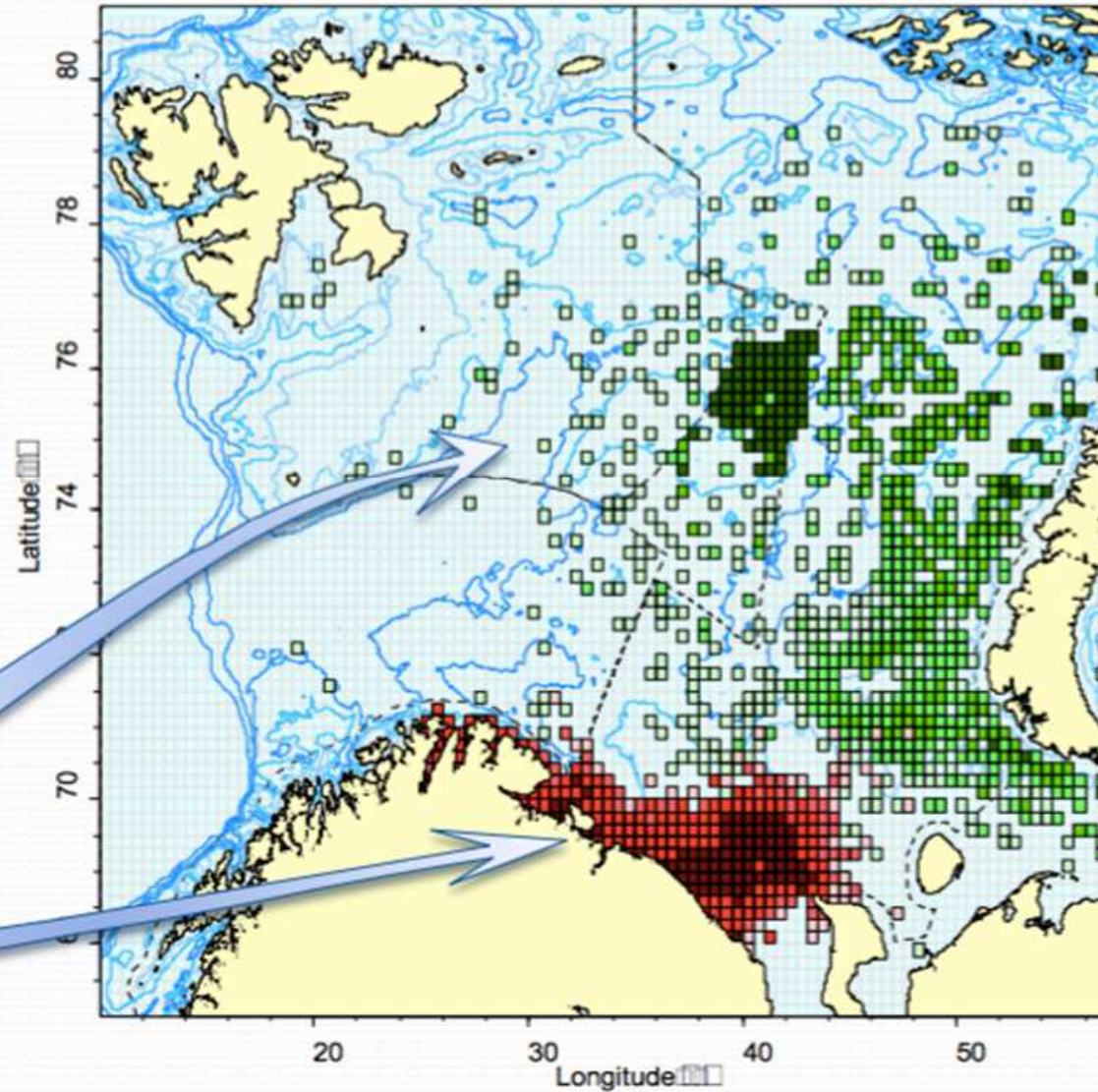
Red king crab was introduced deliberately from the Pacific Region in the 1960s.

The origin of snow crab are still unclear and may be associated either with an incidental transport of larvae in the ballast water or with the natural migration.



Data 1992 - 1996

## Red- king crab, Green- snow crab

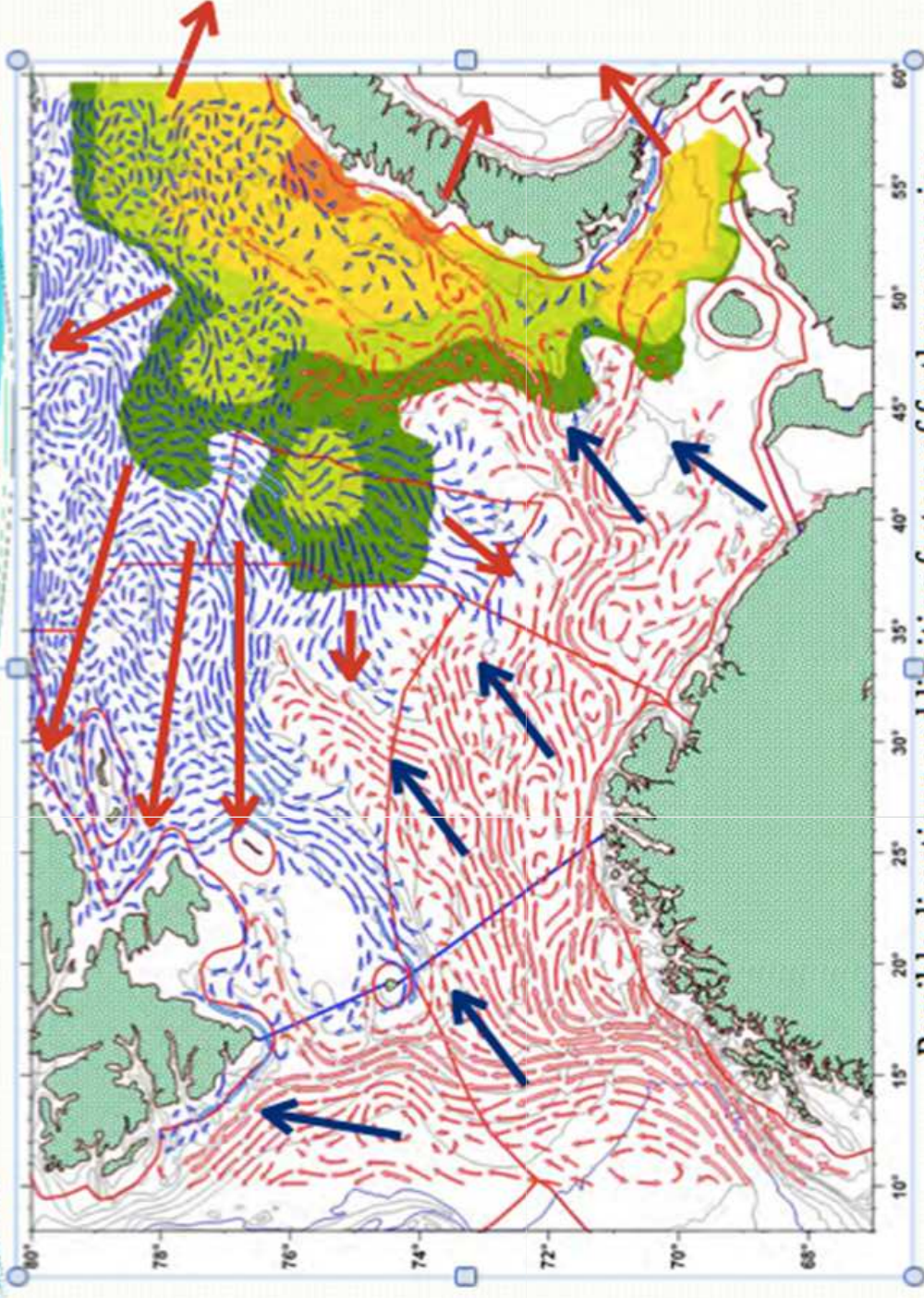


Data 2005 - 2014



# Environmental factors of spreading

## Snow crab



Possible directions and limiting factors of further expansion

**Positive factors:**

- 1) Depth range ;
- 2) Currents system;
- 1) Temperature of north and north-east parts  
(Area of Cold Water < 2°C);
- 4) Food availability.

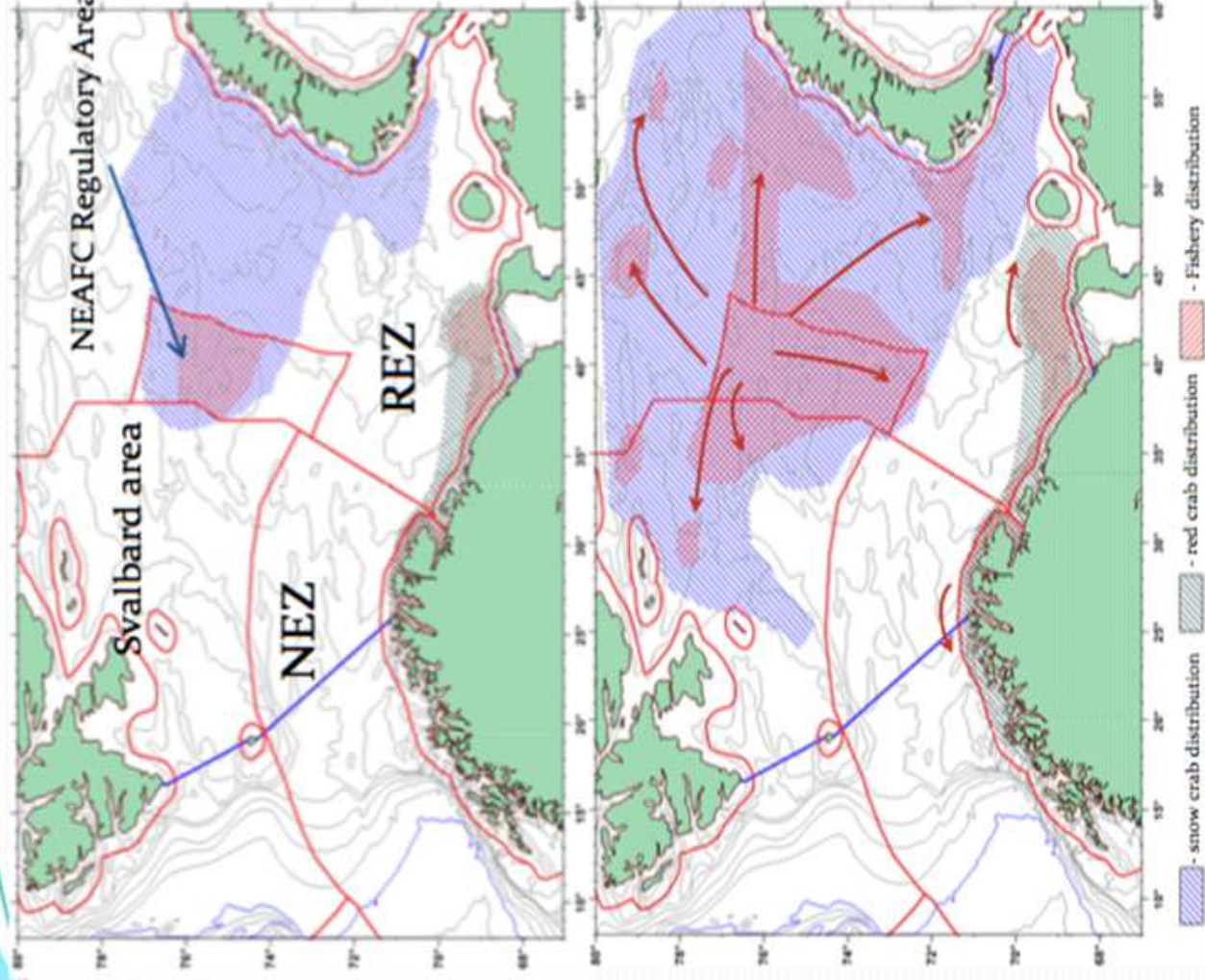


**Positive factors:**

- 1) Temperature of south and west parts;
- 2) Red king crab distribution.



# Snow and king crab commercial stock distribution and fishery in the Barents Sea in 2013-2014 and nearest future



## 2013-2014

### Snow crab

1. Snow crab population in the Barents Sea is in active phase acclimatization;
2. Increasing of area and abundance;
3. Increasing of fishery activity
4. Different area of management (free fishing, closed);

### Red king crab

1. Positive population dynamic and moderate (reasonable) level of exploitation ;
2. Stable area of distribution and low probability of further expansion;
3. Different area of management (free fishing, TAC regulated closed);
4. Different spatial allocation of fishing intensity;

## 2023-2024

### Snow crab

1. Further expansion, increasing of area and abundance are expected;
2. Largest potential habitat (most expansive cold water area in a warm period in the Barents Sea);
3. Different area of management (REZ, NEZ, etc.);
4. International fishery. Annual catch can be around 50-100 ktons.

### Red king crab

1. No significant changing in area of distribution;
2. Possible expansion in east and west directions;
3. Increasing of fishery activity is not so considerable as for snow crab. Annual catch can be around 10 ktons.

# Fishing in Svalbard

- Norway formally introduced ban for snow crab catching in EEZ, SFPZ, continental shelf and international waters, but in year 2016 granted exclusions to 20 Norwegian vessels
- Under current regulations, only Norwegian vessels can be subject for such exclusion which contradicts with the EU position presented in the Note verbale.
- Norwegian vessels are engaged in a commercial fishing of snow crab from 2014 in NEAFC and SFPZ, but starting July 2015 nearly all fishing efforts by Norwegian crabs is concentrated in the Svalbard zone.
- Despite 20 issued snow crab licenses, the number of boats actually engaged in fishing of SC is smaller:

• 2014	9 boats	1,846t
• 2105	11 boats	3,658t
• 2016 Jan 1 – Nov 07	10 boats	4,510t
- Note that only 5 boats are catching on regular basis in 2016 ( Prowess, Rostnesvaag, Arctic Pioneer, Northeastern, Polaris) This gives average catches of 902 tons per vessel. By the end of this year it may reach the level of 1000-1200 tone per vessel.



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### Fished species

The report shows quantity delivered on the contract note for the selected period and selected commodity code. In addition can be specified for a view only catches from Norwegian vessels and / or whether a just want to see numbers of catches north of the 62nd parallel.

Accessories Details shows totals for utensils and the total for all tools.

	ROUND WEIGHT (KG)	ANT. VESSELS
snow crab	4509642.6	10
<b>TOTAL</b>	<b>4509642.6</b>	<b>10</b>

View vehicle distribution?	N
From the date of catch	01-JAN-16
Tom capture date (optional)	07-NOV-16
fish species	2536
Only Norwegian vessels?	J
Only north of 62 br.grad?	J
From vessel length	0
Tom vessel length	999

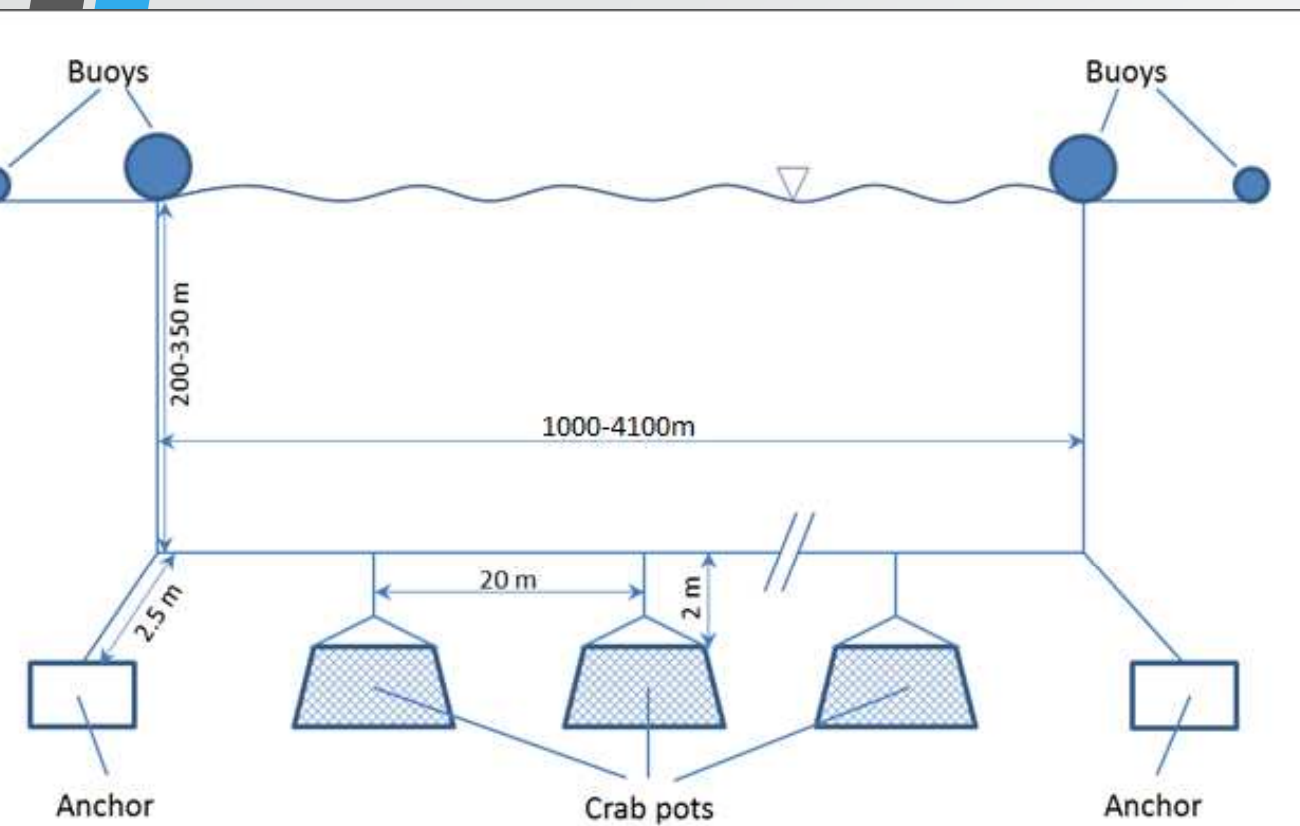


# Communication with organizations

Crab fishing vessels were submitting needed reports the catch and accurate coordinates, according to (NEAFC Scheme of Control and Enforcement 2014) though it wasn't obligatory even under the recommendations of Lithuanian Fisheries service under the Ministry of Agriculture of the Republic of Lithuania. The crab fishing companies of the European Union are ready to be submitting the needed reports under Agreed record of Conclusions of Fisheries Consultations between Norway and the European Union on Electronic Exchange of catch and activity data Brussels, 29 September 2011 (Ref. Ares(2011)1031948 - 29/09/2011) when fishing in the Svalbard zone.

Fishing companies agree to provide a researcher onboard the vessels or for scientific information upon the request from the EU.

# Crab fishing pots



All fishing gear when left at sea is marked with exact coordinates and vessel reports this information to all interested parties. The buoys are always marked in bright colors. Regular exchange (2-4 times per day) of gear position information among all boats in the area is done via e-mail. Coordination between crabbers and trawlers masters regarding planned time and place of their efforts.

The fishing gear consists of the line (approx. from 1000m to 4100 m long), held by two anchors (weight ~ 100 kg, dimensions ~850x1850x1850 mm). Along the main line from 50 to 200 pots are attached by 2 m line in 20 m intervals. The diameter of pots is 1050 mm, height – 600 mm, weight – 100 kg. The net is made from polypropylene, mesh 60x60 mm, the size of degradable escape vent 400x500 mm.