

# ARICE – Arctic Research Icebreaker Consortium for Europe

## A strategy for meeting the needs for marine research in the Arctic



21 partners from Europe,  
USA and Canada,  
„Letters of support“ from  
IASC, ISAC and SAON

Initiated & coordinated by:



## Reasons for establishing ARICE

- Urgent requirement to capture **new data and fill gaps** in scientific understanding and knowledge about rapid change in the Arctic Ocean
- Science operations in the High Arctic are **costly, and technologically and logistically demanding**
- Many of the vessels have to **split their efforts** between the Arctic and the Southern Ocean and are only available in the Arctic during the **summer months**,
- Plans are emerging to build a new German polar research vessel **R/V POLARSTERN 2**, whilst continuing to operate R/V POLARSTERN in the Arctic for an additional 5 years
- The Swedish polar research vessel R/V ODEN is under **a new 10-year agreement** to make the ship available to researchers from May to December each year

# The objectives of ARICE



**Scientific, political and financial commitments are needed to create an European/International network for joint research icebreaker operations using existing ships**

## . The primary objectives are to:

- Achieve a year-round availability of heavy icebreakers in the Arctic by operating Oden and Polarstern in an European/International consortium,
- Increase the coordination of available

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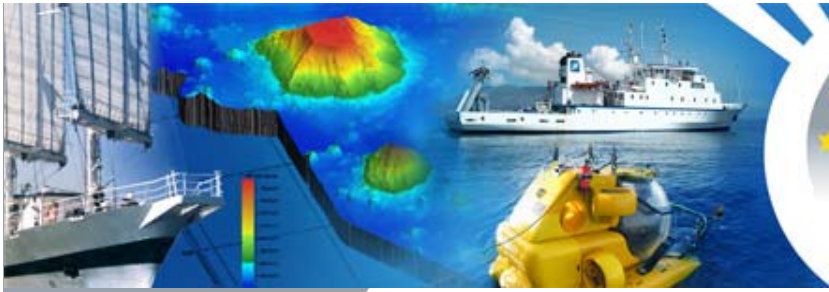
- to concentrate today's heterogenous national polar research strategies into a coherent science planning based on an open, transparent international consensus.

## Towards a call for TNA in Horizon 2020

### Progress & next steps:

Representatives from the EC informed us that a Horizon2020 call for TNA to icebreakers and ice-strengthened vessels will probably be opened within the 2016/2017 work programme. This could be one initial step for the implementation of ARICE,

ESFRI will update its roadmap in 2016, the consultation starts now. We have to discuss if ARICE should become part of the ESFRI Roadmap to proceed with the implementation as an European Research Infrastructure



# Eurofleets



New operational steps  
towards an alliance of  
European research fleets

## Polar components in EUROFLEETS2

Flagship initiative for Polar Access (WP3)  
Polar & Subpolar Call for Ship-time (WP5)



Eurofleets

[www.eurofleets.eu](http://www.eurofleets.eu)



## EUROFLEETS2 calls for proposals

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- **Regional 1- Polar & Subpolar Call -closed**
  - Call opened: end of March 2013
  - Call deadline: Friday 24<sup>th</sup> of May 2013
- **Super-Integration Call -closed**
  - Expression of Interest: from end of March until Wed. 15<sup>th</sup> of May
  - Call opened: Friday 14<sup>th</sup> of June 2013
  - Call deadline: Monday 16<sup>th</sup> of September 2013
- **Embarked Equipment Call -closed**
  - Call opened: Friday 14<sup>th</sup> of June 2013
  - Call deadline: Monday 16<sup>th</sup> of September 2013



## EUROFLEETS2 calls for proposals

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- **Regional 2-** Polar/Subpolar, North Atlantic, North Sea, English Channel, Celtic Sea, Baltic Sea and Bay of Biscay - - **closed**
  - Call opened: 3<sup>rd</sup> December 2013
  - Call deadline: Thursday 27<sup>th</sup> of March 2014
- **Regional 3-** Mediterranean Sea, Black Sea, Red Sea
  - Call opens: June 2014?
  - Call deadline: End of August 2014?







# 1. Regional 1 call: Polar and Subpolar

- **Polar & Subpolar Call (Regional 1)**

EUROFLEETS2 Ship-time application Calls 2013 – Veronica.Willmott@awi.de – Logout

Assignment Reviewer Export Outlines Proposals Overview pt(outline)\* Verwaltung eingereicherter Skizzen

Import rejected approved/funded submitted in progress

Image	Ship Name	Country	Project ID	Project Name	Value	Status
 3x	G.O Sars	Denmark	EUROFLEETS13-005	STEP	0 €	Submitted
	Hespérides	Spain	CNRS-CEA-UVSQ,		0 €	Submitted
	Polarstern	Germany			0 €	Submitted
	Sanna	Denmark			0 €	Submitted

Additional details for the first row (G.O Sars):  
EUROFLEETS13-006 CAOS Ifremer, 0 €



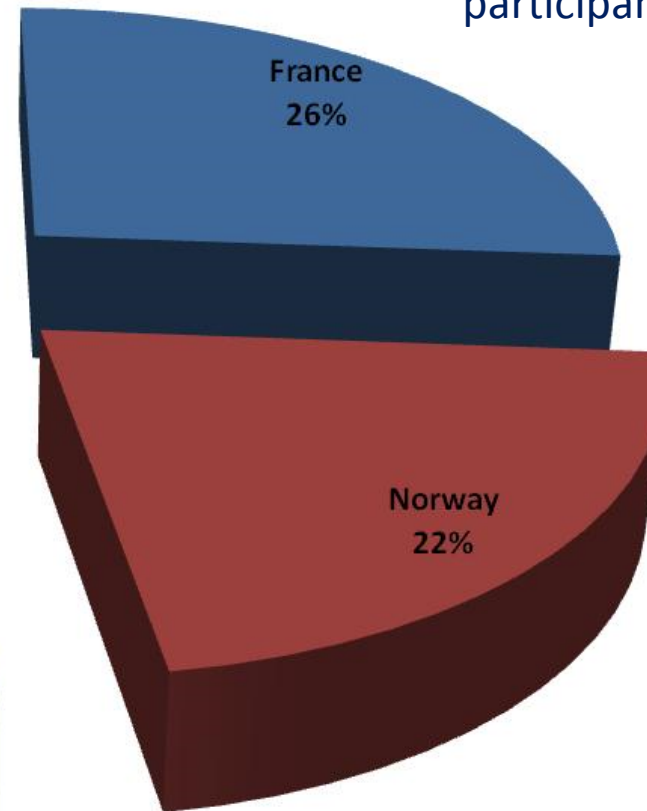
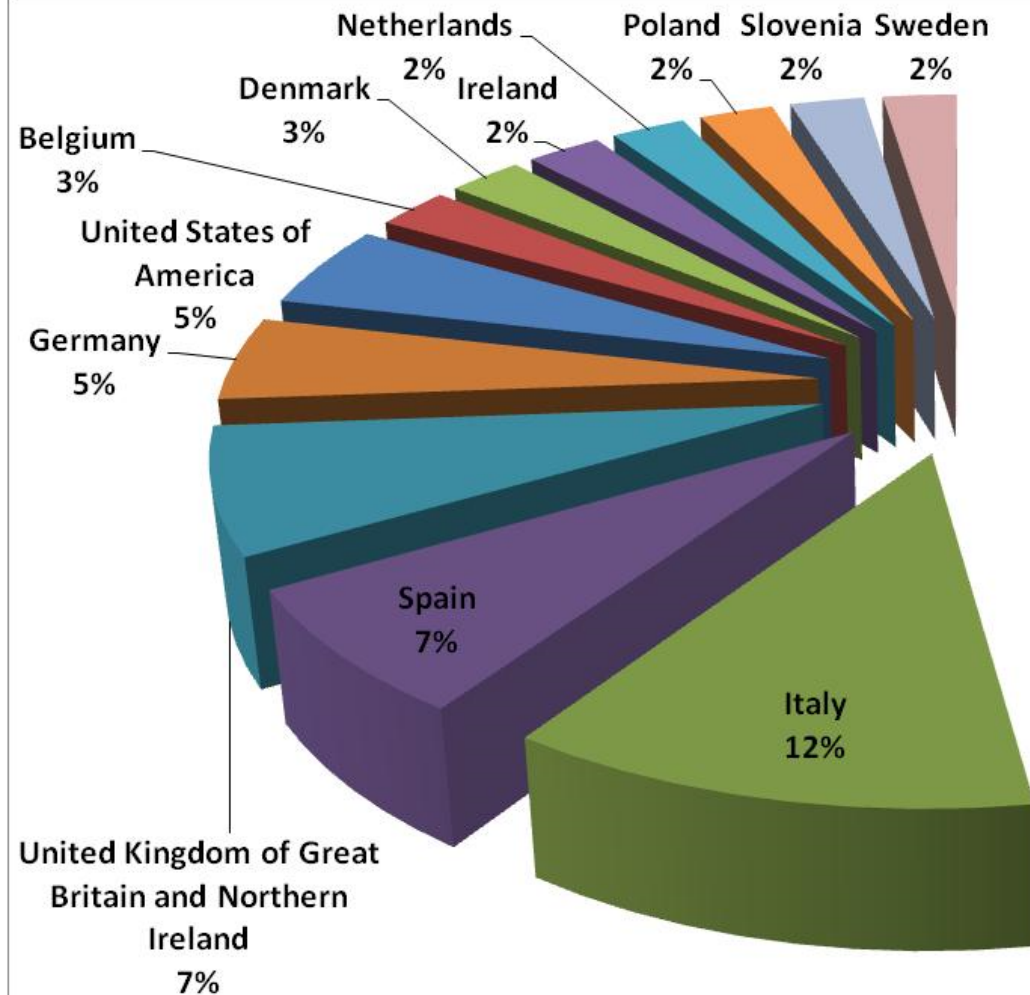


# 1. Regional 1 call: Polar and Subpolar

## Applicants' nationality

6 proposals  
42 partners

2 industry  
participants



# 1. Regional 1 call: Polar and Subpolar

1st SRP meeting: Brussels, 4<sup>th</sup> of September 2013.

## Proposals recommended for funding

RV	Application Ref No	Lead Organisation	Cruise Name	Scientific Ranking	Timing requested	Timing offered by RV	Duration
Sanna	EF13_001	Royal Netherlands Institute for Sea Research (NIOZ)	ORCA	A1	summer	Merged with another cruise: 7-14 August	8
G.O. Sars	EF13_002	OGS (Istituto Nazionale di Oceanografia e di Geofisica Sperimentale)	PREPARED	A1	summer (July-August)	5th -15th June 2014	11
G.O. Sars	EF13_004	Galway-Mayo Institute of Technology	PolarPlastics (student project)	A1	Assigned to PREPARED cruise		2



### 3. Regional 2 Call: Polar/Subpolar, North Atlantic, North Sea, English Channel, Celtic Sea, Baltic Sea and Bay of Biscay

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**First Results:** 22 proposals have been submitted

10 Different vessels have been requested

2 pieces of equipment (HDTV camera (1) & ROV Liporus (3) have been requested

Working Areas:


- Arctic 5 proposals
- Antarctic 4 proposals
- North Atlantic 6 proposals
- Gulf of Cadiz 3 proposals
- Azores 1 proposal
- Baltic 1 proposals
- North Sea 2 proposals

**PI's from 12 different nations: UK (6), Spain (4), Germany (2) Norway (2), Portugal, Finland, Belgium, Malta, Italy, France, Denmark and the Netherlands (1 each).**

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### 3. Regional 2 Call: Requested Vessels



 OGS-Explora


8 proposals




 Celtic Explorer

3 proposals



 Polarstern



 Hespérides



 Pourquoi Pas?

2 proposals each

1 proposal each



 Salme



 Sarmiento de Gamboa



 Marion Dufresne



 Belgica



 Celtic Voyager





# Heavy icebreakers for research in the Arctic



## D.3.1 Status and foreseeable evolution of the European and International Polar Research Fleets & equipment



# European ice-margin vessels



Sanna



Magnus Heinason



Lance



G.O. Sars



James Clark Ross



Maria S. Merian



Hespérides



OGS Explora



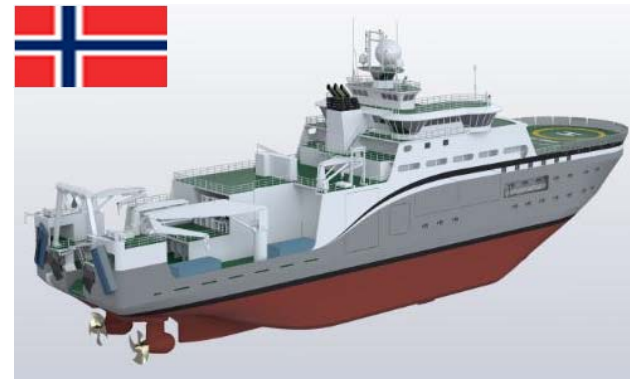
**D.3.1 Status and foreseeable evolution of the European and International Polar Research Fleets & equipment**



# Planned new icebreakers/ice-margin vessels



Polarstern II (2018/2019)



Kronprins Haakon (2015)



CCGS John G. Diefenbaker (2017)



Sikuliaq (2014)



(no name) (2015)

# Polar Research Vessels Perspective at Horizon 2020

## Heavy Icebreakers

