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THE ARCTIC, AN OCEAN

INTRODUCTION

Background

Cooperation between the eight Arctic states is a recent initiative stemming from a shared

political FRPPLWPHQW WR RYHUFRPH WKH VWUDWHJLF SDVW RI WKH IRU

that are directly and indirectly concerned. All of the potential users of the Arctic Ocean are responsible for addressing the challenges raised by the sensitivity of the environment and the low resilience of Arctic marine ecosystems to human activity in particular.

Several states outside of the Arctic region, in Europe and in Asia, have set out their interests and responsibilities in Arctic strategy documents, and the European Union, which includes three members of the Arctic Council and seven countries with observer status, has stated its interests in an integrated policy for the Arctic.

Ultimately, of the different energy parameters (role of unconventional hydrocarbons, global energy demand, etc.), political parameters (Arctic 2020 strategy of the Russian Federation, US Chairmanship of the Arctic Council 2015-2017, etc.) and environmental parameters that are shaping the emergence of the Arctic as a geopolitical and geoeconomic region, climate and environmental change in this area is indisputably the most predictable parameter: the Arctic Ocean should be ice-free during the summer season sometime in the coming decades.

National context

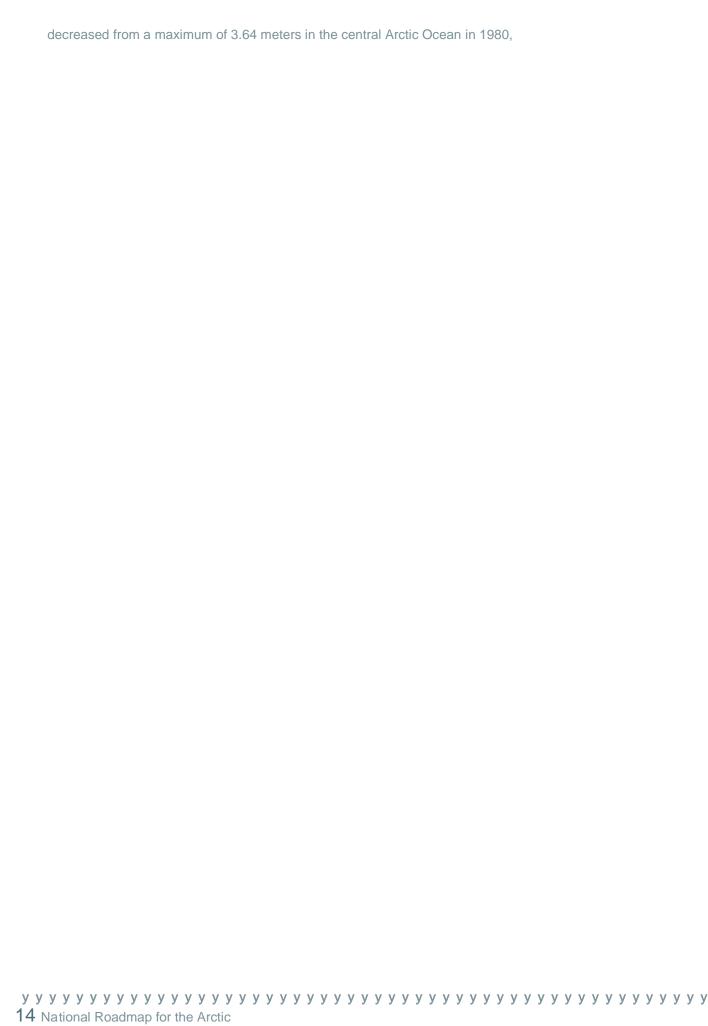
The warning sounded during the International Polar Year 2007-2008 was received loud and clear in France because of the country's extensive tradition of polar exploration and scientific research. In November 2008, France organised an international conference on the Arctic in Monaco as part of the French Presidency of the EU. The conference called for the creation of an Arctic scientific observatory to ensure national coordination of French research on the Arctic. Following a decision made by the Ministry of Higher Education and Research, this initiative was launched in 2010 by the National Scientific Research Centre, which coordinates nearly 400 researchers in earth sciences, environmental science and human and social sciences, in conjunction with the French Paul-Emile Victor Polar Institute (IPEV).

In addition to its scientific interest in the Arctic, France has also expressed ecological ethics concerns about the region in its "Grenelle" environment project (1 Whereas the \$UFWLF UHJLRQ SOD\V D NH\ UROH LQ WKH RYHUDOO EDODQFH RI W the aim of protecting the Arctic environment, France will promote or support adaptation by the competent international bodies of international regulations to the new uses of the \$UFWLF 2FHDQ PDGH SRVVLEOH WKURXJKAct QOPO 9-960 of H3 Qaugust FHVVLELOLV 2009, Article 2).

France already has political and economic interests in the Arctic (Total, Engie, Technip, Thalès, etc.) which are bound to grow. The issues and challenges of the Arctic involve all of the countries that are potential users of the Arctic Ocean.

In December 2009, the Blue Book explained that 3 DSSRLQWLQJ D SRODU DPEDVVDGRU ZI
)UDQFH¶V FRPPLWPHQW WR FRQWULEXWLQJ WR DQ LQWHJUDWHG VXVV
UHJLRQ ZKHUH WKH HFRV\VWHP LV SDUWLFXODUO\ IUDJLOH´ DQG WKDW

THE DECLINE OF ARCTI C SEA ICE



advisory effort primarily carried out through six permanent working groups and ad-hoc task forces.

Non-Arctic states must engage in research in the Arctic to obtain official observer status in the Arctic Council. France applied for and obtained in 2000 observer status in the Arctic Council on the strength of its tradition of polar exploration and expeditions. This status is reviewed periodically on the basis of VFLHQWLILF FRQWULEXWLRQV 2EVH main means of participation is their contribution of expertise to the working groups.

OUDQFH¶V JURZLQJ LQWHUHVW LQ WKH QHZ VFLHQWLILF HQYLURQPH Arctic, and that of the international community, gave rise to a national initiative to coordinate Arctic research. This Arctic initiative is overseen by France's National Centre for Scientific Research and complements the work of the Paul-Emile Victor Polar Institute.

A recent long-range pla QQLQJ H[HUFLVH LQYROYLQJ DOO RI)UDQFH¶V VFLHQ and major research bodies who are interested in scientific issues in the Arctic revealed the abundance and excellence of French Arctic research, but also its lack of coordination.

The system based on the Arctic initiative and the Paul-Emile Victor Polar Institute is bound to play a more structural role in the coming years at both the national and international levels, as long as additional resources are allocated to it.

The excellence RI)UDQFH¶V SRODU VFLHQWLILF UHVHDUFK DQG LWV LQW research constitute a major asset of French foreign policy in the Arctic and underpin its legitimacy.

- Build up France's scientific role in the Arctic Council working groups and task forces, by bringing in French human and social science specialists in particular.
- È Ensure that France participates fully in international scientific organisations, such as the International Arctic Science Committee.
- In calls for proposals, discussion groups and the preparation of calls for projects,

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 Arctic.
- Develop the European aspects (cooperation between Arctic and non-Arctic European Union countries) of French scientific research on the Arctic, as part of the European Union research and innovation programme (Horizon 2020), and at the institutional level, through the European Polar Board (EPB) and its initiatives (e.g. the EU-PolarNet project).
- Develop and enhance partnerships with scientific organisations from the Arctic Ocean coastal states.
- 3 URPRWH) UDQFH¶V VFLHQWLILF H[SHUWLVH LQ KXPDQ DQG teaching of Arctic languages in France to the Arctic states.
- Develop research contracts with businesses that may be interested by economic opportunities in the Arctic (transport, aerospace, shipping, energy, mineral resources, insurance, communications, health).
- All of these initiatives require development of French Arctic research with strong institutional and scientific support:
 - allocating operating grants for the coordination structure based on the Arctic project and the Paul-Emile Victor Polar Institute;
 - placing greater priority on the main scientific issues relating to the Arctic defined by the Arctic project in the other research funding agencies, including the National Agency for Research;
 - increasing funding for the Paul-Emile Victor Polar Institute to support scientific programmes and maintain national infrastructures in the Arctic.

THE ARCTIC, A REGION WITH MANY BOUNDARIES

The Arctic is defined by a number of different geographical and physical criteria: the

terms in order to delimit the priority economic development zones as part of the

Northern Ostrobothnia) and the Swedish North (Norrbotten and Västerbotten) is near the Arctic Circle. In 2013, the Russian Arctic was redefined in administrative

02

Economic opportunities and cooperation

Navigation conditions are restrictive and dangerous:

- x extreme conditions: ice floes, fog, imprecise charts;
- x lack of search and rescue infrastructure and lack of deep-water ports;
- x lack of international shipping hubs or intermediate markets since Russia is the only country with a coast on the Northeast Passage;
- added cost of navigation in polar waters: more expensive shipbuilding and crew training requirements, need for ice-breakers, high insurance costs;
- x commercial constraints: no guarantee of shipping times because of the variability of ice conditions, summer-only route;
- x uncertain return on operating capital, since ship safety and environmental protection requirements that are especially difficult to implement make it hard for the Northeast Passage to be in the short to medium term a serious competitor for the Suez Canal or the Strait of Malacca. However, the development of projects to exploit the Arcti F¶V QDWXUDO UHVRXUFHV DUH ERXQG WR OHDG WR LQFUHDVHG V resources and logistical support. Consequently, local and regional shipping, particularly to mining platforms, mines and mineral deposits, is bound to grow rapidly. Furthermore, Arctic cruising is booming.

Infrastructures

The challenges of building infrastructure in a region where thawing permafrost (frozen ground) undermines land-based constructions concern the following:oil and gas mining infrastructures:

- x oil and gas mining infrastructure;
- x modernisation of portt.96 Tf 4.56 d iTd 6t gas min11(i)-14(sat7(n)6(11(8/MCID 11 >>BDC 0.243 0.365 0.404 rg

resources in the open sea, such as polar cod, American plaice and European plaice.

Renewable energy and new technologies

In a region where climate change opens up prospects for economic and commercial development, green growth is a crucial issue, relying on renewable energy sources, green technology and investment in innovation. The Arctic is a laboratory for new technologies in information and communication, robotics, automation, airborne systems and sensors.

Tourism

With the opening of Arctic seas during summer, new opportunities have arisen for the tourism industry, particularly polar cruises. Although these may help to raise public awareness, they pose a potential threat to the Arctic ecosystems.

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The Arctic encompasses a wide range of interests that need to be gauged.

French companies present in the Canadian, Norwegian and Russian Arctic

(partial listing)

Canada

- Arey a: uranium exploration project in Nunavut
- Bouygues and Colas : PPP for the renovation of Iqaluit airport
- Canada Rail (Systra) rail infrastructures related to mining
- Ponant: polar cruise company
- GDF Suez : oil and gas
- COFELY Fabricom : platform maintenance
- Technip : underwater engineering
- Nexans : cables
- CGG Veritas :

Norway

Indigenous representation in the Arctic Council

Source : Arctic Council

03

Defence and security issues

THE ARCTIC, A REGION OF COOPERATION

Despite the uncertainty surrounding the prospects for exploiting natural resources and the safe use of Arctic shipping routes that have opened up as a result of rapid changes in the Arctic Ocean, new sovereignty issues have emerged. Although the Arctic coastal states are the first concerned, the problems relating to economic activity, the environment and maritime security require France to give more consideration to the region in terms of its global interests and its responsibilities as part of the international community.

France's membership of the European Union and NATO means that it may have to contribute to maintaining the stability of the Arctic, since it is one of the few countries with the capability to deploy significant resources at such great distances.

Even though the military role of the Arctic has faded into the background since the end of the cold war, it offers room for manoeuvre which has once again become a theatre for FRQWUDGLFWRU\ DPELWLRQV HVSHFLstlandoe0chadoq\estaboq\entitaboq\estaboq\estaboq\enti 5 X V V L D ¶ V SDUWLFLSDWLRQ LQ UHJLRQDO FRRSHUDWLRQ ERGLH programmes means that the Arctic has progressively become a region of cooperation between the eight countries directly concerned. Under the terms of the Ilulissat Declaration of 28 May 2008, these countries made a commitment to peaceful settlement of maritime disputes based on the United Nations Convention on the Law of the Sea of 10 'HFHPEHU KHUHLQDIWHU 3WKH &RQYHQWLRQ′ 7KLV PHDQV

x Marith/aerithrouenbloutado(rd)6)(6(b))-5(aE)-6(g)+30(c)(6≯B2-420C0B260T-378(ta₹2004(8)-45€0(0555-20030661T081485-7 at 3(h)-5mtf64(1-2(/C2_1 9.96 Tf-3(i)-14(me)5(d)-14(e)-5(th)-6(ee5(e)-5(2(w o)-5(f)5(t)-3(h.)6(30)A(t)-3(i) 008 519f g8 ta96 Tf 3_1tf30 00eo r14(t)-tale 3_1d-14(e)6(mfi TD [3(h)-17(e)6()(h-14(me)5(d7-14(e)(at)7())]TJ T* [()17-3(e)u()-(at)7ms.962 [()18 5192-

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Security Forces Roundtable, a group of military representatives from Arctic and non-Arctic states. France is a regular Roundtable participant. With the relevant partners, it is able to highlight the model developed in its national maritime security strategy.

) 5 \$ 1 & (¶ 6 0 \$, 1 '() (1 & AND SECURITY INTERESTS IN THE ARCTIC

At this point, France's main interests in the Arctic primarily concern its economy, security and the environment, rather than military and defence issues. However, any threat to the stability and security of the Arctic, which is a frontier for mining minerals and energy, as well as a future shipping lane between Asia and Europe, would affect our present and future interests. We must ensure the security of our energy supply and, more specifically, our supply of strategic minerals (niobium, tantalum, etc.), which are critical for the high-tech defence sector.

France is allied with the Arctic states as a member of the European Union (Denmark, Finland, Sweden) and the Atlantic Alliance (Canada, United States, Denmark, Iceland, Norway), which means it is concerned by the stability and security of this area that lies between 2,500 and 5,000km from the French coast.

The gradual opening of Arctic shipping routes, the increase in commercial shipping traffic (pleasure cruising and, to a lesser extent, cargo) will involve French ships and French interests. This raises new challenges for France in its capacity as a leading naval power: protection and rescue of ships and passengers, fighting pollution, critical legal issues concerning freedom of navigation, etc.

Lastly, the Arctic Ocean is also a manoeuvre area for navies. In operational terms, France's armed forces must remain able to use the Arctic Ocean for transit of its naval and air forces and, potentially, for naval air force operations.

RECOMMANDATIONS ON SECURITY AND DEFENCE

- Monitor regional political and military developments and develop in-depth understanding of the area:
 - assign French officers to ships belonging to the Arctic coastal states;
 - work with other ministries to study the feasibility of sending oceanographic and hydrographic ships on a mission to the Arctic Ocean;
 - offer opportunities for scientists to embark and conduct experiments on the vessels deployed;
 - step up the exchange of oceanographic information between the French navy and its foreign counterparts, possibly by offering information in our possession about other regions of the world.
- Support our economic and industrial interests:
 - maintain the technological understanding and know-how needed to design Arctic equipment with due consideration of the operational needs of the armed forces; capitalise on feedback from the use of French and foreign equipment;
 - organise periodic meetings between players from the public and private sectors, and players from the defence, energy and transport sectors who are concerned by Arctic issues.
- Ènhance

THE ARCTIC OCEAN, A UNIQUE AND FRAGILE MARINE **ENVIRONMENT**

ORGANISATION CHART O F THE ARCTIC COUNCIL

Member	Permanent	Observers			
States	Participants	Countries	International	Non -	
			organisations	Governmental	
				Organisations	
Canada	Aleut International	Germany	International	Advisory	
	Association	(1996)	Federation of Red	Committee on	
			Cross and Red	Protection of the	
			Crescent	Seas (ACOPS)	
			Societies (IFRC)		
Denmark/	Arctic Athabaskan	Spain (2006)	International	Arctic Institute of	
Greenland/	Council		Union for the	North America	
Faroe Islands			Conservation of	(AINA)	
			Nature (IUCN)		
Finland	*ZLFK¶LQ &RX	France (2000)	Nordic Council of	Association of	
	International		Ministers (NCM)	World Reindeer	
				Herders (AWRH)	
Iceland	Inuit circumpolar Council	Netherlands (1998)	Nordic No	•	

05

France's presence in international forums

EMERGENCE OF AN INTERNATIONAL FORUM ON ARCTIC ISSU ES

The Arctic Council, created under the 1996 Ottawa Declaration signed by the eight Arctic states is the key political forum for regional cooperation on Arctic issues. The Arctic Council adopts texts that are not legally binding, but they carry enough political weight WKDW FRXQWULHV FRPSO\ ZLWK WKHP 7KH &RXQFLO¶V SROLF\ GHFL of Foreign Ministers held every two years. The decisions are based on the work of the Council's six scientific working groups and give due consideration to the interests expressed by the representatives of indigenous peoples.nt15(e)6(o(p)-3(l))-3(i)-1 [(e)6(xpr)-8(e5pt-i5-14<00Bd41(i)-14)]

working group that drafted the texts.

We should also closely monitor the work of the Arctic Regional Hydrographic Commission (ARHC) of the International Hydrographic Organization and possibly contribute to it.

) 5 \$ 1 & (¶ 6 ', 3 / MATIC ACTION RELATING TO THE ARCTIC

With its history in the Arctic, France should rely on its experience and the recognised excellence of its polar research to make a helpful contribution to the Arctic Council working groups. France cannot strengthen its legitimacy in the Arctic or promote its scientific, environmental and economic interests in the region without providing the necessary resources for French scientists to play an active and substantial role in these working groups.

The quality of the work of the Arctic Council working groups also creates an opportunity to enhance our bilateral scientific cooperation with the Arctic states. This will also be an opportunity to promote

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The new observer status, adopted at the 2013 Kiruna Ministerial Meeting, involves a SHULRGLF UHYLHZ RI WKH REVHUYHUV¶ LQWHUHVWV LQ WKH UHJLRQ to renew their status are invited to submit to the Arctic Council all relevant information about their activities in the Arctic and their contributions to the work of the Council. With this in mind, it has become particularly critical to provide appropriate resources to VWUHQJWKHQ)UDQFH¶V VFLHQWLILF SUHVHQFH LQ WKH ZRUNLQJ observers have already joined most of them.

Maintain a presence in all the relevant forums in order to promote France's interests, maintain the positions of French players and promote a common interest vision (conservation of the environment, combating climate change, balanced governance, etc.)

RECOMMANDATIONS ON DIPLOMACY

ightarrow)UDQFH¶V GLSORPDWLF DFWLRQ LV EDVHG SULPDULO\ RQ VWF

THE EUROPEAN UNION AND THE ARCTIC

France, as a Member State of the European Union, supports EU policy on the Arctic and coordinates its action with this policy, with the view that the EU is significantly involved in the Arctic and a key actor in this region.

Three Member States of the European Union (Denmark, Finland and Sweden) have territories beyond the Arctic Circle and seven Member States are observers on the Arctic Council.

The EU LV DOVR WKH ZRUOG¶V ODUJHVW PDULWLPH HFRQRPLF SRZE shipbuilding techniques, tourism, offshore energy production, research) and a key player in the trade of fishery products in the European sub-Arctic and Arctic. The EU is a member of the North East Atlantic Fisheries Commission (NEAFC) and the OSPAR Commission.

In addition, in terms of energy security, Europe relies on imports for more than 50% of its energy and over two-thirds of its imports are from Russia and Norway, which have large offshore oil fields in the Arctic that are in production or under development.

The EU is heavily invested, as both a key player and a major donor, in the field of Arctic research. The European Union has committed over 200 million euros (and 40 million euros for 2016-2017) to research and development programmes in the Arctic in the last ten years. The Seventh Framework Programme for Research and Technological Development provided funding for more than 100 projects, including 40 collaborative projects on climate change, contaminants and health, infrastructures, environmental technologies, capacity-building, cartography, space and soil. Several research programmes were set up for sustainable development in the Arctic, with total funding of 1.14 billion euros for 2007-2013 (improving recycling and pollution treatment techniques; water management; nuclear safety and civil defence). From 2014 to 2020, the Creative Europe and Horizon 2020 programmes will further increase EU involvement

The EU is also a member of the Barents Euro-Arctic Council (BEAC), a regional cooperation body, alongside Denmark, Finland, Iceland, Norway, the Russian Federation and Sweden. Its role on the 6(an)-5(t)-69(t)-na(d) 6, ege 96R-5(.1 96R)-9-6(d)-3()-69(()]TJt)-5(e)6(6a(t)-7)-69(o)-6(cooperafto(e)6r--3(e)63 Barwed [(Th)-3(e)149(,)o-3()-69(1t)418(shu)6(n)-69(1t)418(d)thwu w5(n)-5(a(r)5(at)-69(1t)5(at)-69

national interests and the common interest in the arctic region

THE ARCTIC . AN INTERNATIONAL CONCERN

The new situation in the Arctic caused by the dramatic retreat of summer sea ice has gradually become an international concern.

The consequences of changes in the polar environment and climate are already being felt all over the planet.

The Arctic is a zone of global scientific interest.

As access to the Arctic Ocean increases year by year, it reveals a connection between the North Pacific and the North Atlantic, opening up opportunities and challenges that could concern the international community.

\$V DQ REVHUYHU LQ WKH \$UFWLF &RXQFLO)UDQFH UHFRJQLVHV W sovereign rights and jurisdiction in the Arcti c.

By virtue of their sovereignty, their sovereign rights and their jurisdiction over vast portions of the Arctic Ocean, the five coastal states are in a special position to respond to the challenges and issues in the Arctic.

The nature and the scale of the issues and challenges in the Arctic call for a high level of international cooperation between the states that are directly and indirectly concerned.

France subscribes to the idea that the United Na(d)-3()-8(t)-15(o)-6()p

responsibility of all potential users of the Arctic Ocean.

The sensitive environment and the weak resilience of Arctic marine ecosystems to human activities (commercial shipping, oil drilling, pleasure cruising, etc.) is a challenge that is the responsibility of all potential economic players.

CONCLUSION

7KLV GRFXPHQW WHVWLILHV WR) UDQFH¶V OHYHO RI LQWHUHVW LQ where economic opportunities and environmental and climate challenges are inextricably linked.

In his speech to the Arctic Circle conference in Reykjavik, Iceland on 16 October 2015, the President of the French Republic, François Hollande, said:

3) UDQFH ZLOO GR HYHU\WKLQJ WKDW LW FDQ KHUH LQ WKH) DU action, mobilise its researchers and its businesses, to enable us to preserve this SDUW RI WKH ZRUOG ZKLFK LV XQGRXEWHGO\ RQH RI WKH PRVW

For France, and for many other countries that are directly and indirectly concerned, the Arctic is an area of global scientific interest. France calls for increased scientific cooperation in the Arctic, in which it intends to play an active role by increasing its resources and its investment in scientific research on the Arctic. The Arctic is an important natural laboratory for studying climate change at the global level, making it an area of scientific interest for all of humanity.

France supports a multi-sector environmental precautionary approach based on the