

Risks and Opportunities Hidden Behind the Melting Ice in Arctic

Reporter: Jiren Zeng



Jungho Nam

Dr. Jungho Nam has been working at Korea Maritime Institute (KMI) since 1996. His researches cover marine environment management, trans-boundary marine environmental affairs, marine science and technology application etc. He has contributed a lot to the marine policies of his government and also activities of global and regional environmental organizations such as PEMSEA, COBSEA, World Ocean Forum and Arctic Council etc.

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Reporter: The theme of the session you took part in is “Meeting on the Melting Ice: Asia’s Role in the Protection of the Arctic Ecosystem”. Could you briefly introduce the changes happening in arctic area today and their potential influence to human being?

Jungho Nam: Yes, arctic area is experiencing unprecedented changes, while there are two sides of these changes: risk and opportunity. The risk is that ice melting is changing the eco-system in arctic area, say, degrading the habitat of animals like birds and polar bear. Besides, other human activities within arctic region are also causing damaging consequences like black carbon emission, noise, oil-spills and pollution. In addition, transferred issues from off-sites like the increase of water temperature and

the acidification of ocean also happen.

Meanwhile, the changes in arctic area also bring human being many opportunities. For example, due to the ice melting, new shipping routes may arise. Both arctic countries, such as Denmark and Finland, and east-Asian countries especially Korea and China will be benefited. They will have alternative sea route to connect the eastern and western side of the Eurasian Continent. Besides, human beings may also be able to exploit the abundant petroleum resources and take fishing activities in arctic areas.

Reporter: In 2013, five Asian countries including Korea and China became the observers of the Arctic Council. What do you think is the motivation for non-arctic countries to join the Arctic Council and take part in arctic issues? And what can Asian countries do to contribute to arctic issues?

Jungho Nam: Apparently, economic preference takes priority in most people, companies and countries. The new shipping routes and exploitation of resources are luring. Many have strong interest in such issues than in other common issues like eco-protection, pollution etc. So apparently the primary motivation for non-arctic countries to join the Arctic Council is to get more economic opportunities from arctic matters.

But China and Korea are also prepared to do contributions to arctic issues, helping to protect the eco-system by providing scientific capabilities, surveys and researches by themselves. And I think establishing working groups in arctic area and carrying out more scientific researches are good ways for Asian countries to engage in arctic issues.

Reporter: Then what do you think is the rights and responsibilities of arctic and non-arctic countries over arctic issues? And what's the difference between them?

Jungho Nam: Speaking of rights, arctic countries own many of the arctic areas, including their exclusive economic zone (EEZ). The arctic states have explicit and concrete rights to utilize resources and spaces within their jurisdiction. Other countries have no rights to violate or undermine them.

While the rights for non-arctic countries come from “connection”. This “connection” mostly includes migratory species like whales, harbor seals, sharks and birds. For example, due to the exploitation of energy resources in arctic, there might be some damage to the eco-system, like the damage of birds’ habitat. So if bird’s habitat is damaged by this kind of exploitation, the impact may come to other parts of the world, like China and Korea. This is a connection we can see and explain, and there are still a lot of hidden connections between arctic issues and welfare of non-arctic areas not known yet. Therefore, non-arctic countries have the right to prevent arctic countries from doing damage to arctic areas. This connection is where non-arctic countries’ rights come from.

Thus, arctic countries have more responsibility to protect the eco-system within arctic, while other countries have the rights to push them to do so. But that doesn’t mean non-arctic countries have right to intervene matters within jurisdiction area of arctic countries.

However, the recognition of this ecological linkage doesn’t mean proper protection missions are allocated to arctic and non-arctic countries. Much more attention should be paid to the eco-protection of arctic.

Reporter: Speaking of raising public awareness, some says there is an inevitable lag before human beings taking action to mitigate the environmental changes. Maybe we are not able to realize the significance of the problem until some catastrophic events cause great loss. Do you agree with such opinions?

Jungho Nam: Indeed there will be a lag in human recognizing risks. Arctic is remote in terms of both physical and emotional distance. The perception on arctic issues is very low. We are not as conscious of future risks in remote arctic area as of current risk in real world like offshore pollution. Public will be aware of the weakness of environment after experiencing some extreme or catastrophic events, but that's too late. There is attention paid to protection now, but it's far from enough.

Reporter: Speaking of future risks, a research published on *Nature* in 2013 reported that the melting permanent frozen soil in arctic area may release great amount of greenhouse gases such as methane into the atmosphere, speeding up the global warming and causing irreversible losses. Do you think such loss is inevitable?

Jungho Nam: What you mentioned is also a focused research topic in Korea. Institutes are carrying on researches on this problem. Yes, the release of more greenhouse gases in arctic is happening, more than we expected. But due to the uncertainty of the problem and hidden connection between global environmental factors, we do not have enough information. We are lack of data to make precise prediction.

If you read the Assessment Report (AR) of the Intergovernmental Panel on Climate Change (IPCC), you will find AR4 published in 2007 reported the sea level rising by 59cm, while that number soon increased to 82cm the AR5 published in 2013. Obviously the sea level rising is speeding up, and we don't know what will be published in AR6. So even though the speeding up doesn't mean a high speed, personally speaking, I think some great loss is inevitable.

But here I want to make two points clear. One is that the ice melting is a slow process; it won't vanish until 2050. Another point is that the main reason causing the melting is

the global warming, rather than human activities within arctic area. Of course activities like exploitation will to some extent lead to melting, but as long as it's limited to certain places and seasons, the impact would be limited. It's much minor to the driving force of global warming.

Reporter: Then to regulate human behavior within arctic area, do you think international legislation or framework should be established?

Jungho Nam: That is a delicate issue. I think arctic countries may not agree to reach a conventional international framework. They want to take different stance over arctic issues. Since most area in arctic is governed by different countries and states, I think they don't want to build a new conventional framework.

Besides, it's also hard to make regulations to restrict the energy and shipping companies' activities within arctic area since we are still out of concrete evidence of human activity's impact on arctic area. But we can develop some management system. We call it precautions approach to prevent catastrophic events from happening. We need to develop the environment impact assessment system as well. These are not regulation but some strategies based on our scientific technology and findings. There's slight difference between them.

Reporter: Then what kind of cooperation or joint effort by different countries can be made to better protect the eco-system in arctic area? And what's the potential difficulty in establishing or maintaining such cooperation?

Jungho Nam: I think the priority of international cooperation still goes to scientific aspects. Another suggestion is that we can establish the trans-boundary network of protected area based on the ecological linkage.

Let's take the Conservation of Arctic Flora and Fauna (CAFF) as an example. One

aim of CAFF is to protect birds. Some birds fly and migrate from Australia, through China and Korea, to arctic area. This is an ecological linkage. And protected areas are established in almost all the countries on these birds' migrating route by CAFF, such as there are protected areas for such birds' habitat in Korea. Alike, I think to establish a marine protection network by different countries might be helpful.

And the potential difficulty for such action would be that such network need to be established based on a real existing ecological linkage, while a political human network without concrete ecological linkage might not last so long as we expected, because there is no media to help to maintain the network. The real existing ecological linkage has the media, say, the birds, to link all the related countries, making it easier to maintain the network. However, the human network might be easy to establish but hard to maintain because there is no media. Different cultures, interests and policies may be the barrier for maintaining the network.

Reporter: After all, are you optimistic or pessimistic over the ice-melting problems and other issues in arctic? What's your overview on the future of arctic?

Jungho Nam: In regard of the ice-melting issue of arctic, I'm "a little bit" optimistic, because the ice melting is slow, and the new sailing route won't be used at least by 2050. That's far from today. The energy exploitation now is also limited because it depends on the extent of the ice melting.

Although personally speaking I do think some loss is inevitable, I still believe in human being and human power. I believe that human beings are capable of designing and developing strategies and measures to mitigate, or even eliminate the negative impacts of environment problems in arctic area.