### 北極温暖化と東アジア安全保障環境

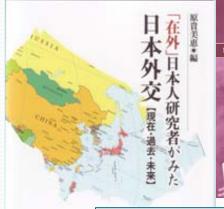
From Cold War Thaws to the Arctic Thaw:
The Changing Arctic and Its Security Implications to East Asia

原 貴美恵 ウォータールー大学(カナダ)

#### Kimie Hara

Professor and the Renison Research Professor Director, East Asian Studies, Renison University College University of Waterloo, Canada



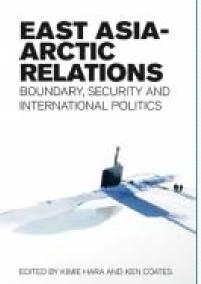




**Shifting Regional Order** in East Asia

- Proceedings







Northern Territories, Asia-Pacific Regional Conflicts and the Aland Experience

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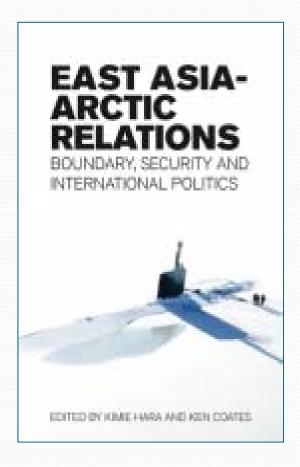
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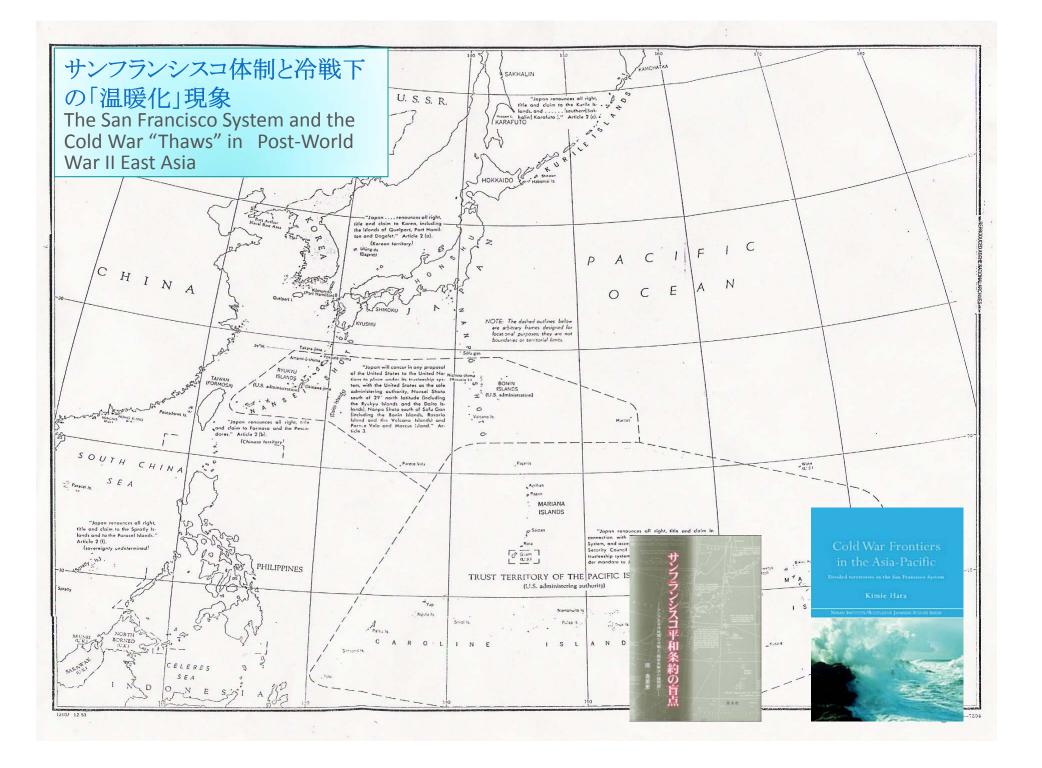
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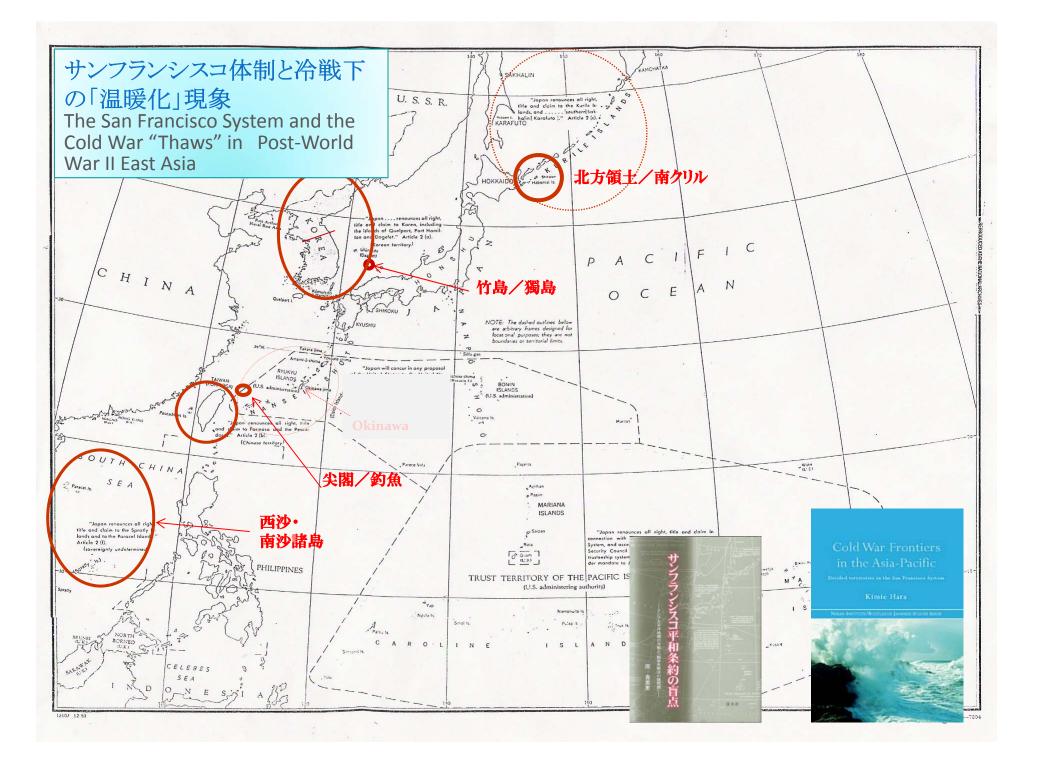
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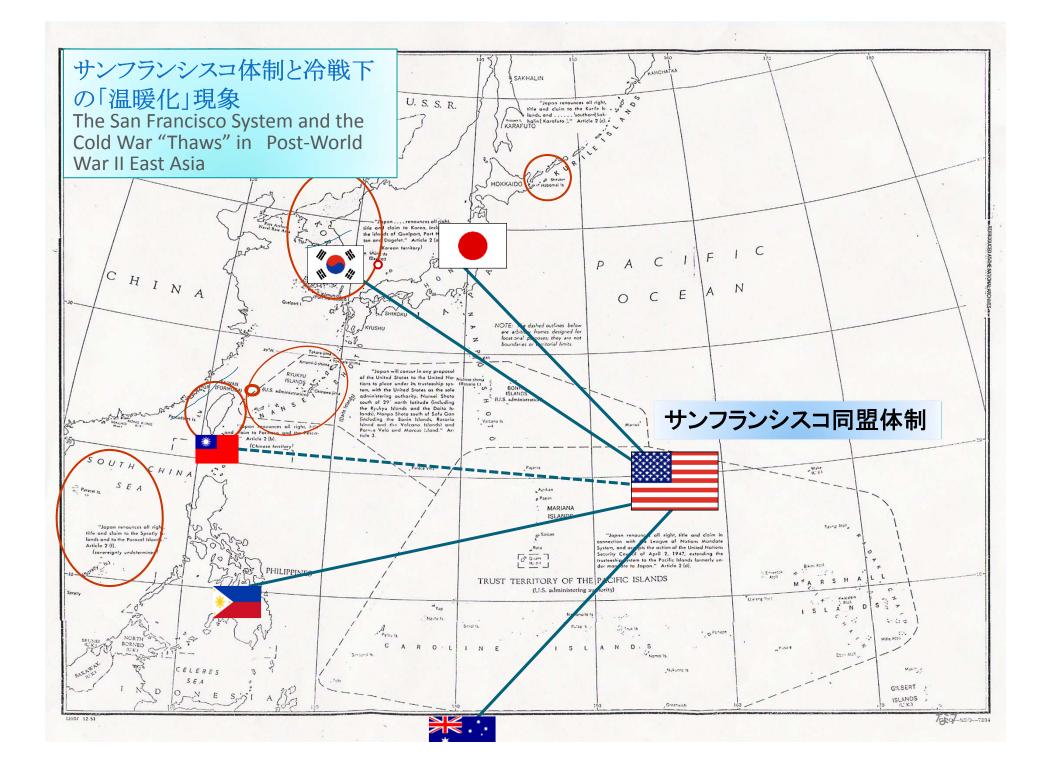
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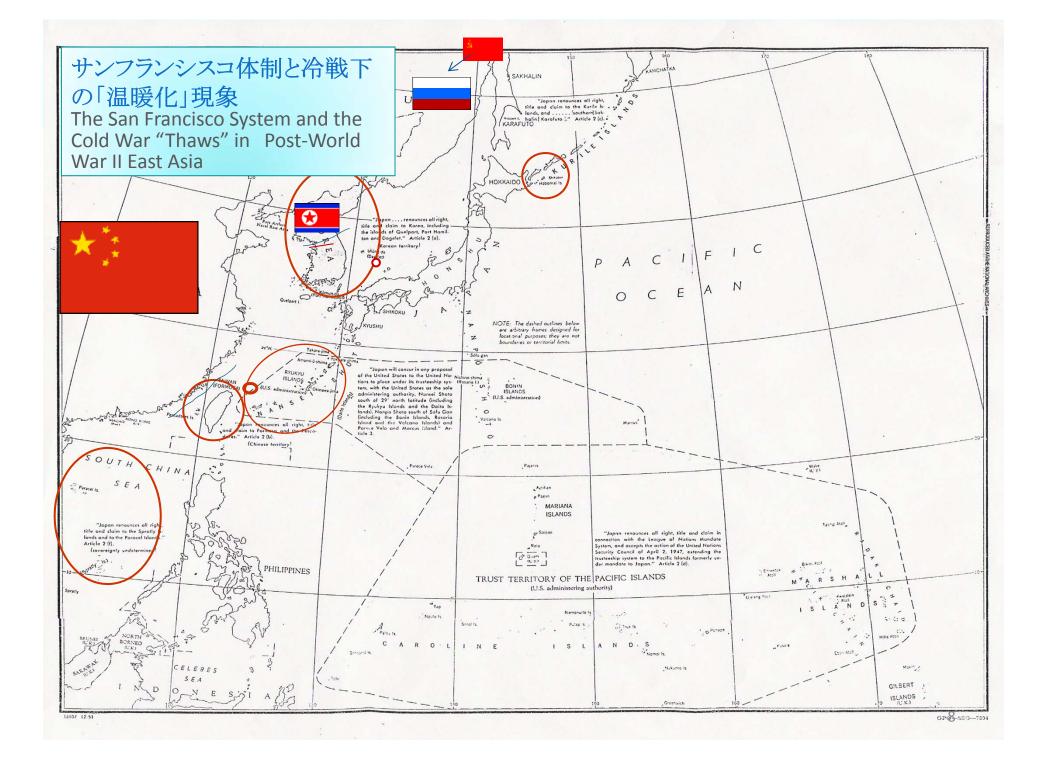
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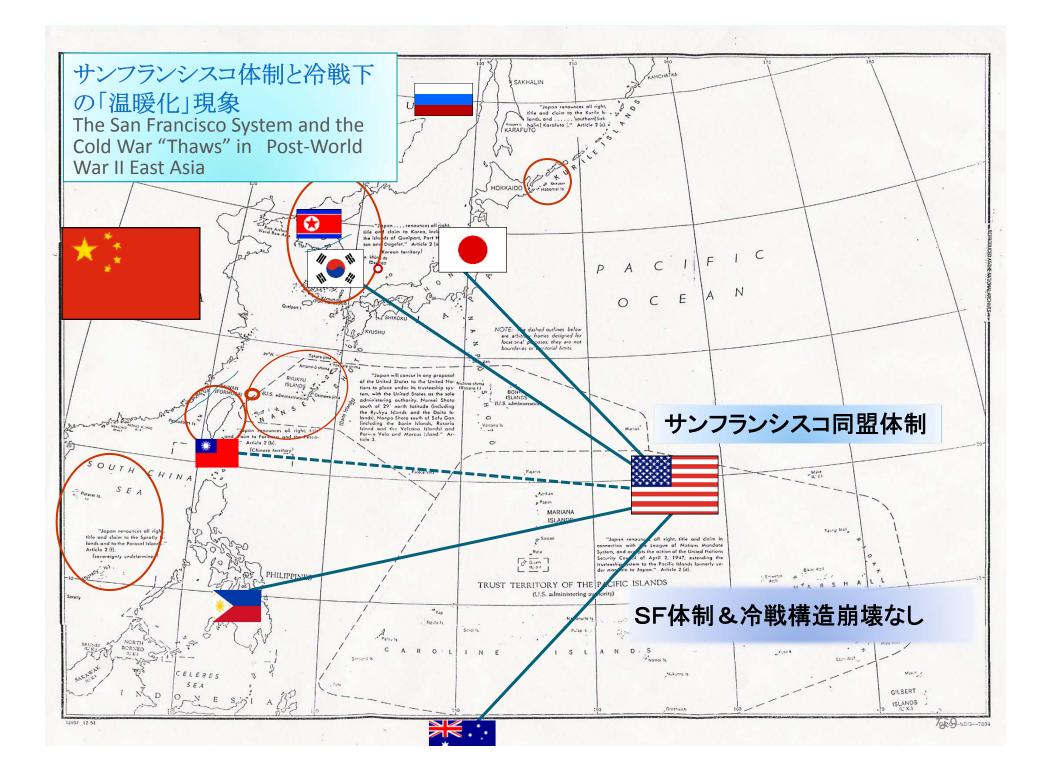
- ▶ サンフランシスコ体制と冷戦下の「温暖化」現象
  The San Francisco System and Cold War "Thaws" in Post-World War II East Asia
- 北極温暖化と政治安保環境との関係 The Arctic Thaw and Political and Security Implications
- 結論と提言Conclusion and Recommendation

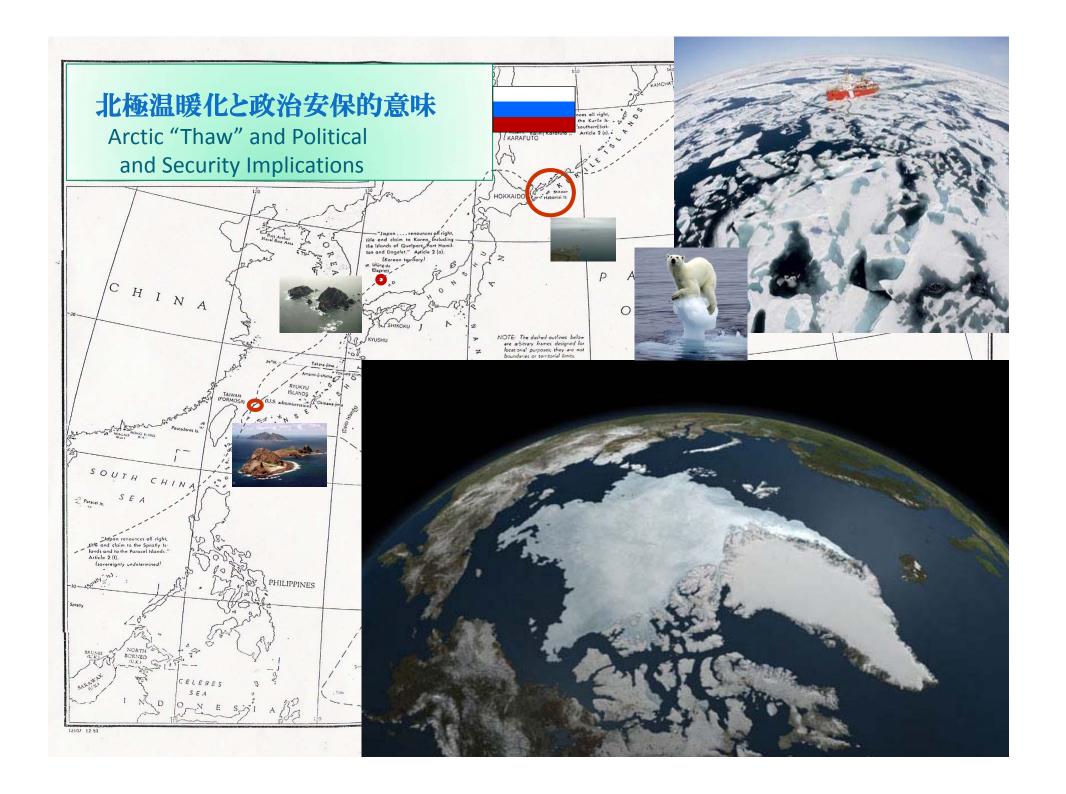


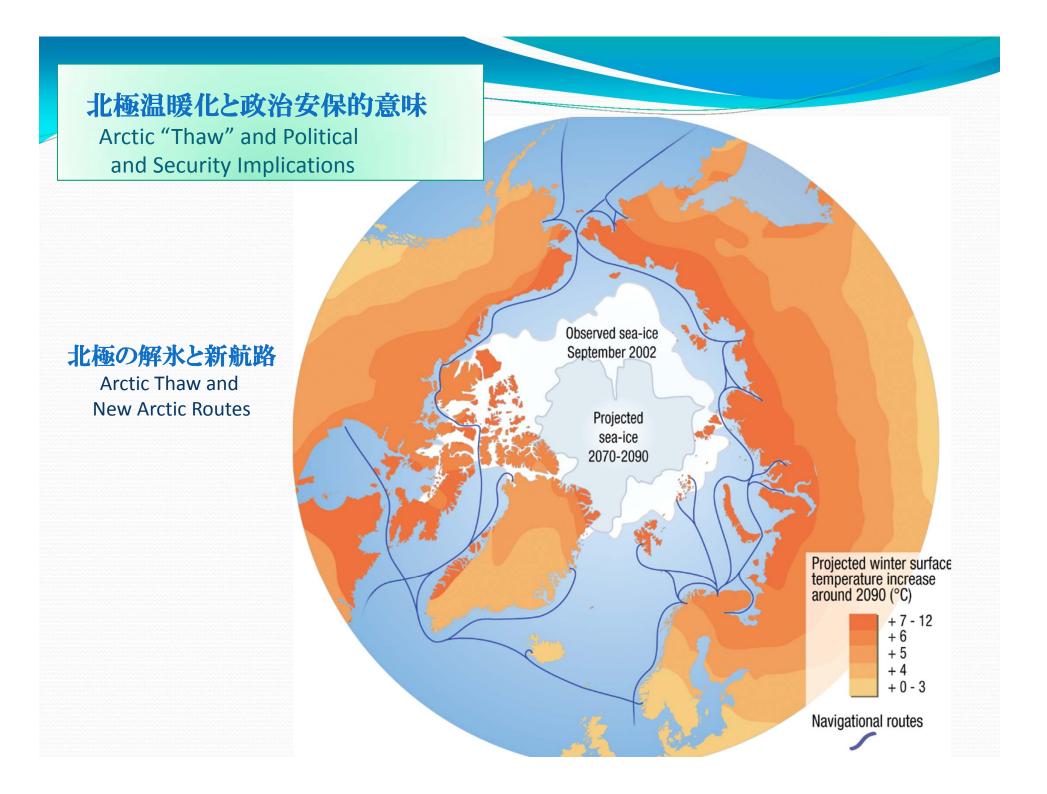












#### スエズ運河航路と 北極海航路の比較

Comparison between Suez Canal and Northern Sea Route



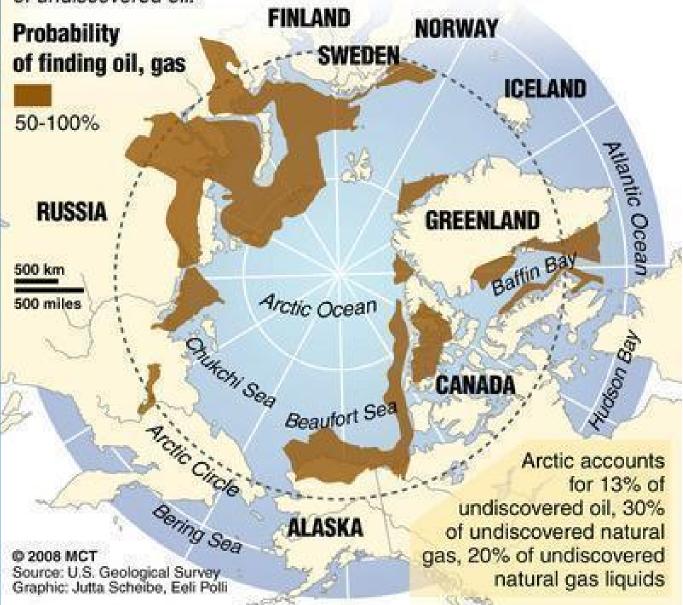
北極地域の油・天然 ガス開発プロジェクト Oil & Gas Development Projects in the Artic Region ★ 2004 Selendang Ayu shipwreck Chukchi Sea: Drilling leases sold for \$3.4 billion in 2008, exploration delayed for regulatory review post ALASKA BP spill (Shell, ConocoPhillips, 1989 Exxon Valdez shipwreck \* Statoil and Eni bought leases, Trans-Alaska oil pipeline: but only Shell has an Completed 1977 exploration drilling plan) 2006 BP Alaska pipeline spill Prudhoe Bay fields: Oil in CANADA production since 1977 (BP, ConocoPhillips, xxonMobil and others) Beaufort Sea: Planned exploratory Norman Wells: drilling delayed by legal battles since 2007 RUSSIA Onshore oil (Shell) production Planned undersea long-reach drilling from since 1937 an artificial island delayed by regulatory Yamal: Gas field in traditional Canadian Beaufort Sea: review (BP) reindeer herders' land, \$1.2 billion paid for leases, completed in 2010 (Gazprom, exploration delayed for SN-Neftegaz and others) regulatory review post BP spill (ExxonMobil, Imperial, BP, Chevron) Nenets fields: Oil and gas in production since 1960s Shtokman: Plan to tap (Lukoil, Rosneft, ConocoPhillips, world's second largest gas Total, Statoil and others) field, delayed to 2016 (Gazprom, Statoil and Total) 1980 Nenets gas blowout GREENLAND 1994 Komi pipeline spill disaster Goliat: Oil production planned (Eni) Disko Bay: Prirazlomnoye: Oil platform Oil exploration in final assembly in the Pechora Sea under way (Sevmorneftegaz - a subsidiary (Cairn Energy) Snohvit: Sub-sea of Gazprom) gas production began Lofoten Islands: in 2007 (Statoil) Ongoing conflict over **ICELAND** whether to open this key In production Output
Under exploration fisheries area to oil exploration Oil and gas reserves NORWAY In development Spills NewScientist

#### 北極地域の推定 未開拓油・ 天然ガス

stimates of Undiscovered Oil and Natural Gas in the Arctic

# Oil and gas in the Arctic

Area north of the Arctic Circle has an estimated 90 billion barrels of undiscovered oil.



#### 北極温暖化と政治安保的意味

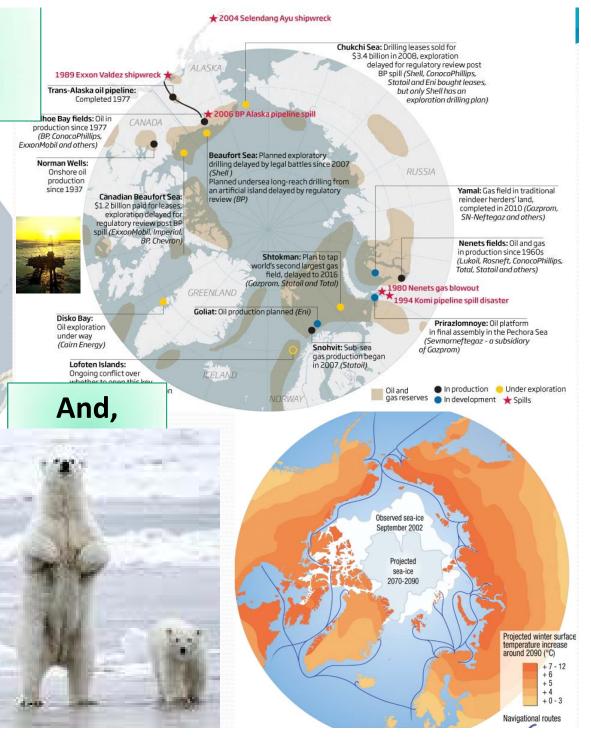
Arctic "Thaw" and Political and Security Implications



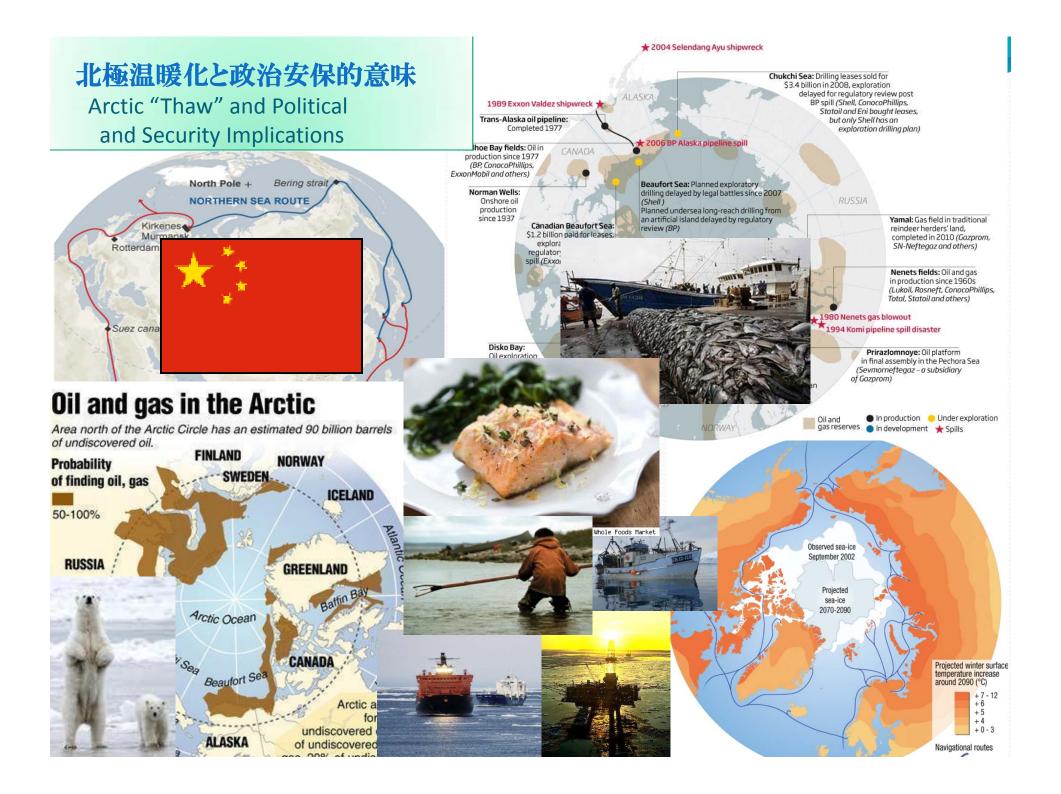
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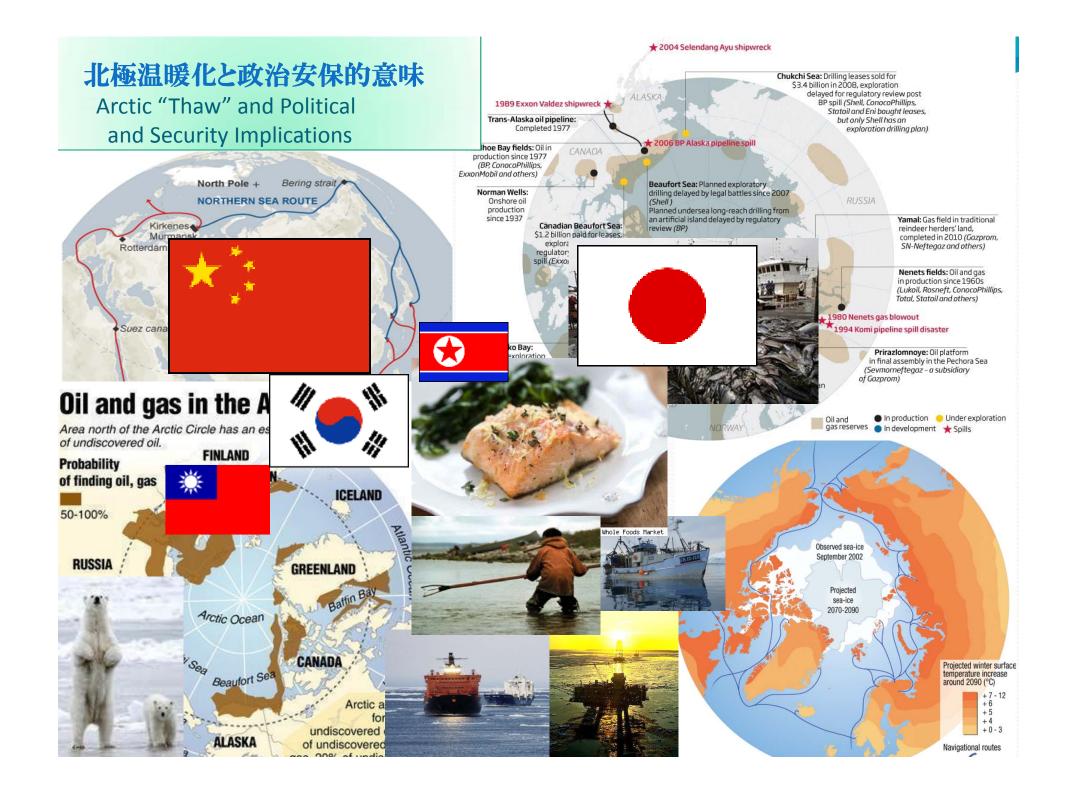


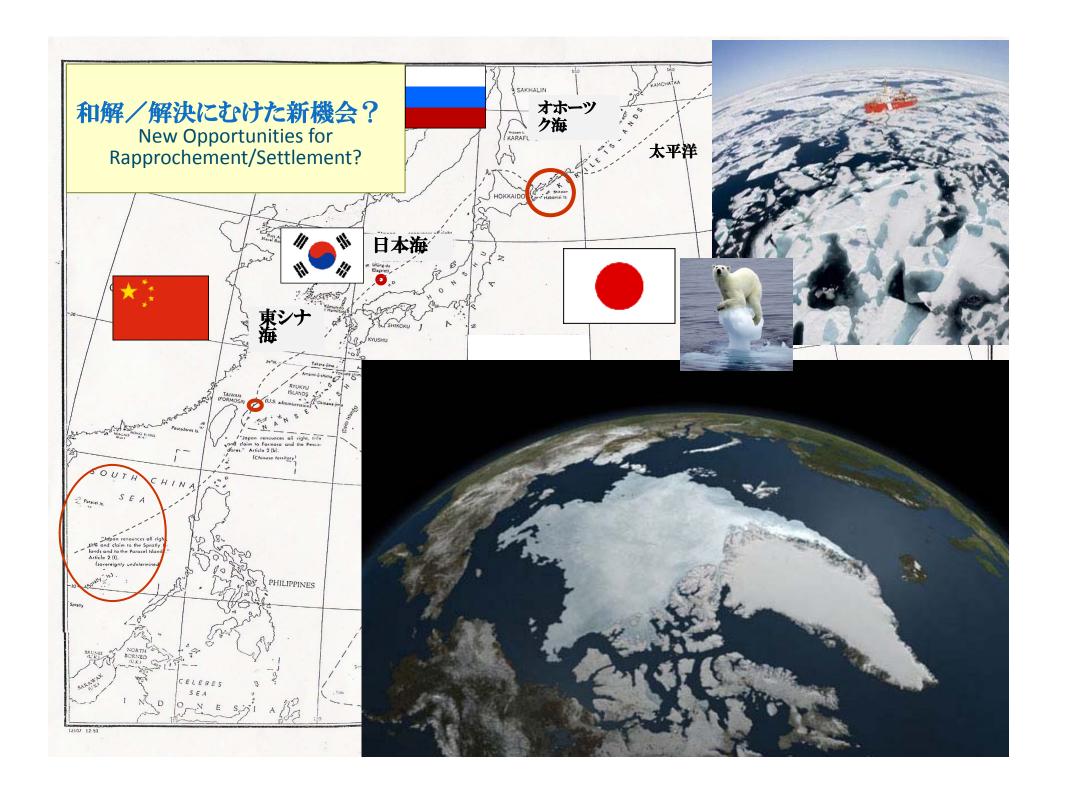


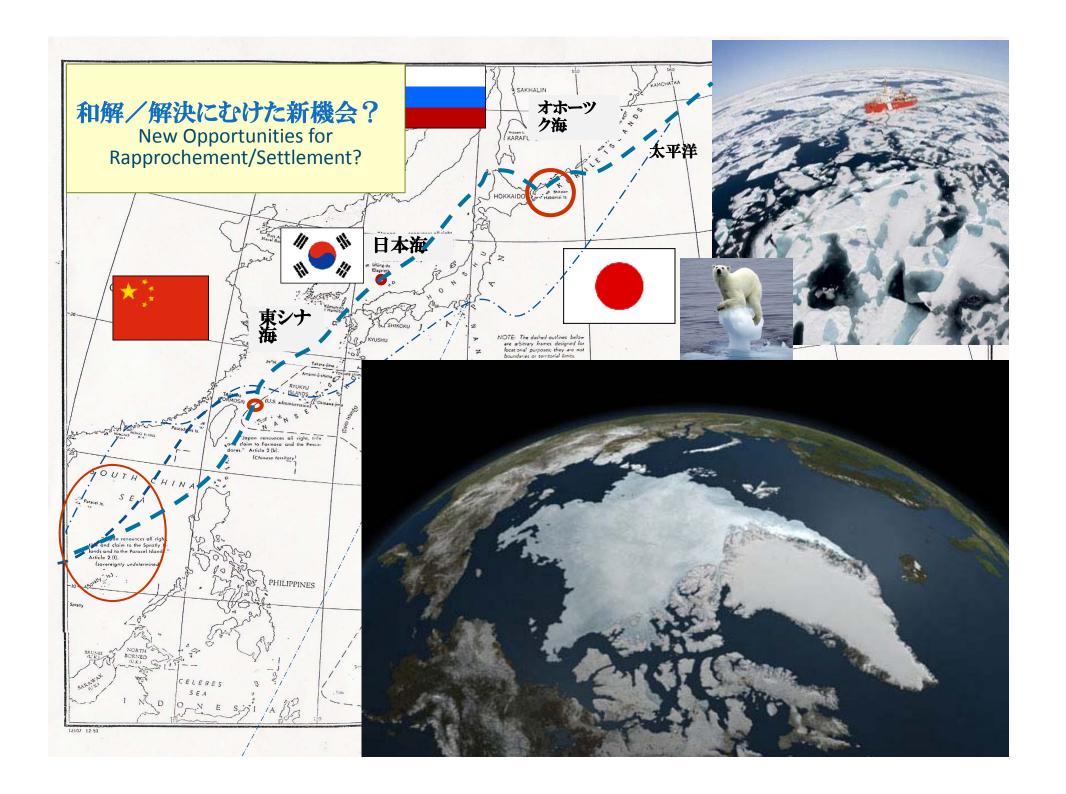


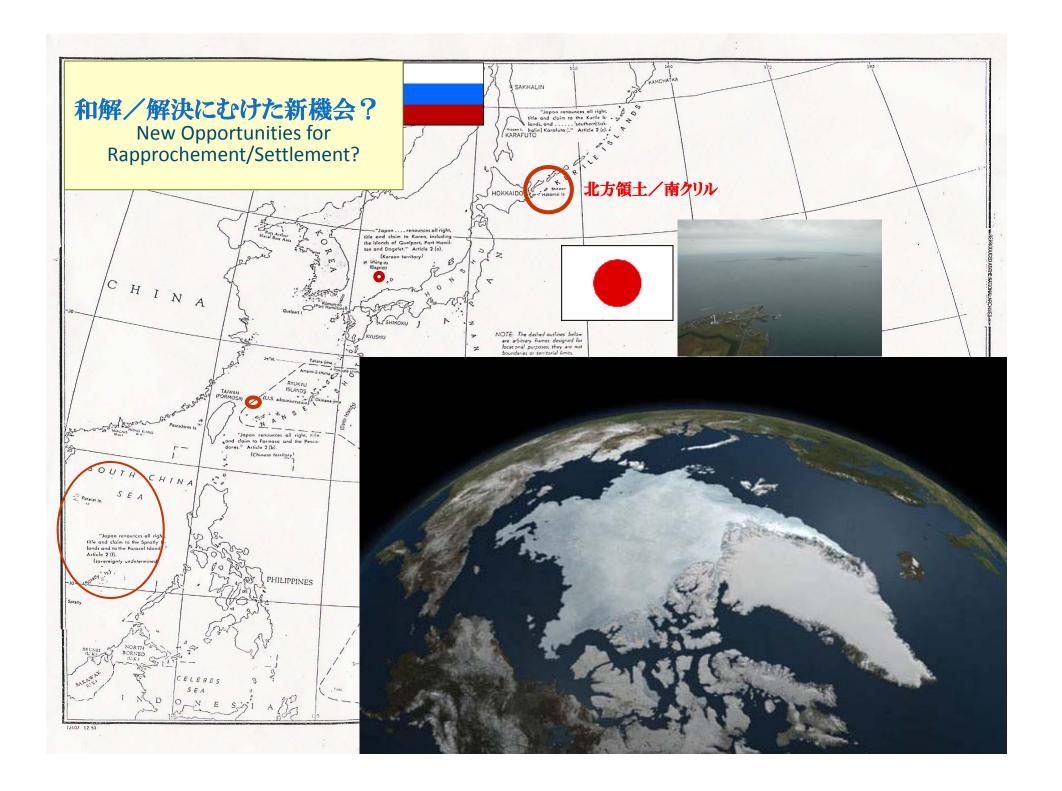


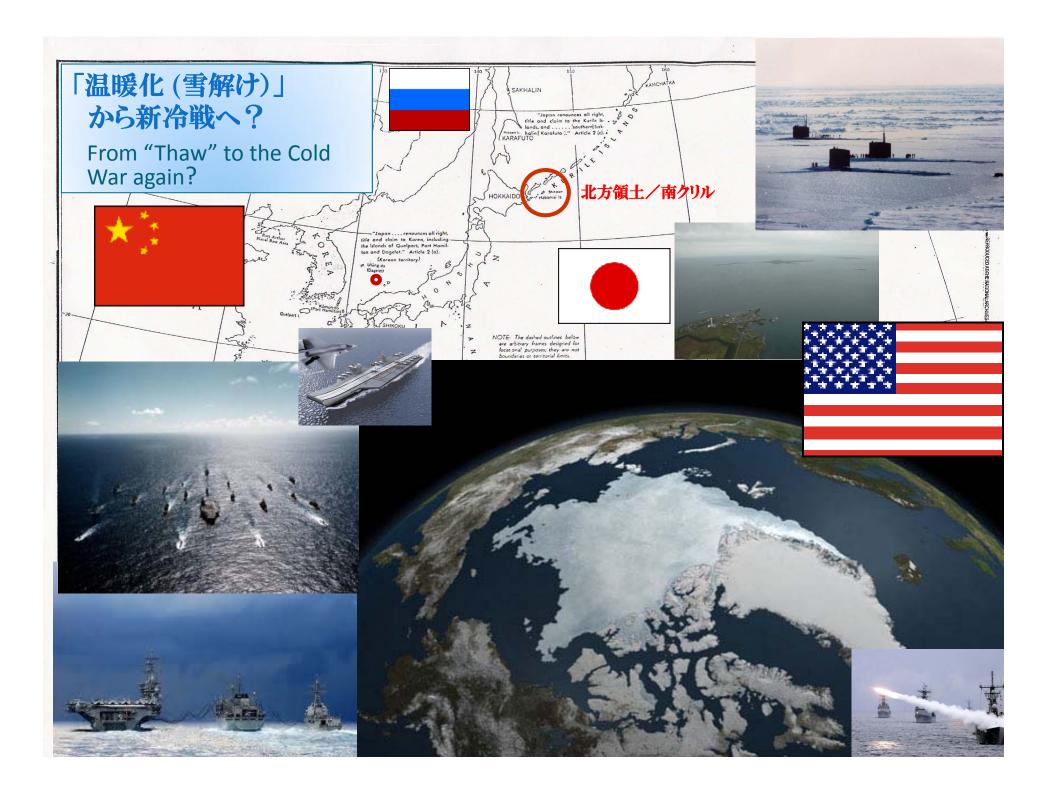












### **結論** Conclusions

### サンフランシスコ体制と北極温暖化?

San Francisco System & Arctic Thaw?

## 信頼醸成措置(CBM)の重要性

Importance of CBM

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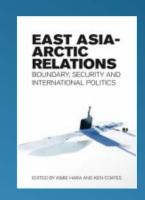
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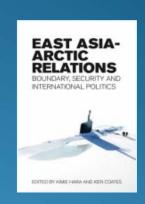
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East Asia-Arctic Relations: Boundary, Security and International Politics Project

→ To be continued

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# Thank you!



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