

Bruk av Miljøringens stipend til yngre fagpersoner: Samarbeid med PARI Institute i Japan

Hans Peter H. Arp

Norwegian Geotechnical Institute



Miljøringen temamøte.
22 November 2012
Klif, Oslo

Innhold

PARI

NGI og PARI

Japan tur 1 - samarbeid

Japan tur 2 – intensjonsavtale

Fremtid av NGI-PARI samarbeid



PARI

NING

Port and Airport Research Institute

Research on Ports and Airports

Studies on Marine Environment, Coastal Disaster Prevention and
Utilization of seas



50 years history of PARI

- **1946** small section of Railroad Research Institute, Ministry of Transport in Tokyo
- **1949** Moved to Yokosuka City
- **1962** Port and Harbor Research Institute (PHRI)
- **2001** Independent Administrative Institution, Port and Airport Research Institute (PARI)

Fokusområder av PARI

1. development, utilization and maintenance of **ports (havner)**
2. development and maintenance of **navigation channel (navigasjonskanaler)**
3. **reclamation and drained reclamation** within port area
(gjenvinning av sediment)
4. development, utilization and maintenance of **coastal barrier (kystbarriere)** within port area
5. development and maintenance of **airports (flyplasser)**.
6. research, technology development and dissemination, advisory activities, and data collection on the above-mentioned items



Mine kontakter i PARI



Ryoji NAITO
(Nå MLIT)



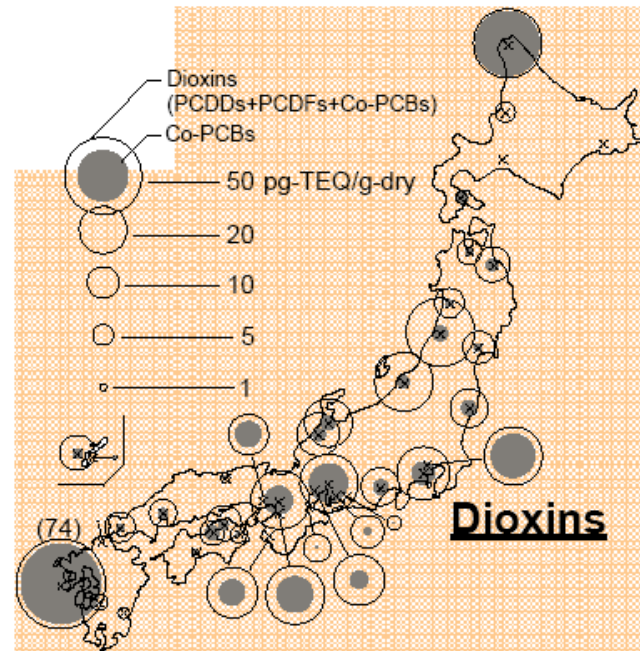
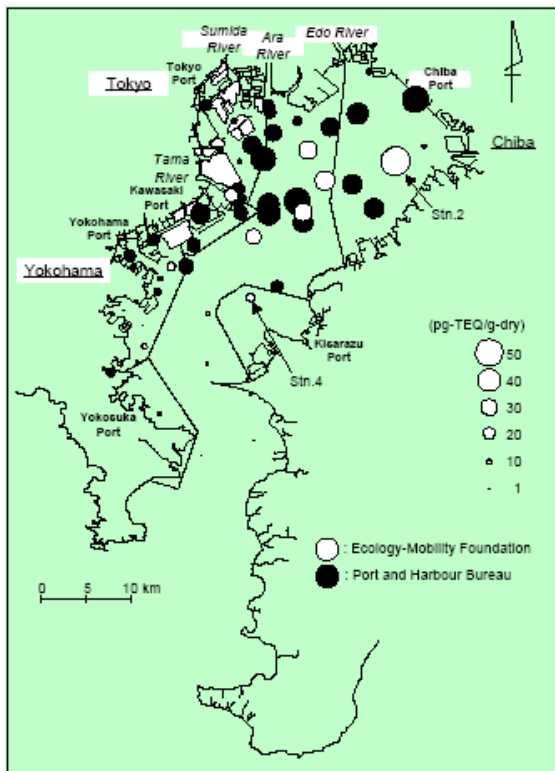
Prof. Yoshiyuki
NAKAMURA



Tetsunori
INOUE

Eksempel prosjekt fra PARI 1

Field surveys on chemical pollutions in coastal sediments



Eksempel prosjekt fra PARI 2

Tidal flat construction in Japan

Example of constructed tidal flats in Japan (Seto Inland Sea)



Eksempel prosjekt fra PARI 3

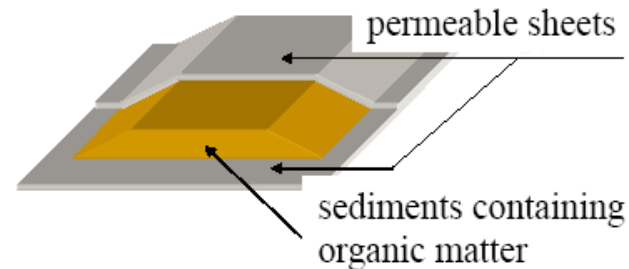
Developing management tool of chemicals in port and harbor sediments

Expected output & outcomes

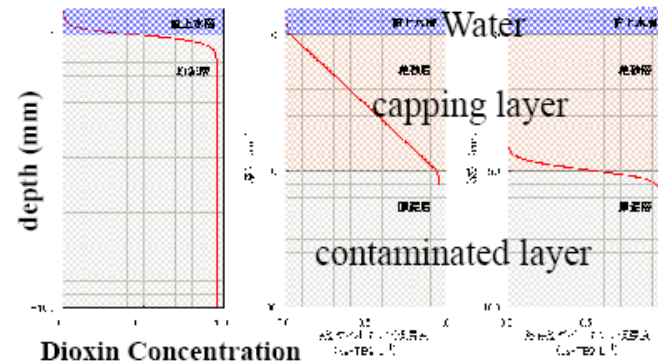
Proposal of effective countermeasures against chemical pollution

Establishment of management strategy for port and harbor sediment and its beneficial use

Proposal of novel method of capping using sediments rich in organic matter and evaluation of its effectiveness



Typical distribution of dissolved dioxins



no capping

capping with sand

capping with sediment

11. Mars 2011 – Tohoku jordskælv



NGI

Historie NGI og PARI



Historie NGI og PARI

1980 – Visits from Dr. Hioti and Dr. Kawasaki to NGI

1990 – Dr. Knut H. Andersen visits PARI

1991 – Dr. Kikuchi did one year postdoc at NGI (Christian Madshus)

1992 – 2000: NGI researchers Tom Lunne, Knut Andersen, Per Sparrevik, Christian Madshus, Reidar Otter, and Kjell Karlsrud attended and participated in three workshops

-Dr. Per Sparrevik (Paru-san) visited PARI for 6 months

-1995 Dr. Masanori Tanaka and Dr. Hiroyuki Tanaka came to NGI to test equipment in Drammen

-1995. Mr. Stein Strandvik visits in work related to Kobe earthquake

-2003 Dr. Mitsugu Yoshimura came to test nuclear density probe at Onsøy

-2005-10. Two visits by former administrative director Dr. Suzanne Lacasse

-2011 Dr. Ryoji Naito visited for three months for research

-2011 Prof. Nakamura and Dr. Inoue visit

-2011 Dr. Arp visits PARI

-2012 MoU PARI and NGI signed by Dr. Takahashi and Dr. Andresen

Historie NGI og PARI



Dr. Y. Kikuchi

One year postdoc at
NGI in 1991

Dr. Knut H. Andersen
Head of Research at NGI

Visited PHRI (PARI) in 1990

Andersen K.H., R. Dyvik, Y. Kikuchi ,and E. Skomedal (1992)

Clay behaviour under irregular cyclic loading.

Proc. International Conference on the Behaviour of Offshore Structures, London, Vol. 2., pp. 937-950

Historie NGI og PARI



Visit from Dr. Sparrevik (Paru-san)

Historie NGI og PARI



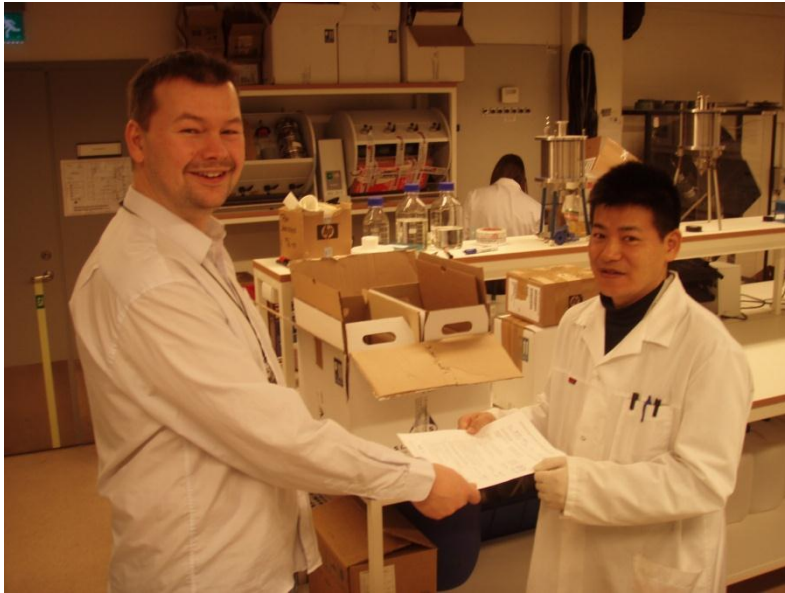
Dr. Masanori Tanaka, Bjørn Thune in Drammen

Historie NGI og PARI



January 1995 – Visit from Stein Strandvik investigating the earthquake in Kobe

Historie NGI og PARI



Three months visit of Dr. Naito in 2011

NGI

Til Japan – November 2011

...med støtte fra miljøringen!!



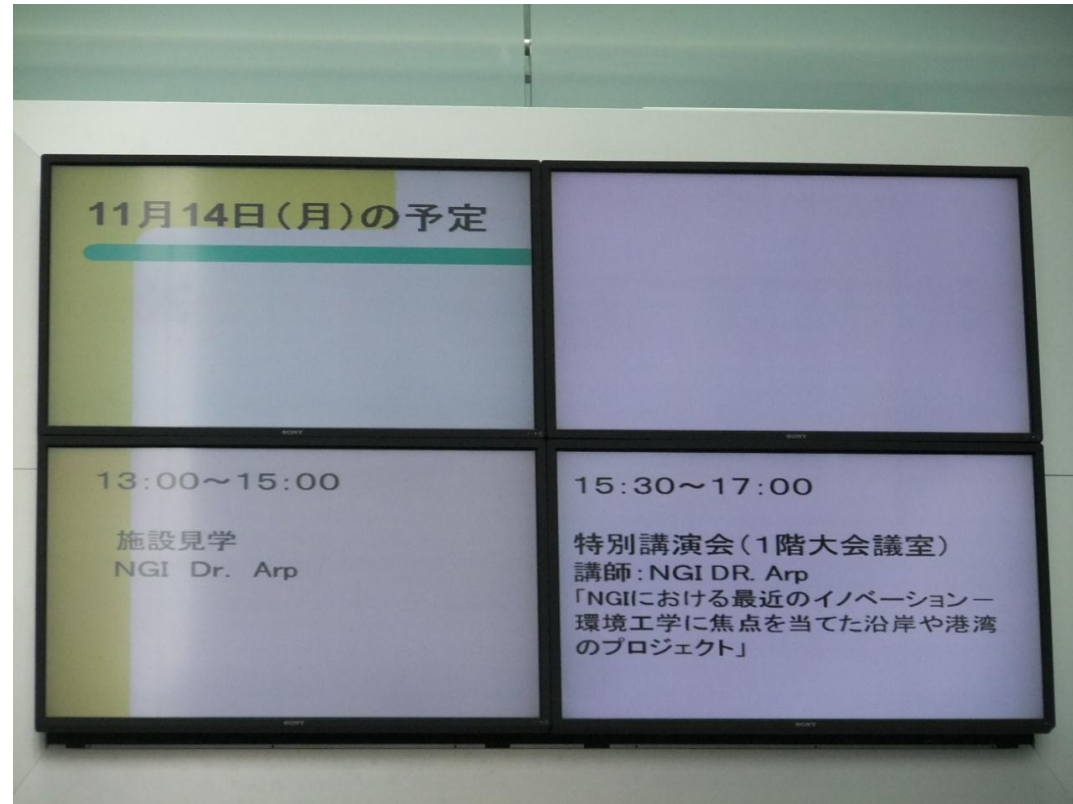
Til Japan – November 2011



NGI

Til Japan – November 2011

1. PARI, Yokusuka
2. Universitetet i Kita-Kyushu
3. Universitetet i Kyoto
4. MLIT, Nagoya
5. JSCE konferanse
6. MoU NGI-PARI



Til Japan – November 2011

1. PARI, Yokusuka
2. Universitetet i Kita-Kyushu
3. Universitetet i Kyoto
4. MLIT, Nagoya
5. JSCE konferanse
6. MoU NGI-PARI



Stort fasiliteter til forskning!

Til Japan – November 2011

1. PARI, Yokusuka

2. Universitetet i Kita-Kyushu

3. Universitetet i Kyoto

4. MLIT, Nagoya

5. JSCE konferanse

6. MoU NGI-PARI



forelesning i University av Kita-Kyushu;
Prof. Kiwao Kadokami

Til Japan – November 2011

1. PARI, Yokusuka
2. Universitetet i Kita-Kyushu
3. Universitetet i Kyoto
4. MLIT Kyoto
5. JSCE konferanse
6. MoU NGI-PARI



Prof. Kidokami viser Prof. Nakamura tiltak i Kita-Kyushu område.

Til Japan – November 2011

1. PARI, Yokusuka
2. Universitetet i Kita-Kyushu
3. Universitetet i Kyoto
4. MLIT, Nagoya
5. JSCE konferanse
6. MoU NGI-PARI



Forelesning for gruppen til Prof. Hiroaki Tanaka, Universitetet i Kyoto

Til Japan – November 2011

1. PARI, Yokusuka
2. Universitetet i Kita-Kyushu
3. Universitetet i Kyoto
4. MLIT, Nagoya
5. JSCE konferanse, Nagoya
6. MoU NGI-PARI



Dr. Naito på tsunami simulator for Nagoya

Til Japan – November 2011

1. PARI, Yokusuka
2. Universitetet i Kita-Kyushu
3. Universitetet i Kyoto
4. MLIT, Nagoya
5. JSCE konferanse, Nagoya
6. MoU NGI-PARI



NGI-PARI-MLIT poster at JSCE
(Daido University), with Dr. Naito and Dr. Arp

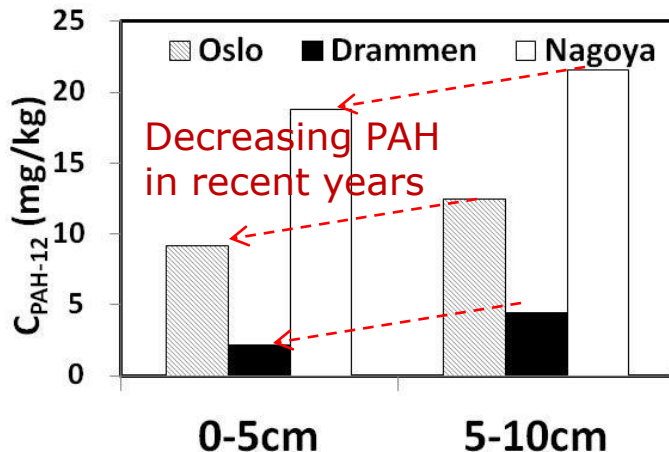
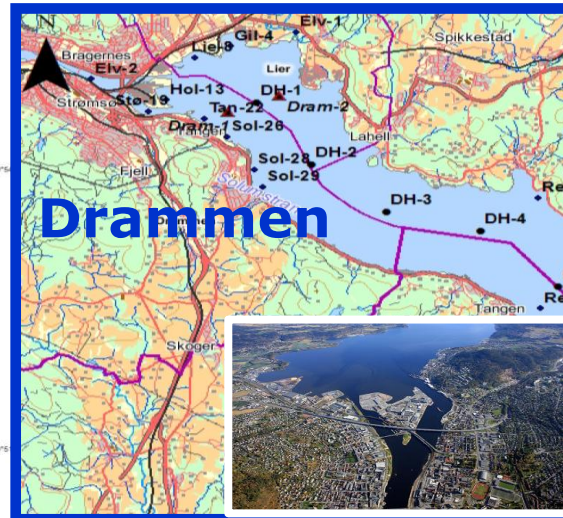


Origin and distribution of PAHs in port and harbor sediments: A comparative study of two harbors in Norway and Nagoya Port, Japan



Hans Peter H. ARP^{1*}, Ryoji NAITO², Espen EEK¹, Yosiyuki NAKAMURA³, Taro URASE⁴ and Akira SAWADA²

¹Norwegian Geotechnical Institute, Oslo, Norway; ²Nagoya Research and Engineering Office for Port and Airport, Ministry of Land Infrastructure and Transport, ³Port and Airport Research Institute, ⁴School of Bioscience and Biotechnology, Tokyo University of Technology.



Nagoya is the most contaminated with PAHs

Concentration is improving by natural attenuation (likely due to more restrictions on emissions)

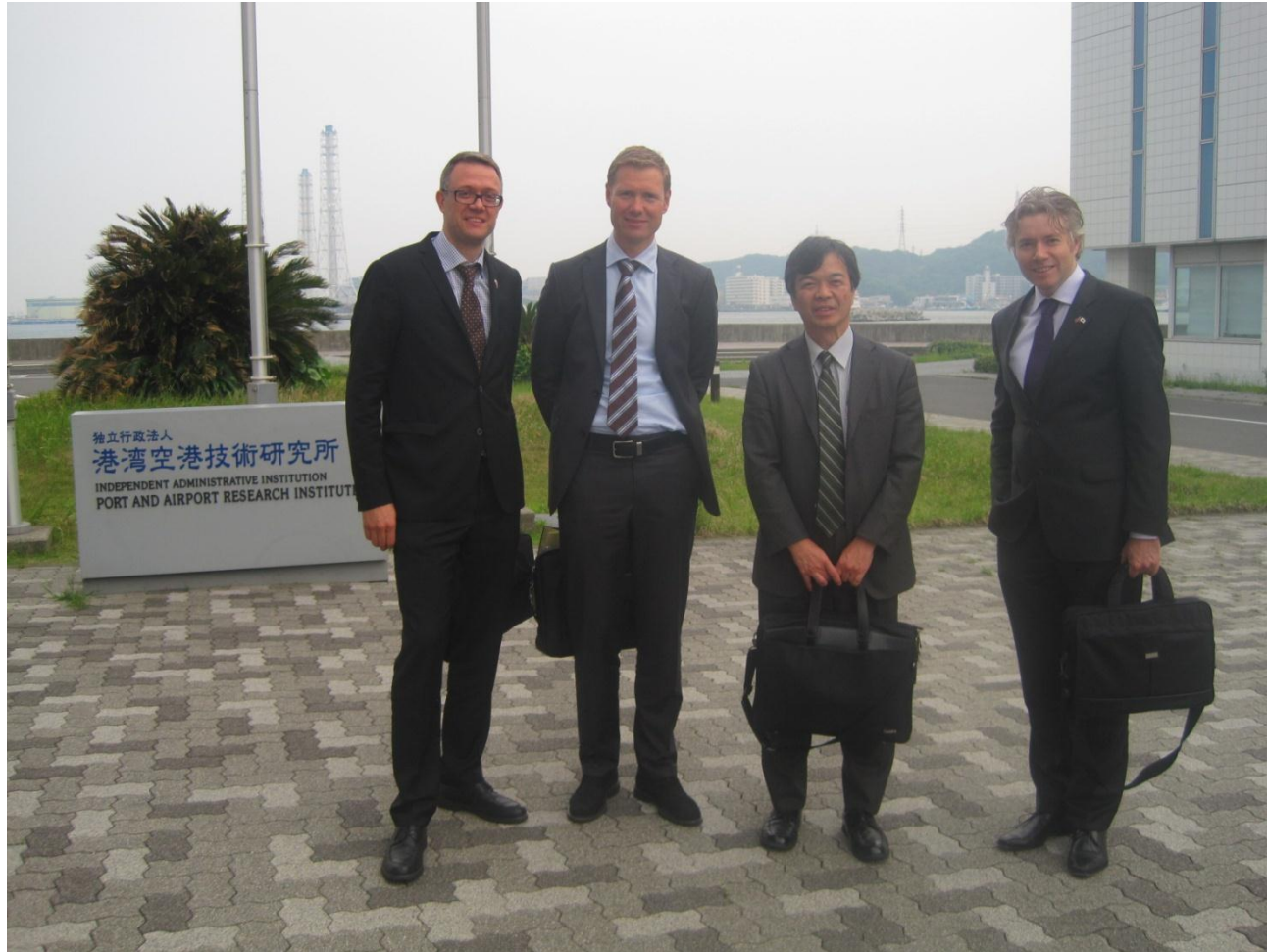
PAH sources mixed



Independent Administrative Institution
Port and Airport Research Institute (PARI)

Til Japan igjen! Intensjonsavtale

Til Japan igjen! May 2012



Espen Eek, Lars Andresen (Adm. Dir NGI), Prof. Nakamura, Hans Peter Arp



MoU PARI - NGI

MEMORANDUM OF UNDERSTANDING (MoU) BETWEEN

THE PORT AND AIRPORT RESEARCH INSTITUTE (PARI)

Represented by its President, Dr. Shigeo Takahashi

AND

NORWEGIAN GEOTECHNICAL INSTITUTE (NGI)

Represented by its Managing Director Dr. Lars Andresen

NGI: Dr. Lars Andresen, Dr. Espen Eek, Dr. Hans Peter Arp
PARI: Dr. Shigeo Takahashi, Prof. Nakamura, Dr. Kishimoto, Dr. Inoue
Norge: H.E. Mr. Trond Giske, H.E. Ambassador Arne Walther
Japan: Mr. Kunihiko MUROI, Parliamentary Vice-Minister of MLIT
Mr. Norihiko KODAMA, Private Secretary to the Vice-Minister
Mr. Norihiko YAMAGATA, Director-General of Ports and Harbors



May 9, 2012



Topics for cooperation between NGI and PARI

Geohazards – risk assessment and management associated with landslides, earthquakes, and tsunamis

Offshore foundations – wind energy, offshore installations, subsea geotechnology characterization

Environmental technology – sediment capping, passive sampling, better assessments of risks to aquatic ecosystems





Intensjonsavtale seremoni



Arctic Hall, Royal Norwegian Embassy

Organisert av Innovasjon Norge – Tokyo

(Svein Grandum), med NGI og PARI



Intensjonsavtale seremoni



H.E. Mr. Trond Giske

Vice-Minister Mr. Kunihiko MUROI



Intensjonsavtale signert!



H.E. Ambassador Arne Walther

Dr. Shigeo TAKAHASHI, President PARI

Mr. Norihiko YAMAGATA, Director-General of Ports and Harbors Bureau

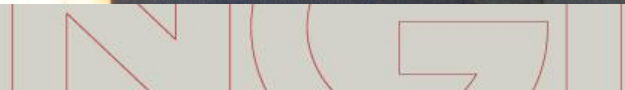


Intensjonsavtale signert!





Skål!



Norway-Japan Seminar 2012

RESEARCH, III 13

FOOD, FISHERIES AND
AQUACULTURE RESEARCH,
NOFIMA



ESKIL FORÅS
Research Manager
SINTEF Fisheries and
Aquaculture AS



GEIRR HAARR
Manager HyWind,
Japan/Korea
Statoil ASA



TROND GISKE
Minister
Ministry of Trade and
Industry, Norway



GORO YOSHIZAKI
Professor
Tokyo University of
Marine Science and
Technology



**KRISTINE
GRAMSTAD**
Vice Minister
Ministry of Fisheries and
Coastal Affairs, Norway



GUNVOR ØIE
Research Manager
SINTEF Fisheries and
Aquaculture



HANS PETER ARP
Researcher
Norwegian Geotechnical
Institute



HEIDI A. NILSEN
Director of Research
Seafood industry
Norwegian Institute of
Food, Fisheries and
Aquaculture Research,
NOFIMA



JOJI MORISHITA
Counsellor, Fisheries
Policy Planning
Department
Fisheries Agency of
Japan



JUN SAKAI
Principal scientist
FMRIC

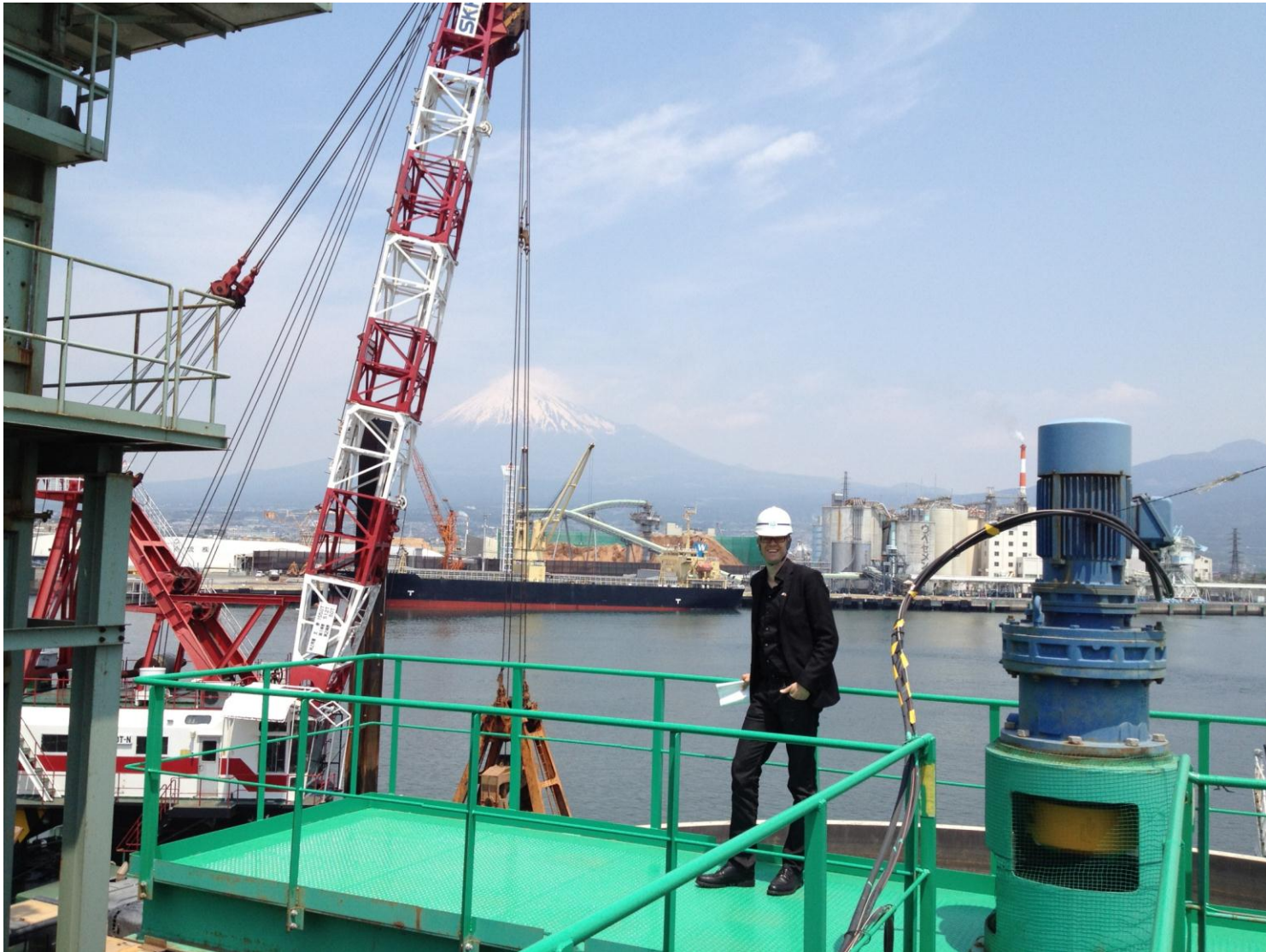


KJELL NAAS
Senior Advisor
The Research Council of
Norway



LARS LOVUND
Director
Norwegian Seafood
Research Fund





NGIs Grenlandsfjord forsker (Espen Eek) på Japans mest dioksen forurensede havn (Tagonoura)

Siden MoU signering

Miljø:

- passiv prøvetaker fra NGI til å måle PAHer og PCBer i Fukushima området
- forskningssøknad til NFR (Frinatek)
- andre forskningssøknader planlagt (JSPS)

Naturskade:

- forskningssøknad til FP7 og EU Concert
- ekstra besøk av Anders Solheim (NGI) til PARI

Neste besøk fra PARI til NGI – Dec 6 - 7



A Tale of Many Harbors

MEMORANDUM OF UNDERSTANDING (MoU) BETWEEN

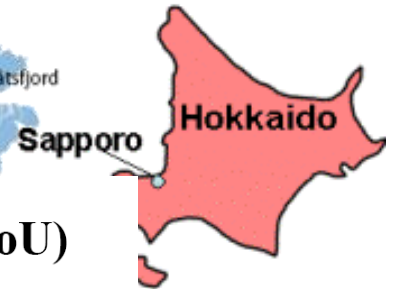
THE PORT AND AIRPORT RESEARCH INSTITUTE (PARI)

Represented by its President, Dr. Shigeo Takahashi

AND

NORWEGIAN GEOTECHNICAL INSTITUTE (NGI)

Represented by its Managing Director Dr. Lars Andresen



Norsk forskning på japanske havner



ありがとうございました！



Tusen takk til Miljøringen!

