

S9

MEQ Topic Session

Ecological effects of offshore oil and gas development and oil spills

Co-sponsored by the Northwest Pacific Action Plan (NOWPAP) of UNEP

Co-Convenors: Tatiana Belan (Russia) and Kazuichi Hayakawa (Japan)

In recent years, offshore oil and gas production expanded to new areas of the world ocean. Unfortunately, oil and gas exploration and extraction can be associated with negative ecological consequences. For example, seismic surveys may interfere with commercial fishing, installation of platforms disturb habitats of marine fish and invertebrates, and the discharge of drilling muds introduce a number of contaminants into the surrounding waters. Oil spills associated with offshore operations or with tanker accidents also threaten the marine environment. Recent spills have demonstrated vulnerability of coastal communities. Oil slicks at sea can kill or otherwise adversely affect marine birds and mammals, zooplankton, as well as the eggs and larvae of fish and invertebrates. The goal of this session is to bring together marine scientists working on these issues and to discuss what steps can be taken to minimize adverse ecological effects of offshore oil and gas production.

Wednesday, October 5, 2005 08:30-13:00

- 08:30-09:00 **Chang-Gu Kang, Seong-Gil Kang and Jeong-Hwan Oh** (Invited)
Oil spills - Risk, preparedness and response in the Northwest Pacific (S9-2245)
- 09:00-09:20 **Kazuichi Hayakawa, Maki Nomura, Takuya Nakagawa, Seiji Oguri, Takuya Kawanishi, Akira Toriba and Ryoichi Kizu**
Study on damage and recovery of coastlines for three years after the Nakhodka oil spill (S9-2300)
- 09:20-09:40 **Valentina V. Andreeva, Tatyana V. Konovalova, Paul G. Mowatt and Olga V. Samoilyuk**
Review of monitoring results in the area of Moliqpaq platform (north-eastern shelf of Sakhalin) (S9-2271)
- 09:40-10:00 **Review by A.V. Moshchenko based on the following abstracts:**
- Tatyana V. Konovalova, Alexander V. Moshchenko, Tatyana A. Belan and Nadezhda K. Khristoforova**
Alterations of biotopical conditions and variations of benthos distribution near Molikpaq platform (North-East Sakhalin Island shelf) (S9-2250)
- Alexander V. Moshchenko, Tatyana V. Konovalova and Nadezhda K. Khristoforova**
Changes of granulometric composition of bottom sediments near Molikpaq platform (North-East Sakhalin Island shelf) (S9-2260)
- Evgeniy V. Karasev, Tatyana S. Lishavskaya, Tatyana. A. Belan, Alexander V. Tkalin, Alexander V. Moshchenko and Anastasia S. Chernova**
Ecological investigations on the Sakhalin Island shelf, including Molikpaq platform monitoring: A review of FERHRI studies (S9-2294)
- Tatyana V. Konovalova, Alexander V. Moshchenko, Tatyana S. Lishavskaya and Nadezhda K. Khristoforova**
Interrelation of the contents of petroleum hydrocarbons, metals and granulometric composition of sediments near Molikpaq platform (North-East Sakhalin Island shelf) (S9-2253)
- 10:00-10:20 **Coffee Break**

- 10:20-10:40 **Takuya Kawanishi, Masayuki Kunugi and Kazuichi Hayakawa**
Monitoring chemical substances in surface sea water in North Pacific Area (S9-2552)
- 10:40-11:00 **Review by G. Moyseychenko based on the following abstracts:**
- Galina Borisenko and Galina Moyseychenko**
The quantification of natural radioactive background levels of radioactivity in offshore bottom sediments of northeastern part of Sakhalin Island (S9-2437)
- Inna Nemirovskaya, Galina Moyseychenko and Yury Blinov**
Concentrations and compositions of aliphatic and polycyclic hydrocarbons in bottom sediments off Sakhalin Island (S9-2388)
- 11:00-11:20 **Valentin I. Sergienko, Valeriy I. Petukhov, Irina G. Lisitskaya and Igor A. Vagenik**
Geo-chemical monitoring of oil and gas complex at Sakhalin shelf (S9-2548)
- 11:20-11:40 **Xuelei Zhang, R.J. Wu, Z.H. Zhang and Z.F. Dong**
Benzene toxicity to the scallop, *Chlamys farreri*, and the shrimp, *Penaeus japonicus* (S9-2211)
- 11:40-12:00 **Galina Moyseychenko and Alla Ogorodnikova**
Possible influence of accidental oil spills on the Far Eastern Sea shelf biota (S9-2379)
- 12:00-12:20 **Svetlana V. Davydova and Sergey A. Cherkashin**
Ichthyoplankton as an indicator of the state of coastal ecosystems in the areas of oil and gas deposits on Sakhalin shelf (S9-2287)
- 12:20-12:40 **Alexander Bogdanovsky, John Wardrop, Igor Kochergin, Sergei Pokrashenko, Igor Arshinov and Sergey Rybalko**
Progress in oil spill risk assessment for Sakhalin shelf conditions (S9-2620)
- 12:40-13:00 **Discussion**

Posters

- Valentin L. Andreev and Valeriy I. Petukhov**
Informational system for “Marine ecological monitoring” (S9-2558)
- Andrey P. Chernyaev**
Petroleum hydrocarbon pollution of Ussuriyskiy Bay (Japan Sea) in 2003 – 2004 (S9-2469)
- Sam Geun Lee and Eun Seob Cho**
Effects of oils and chemical dispersants on the growth of the phytoplankton, *Cochlodinium polykrikoides* (S9-2569)
- Olga N. Lukyanova, Andrey P. Chernyaev, Sergey A. Cherkashin and Svetlana A. Aleshko**
The distribution of petroleum hydrocarbons and biota assessment in Amursky Bay (Japan Sea) (S9-2237)
- Galina Moyseychenko and Alla Ogorodnikova**
The assessment of acoustic measurements’ impact upon animal plankton of far eastern seas (S9-2538)
- Oleg V. Kusailo, Yuri Y. Nikonov and Gennady A. Kantakov**
Determining bottom sediments distribution by hydroacoustic monitoring (S9-2511)
- Valeriy I. Petukhov, Irina G. Lisitskaya and Alexandra V. Romanchenko**
Research of the composition of petroleum products to identify petroleum contamination (S9-2557)
- Sergey Rybalko, Igor Kochergin, Victor Putov and Tatyana Belan**
Complex environmental impact assessment within marine seismic surveys (S9-2619)