





## OIL SPILL INDIA 2018

5<sup>th</sup> International Conference & Exhibition

5 - 6 July 2018, Constitution Club of India, New Delhi, India





oilspillindia

🕑 (G+ 🖸

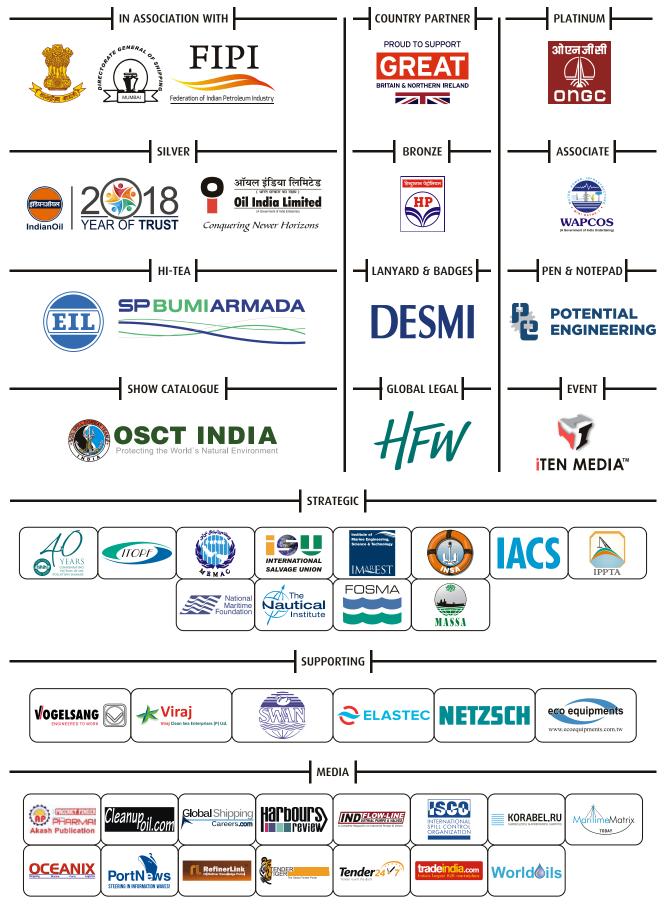
in f

www.oilspillindia.org





## **OUR PARTNERS**







# OIL SPILL INDIA 2018 POST SHOW REPORT

## CONTENTS

WELCOME MESSAGE	04
CONFERENCE PROGRAM	16
HALL OF FAME	19
SUMMARY	20
SHOW HIGHLIGHTS	23
GLIMPSES 2018	27
TESTIMONIALS	28
PARTICIPATING COMPANIES	29
ORGANISER	30





#### नितिन गडकरी NITIN GADKARI





मंत्री सड़क परिवहन राजमार्ग एवं पोत परिवहन भारत सरकार, परिवहन भवन, नई दिल्ली—110 001 MINISTER OF ROAD TRANSPORT, HIGHWAYS & SHIPPING GOVERNMENT OF INDIA PARIVAHAN BHAVAN, NEW DELHI-110 001

#### MESSAGE

I am glad to know that the Energy and Climate Initiatives Society (ENCIS) is organising the 5<sup>th</sup> edition of this global forum – "**Oil Spill India 2018**" during 05<sup>th</sup>-06<sup>th</sup> July 2018 in New Delhi.

The longest coastline with increased maritime trade, exploration activities with handling of large quantum of liquid bulk cargo at the ports and the push for Port-led development under Sagarmala requires development of infrastructure and simultaneously, focus on environment.

The Ministry of Shipping has taken several proactive interventions for the development of the maritime sector including the "Green Port" Initiative, which I am sure, would go a long way in helping the ports in the country for procurement of pollution response equipment necessary for keeping us prepared to face accidents.

I convey my best wishes to the Conference.

(Nitin Gadkari)

November 03, 2017 New Delhi





धर्मेन्द्र प्रधान ଧର୍ମେନ୍ଦ୍ର ପ୍ରଧାନ Dharmendra Pradhan





पेट्रोलियम और प्राकृतिक गैस ; कौशल विकास एवं उद्यमशीलता मंत्रालय भारत सरकार, नई दिल्ली

मंत्री

Minister Petroleum & Natural Gas ; Skill Development & Entrepreneurship Government of India New Delhi

Oil spill disasters & blowouts are unfortunate events that can occur during the process of oil & gas exploration, development, transportation, storage or processing of hydrocarbons. These events could be triggered both onshore and offshore due to various factors including extreme weather conditions which are unpredictable. The consequences of an oil spill or blowout can have disastrous consequences for the society, economically, environmentally and socially. Past & recent incidents across the globe have initiated intense media attention and political uproar calling for governments' stringent response and initiatives to prevent similar disasters in future.

MESSAGE

The Ministry of Petroleum and Natural Gas, Government of India, its regulatory bodies – The Directorate General of Hydrocarbons (DGH) & Oil Industry Safety Directorate (OISD) and the National Oil Companies, together with, the Indian Coast Guard, have thus been according the highest priority to the nationwide implementation of the comprehensive Oil Spill prevention & response management systems.

The Ministry is also committed to ensure that any contractor prior to seeking requisite permits must have in place the contingency, emergency response and disaster management plans for oil spills. These plans must be specific to different stages of the Contractor's /Operator's operations and are recommended to include the installation of oil spill detection software in the VTMS radars at Ports and VATMS radars of oil companies along the coastline.

Mandating & executing the requirements set down by the international Convention on Oil Pollution Preparedness Response and Cooperation (OPRC 90) Article 6 and the National Oil Spill Disaster Contingency Plan (NOS-DCP), the Ministry is pooling resources and integrating the capabilities of other industry stakeholders including those of the Ministry of Shipping, Ministry of Environment, Forest & Climate Change, The Directorate General of Shipping & local Port Authorities, for this national cause.

One of the most significant strides made in this direction is the Oil Spill India Conference & Exhibition (OSI)-the only conference of its type in India & one of the world's leading industry forums on Oil Spill Prevention, Response & Mitigation. Attended by global stakeholders, regulators, industry experts, scientists & academia, the continuing success of OSI has not only reinforced the need for collaboration on the prevention & response frameworks but also on concurrently building an informative schedule of the raising global standards, thus helping implementation of the best initiatives on Oil Spill Response (OSR) in the region.

I am sure the 5<sup>th</sup> Oil Spill India Conference & Exhibition, scheduled to be held during 05-06 July, 2018 in the capital city of India, New Delhi, would continue its tradition of providing a global forum for stakeholders commitment for Environmental Sustainability, Oil Spill Preparedness & Prevention, the need for Synergy in Oil Spill Response & Excellence in Restoration efforts.

It thus gives me immense pleasure to welcome OSI 2018 conference participants from across the world & accord my best wishes to all for a very meaningful & successful forum.



Ministry of Petroleum & Natural Gas: 201-A, Shastri Bhawan, New Delhi-110001 Tel: +91-11-23386622 FAX: +91-11-23386118 Ministry of Skill Development & Entrepreneurship: 2<sup>rd</sup> Floor, Annexe Building Shivaji Stadium, Shaheed Bhagat Singh Marg, Connaught Place, New Delhi-110001, Tel.: +91-11-23450811, FAX: +91-11-23450864









Ocean are central to life on earth. They are rich in oil and mineral resources, suppliers of oxygen, absorbers of carbon dioxide, a virtual heat sink, rich in biodiversity, which have emerged on global economic highway, for transit of seaborne trade.

With extensive maritime trade transitting the oceans oil spills regrettably continue to happen consequently may countries continue to face the associated problems of such oil spill being directly or indirectly connected to the spill. This leads to detrimental environmental effect on the marine and terrestrial natural habitat while having serious repercussions on the regions economic growth.

Due to such oil spill, usually by accident rather than been engineered ones, we are witnessing pollution of the oceans and contamination of the natural marine habitat with adverse impact of climate change on oceans. Consequently, a large percentage of extreme climate events turn into natural disasters and the navies and the Coast Guard of the respective countries have to be ready to provide rapid response in terms of Humanitarian Assistance and Disaster Relief. In order to overcome recurrence of oil spills and to fight the ill effects of such a maritime disaster it is essential that public awareness is generated on this very important issue. In this regard the Oil Spill India (OSI) has been conducting an International Conference & Exhibition on Oil Spill Prevention, Preparedness, Response & Restoration systems over the last five years. This international conference provides a global forum for Governments, regulators, industry, academia and response organizations to discuss, deliberate, share and learn the best of practices, technologies and experiences on oil spill management. It is heartening to note that some of the key takeaways form the precious editions of the conference have been successfully implemented by various nodal agencies and regulators.

The Edition of the OSI aims at discussing the world's worst spill as case studies to increase public sensitivities to oil spill disasters, while looking at stimulating landscapes of Oil Spill Prevention, Preparedness, Response and Restoration activities. The concurrent exhibition will also provide an insight to the latest in global technology and equipment for prevention and response of oil spill.

The seas around us are gaining new found importance on each day goes by and I have no doubt that the current century is the century of the seas. We therefore have a responsibility to ensure 'Swakch Sagar' or clean oceans for our future generations.

I wish OSI and its organisers all the very best for a fruitful and meaningful two day deliberations towards their endeavor to provide effectual knowledge sharing and networking opportunities for this global cause.

Admiral RK Dhowan, PVSM, AVSM, YSM (Retd) Chairman, National Maritime Foundation









Dear Industry Colleagues,

It gives me immense pleasure to welcome you all to Oil Spill India 2018-the 5th International Conference & Exhibition on Oil Spill Prevention, Response & Restoration here in New Delhi.

Organised by The Energy & Climate Initiatives Society (ENCIS) in association with the Directorate General of Shipping, Ministry of Shipping, Government of India & The Federation of Indian Petroleum Industry (FIPI), the theme of OSI 2018 "Commitment, Synergy & Excellence" underpins our commitment towards Environmental Sustainability, Oil Spill Preparedness & Prevention, the need for "Synergy" in Spill Response & "Excellence" in Restoration efforts.

The state of oil spill prevention, prepardeness & response is also more important than ever due to increasing global regulatory compliances & heightened public concerns over the massive social and environmental impacts of an oil spill disaster.

Given the humongous consequences of an oil spill disaster, spill prevention is thus a strategic priority. Companies with stellar safety records have often realised post spill disasters that serious hazards could go undetected for years. Catastrophic spill events may still occur, the risk will never be eliminated, but these risks will have to be better managed and reduced.

Oil Spill India 2018 is thus aimed to engage the collective experience & expertise of regulators, industry, academia and technology organizations to discuss, deliberate, share & learn the best of engineering practices and leadership traits that would drive the industry to a "zero spill" culture.

I convey my best wishes to all the participants for a very interactive, successful & meaningful conference. Thank you for your participation.

**Dr. R. K. Malhotra** Director General FIPI & Conference Chairman - OSI 2018









Dear Industry Colleagues,

It is my pleasure & privileged opportunity to welcome you all at the 5th edition of Oil Spill India Conference & Exhibition. The only conference of its type held in India, Oil Spill India has over the years evolved to become one of the most important international forums dedicated to Oil Spill Planning, Prepardeness, Response & Restoration systems. The forum partakes at a critical juncture in brining together the global spill response industry & its stakeholders in the region to deliberate and collaborate on the prevention & response frameworks whilst concurrently build an informative schedule of the raising Global Standards.

Organized in association with the "Directorate General of Shipping", Ministry of Shipping & The Federation of Indian Petroleum Industry (FIPI), Oil Spill India 2018 would provide an excellent forum for sharing of valued perspectives and brainstorming on OSR preparedness, developments, methodologies, techniques or models used for combating spills of any kind or source.

With more than 400 industry experts, representing 200 plus organisations from across 25 countries from across the world, OSI 2018 woud showcase 12 intercative sessions, a concurrent exhibition with the latest in global technologies & equipments and a special Gala Dinner following the traditions of previous OSI conferences.

Finally, I would like to acknowledge the immense support of OSI 2018 Partners & our Sponsors, without their outstanding contribution and nearly twelve months of planning, we would not have such an excellent conference.

I convey my best wishes to all the participants including the Speakers, Delegates, Exhibitors & hope that you will find the conference both enjoyable and valuable whilst also enjoying the architectural & cultural beauty of New Delhi.

T. K. SENGUPTA Director (E&P) FIPI & Conference Co-Chairman - OSI 2018









Dear Industry Colleagues,

As Co-Chairman Advisory Board-The Energy & Climate Initiatives Society (ENCIS), it is my great pleasure to welcome you all to Oil Spill India 2018-International Conference & Exhibition here in New Delhi.

One of the central goals of the Oil Spill India (OSI) Conference, conceptualized and founded in 2011 as an industry led global forum jointly in association with the Indian Coast Guard - The Central Coordinating Authority for combating oil spills in Indian waters & India's flagship Oil Producer The Oil and Natural Gas Corporation Ltd (ONGC), was to partake with global stakeholders & reaffirm the Industry's commitment for the protection of the Environment; promoting responsible cultures to be incorporated at all levels, from the small communities where the industry operates and throughout their global businesses.

Over the past 6 years & 4 editions, OSI- the only conference of its type held in India & one of the top forums in the world, has continually evolved, meeting the changing needs and interests of the global community that it serves. The 2018 edition of OSI will be no exception & will continue to build upon it's past success, providing a forum on stakeholders commitment for Environmental Sustainability, Oil Spill Preparedness & Prevention, the need for Synergy in Oil Spill Response & Excellence in Restoration efforts.

We are very grateful to the Conference Chairman Dr. R. K. Malhotra, DG, FIPI & Conference Co-Chairman, Shri. T. K. Sengupta, Director (E&P), FIPI for their continued guidance & support in putting together an engaging programme spread over 12 thought-provoking sessions over 2 days. We are fortunate to have the support of a great cadre of sponsors including ONGC, OIL India Ltd, IOCL, HPCL, SP Armada and other leading organisations, whom I hope you will get to meet during the conference.

I sincerely hope you make the most of the debates and networking to follow. With this I convey my best wishes to all the participants for a very interactive, successful & meaningful conference.

Thank you for your participation.

Anand Kumar Former Director (R&D), IOCL & Co-Chairman, ENCIS









The IOPC Funds would like to welcome delegates to Oil Spill India 2018. We are delighted to return to this event which this organisation is very proud to support once again as a strategic partner. Having attended and participated in previous editions of the Conference we have seen it develop and grow into an increasingly informative, interactive and successful event, attracting key representatives from governments, response organisations, industry and the oil spill community in general.

India is a key Member of the IOPC Funds. Oil consumption in the country has increased considerably in recent years and in 2017 it was confirmed that the oil industry in India had become the largest contributor to the IOPC Funds with over 210 million tonnes of oil imports reported in 2016. Given this transport activity and its geographical location, India is at high risk of suffering an oil spill. As an intergovernmental organisation providing compensation for victims of oil pollution damage, it is vital for the IOPC Funds to increase awareness of the work of the organisation and the international liability and compensation regime in general. With this in mind, we are very much looking forward to delivering presentations during the Conference and welcoming visitors to our exhibition space, which we are delighted to share this year with the International Group of P&I Associations. Representing the P&I Clubs, who we often partner with when dealing with claims from an incident, the International Group will join us to be on hand to offer information about the international regime and to meet directly with potential future claimants and other stakeholders.

We congratulate and extend our appreciation in advance to the event organisers for providing such an opportunity to the various stakeholders and global expertise at OSI 2018 and look forward to exploring this year's theme of Commitment, Synergy and Excellence together.

We very much look forward to meeting you and learning from one another over the course of this two-day event.

José Maura Director IOPC Funds









Dedicated to safe ships and clean seas, IACS makes a unique contribution to maritime safety and regulation through technical support, compliance verification and research and development. More than 90% of the world's cargo carrying tonnage is covered by the classification design, construction and through-life compliance Rules and standards set by the twelve Member Societies of IACS.

IACS is pleased to support the work of ENCIS and to be a Strategic Partner in OSI 2018. We send our best wishes to all participants and contributors for a successful event.

**Robert Ashdown** Secretary General International Association of Classification Societies ltd.









The IMarEST is very proud to support Oil Spill India 2018 as a strategic partner. We thoroughly endorse and encourage the central goal of the conference which is to reaffirm the industry's commitment to the protection of the environment; promoting responsible cultures incorporated at all levels, from the small communities where the industry operates through to global businesses. This closely aligns with the IMarEST vision of a world where marine resources and activities are sustained, managed and developed for the benefit of humanity.

The protection of the environment and mitigation against oil spills is of utmost importance and it is refreshing to see this global forum jointly led in association with the Indian Coast Guard and India's flagship oil producer The Oil and Natural Gas Corporation Ltd (ONGC).

As a learned society for all marine professionals, we stand by the OSI 2018 commitment to environmental sustainability, oil spill preparedness and prevention, the need for synergy in oil spill response and excellence in restoration efforts. We hope the 2018 conference is a huge success and will continue to support their vision and goal.

#### **David Loosley** Chief Executive The Institute of Marine Engineering, Science and Technology





مركز المساعدة المتبادلة للطوارئ البحرية

Marine Emergency Mutual Aid Centre (MEMAC)



REGIONAL ORGANIZATION FOR THE PROTECTION OF THE MARINE ENVIRONMENT

ارمنظره الاقليرية لحرايه البيئه البحرية



WELCOME MESSAGE

Your Excellencies, Distinguished Guests, Delegates and Representatives of Different Companies and Institutions, Ladies and Gentlemen,

As Director of the Marine Emergency Mutual Aid Centre (MEMAC), we have great pleasure to participate in the International Conference & Exhibition, which reflexes the Oil Spill India 2018, and convey best regards and gratitude of our Member States to you.

We feel, dear colleagues, that we are all on board of the same ship as we all share almost the same problem which is the protection of the marine environment from pollution, and thus comes the importance of cooperation and coordination among us, which can be mainly expressed by 'exchange' of updated information and new experience.

Furthermore, the Oil Spill India 2018 will be a great opportunity for all of governments, industries and the scientific institutions to meet and share knowledge which will lead to solve many obstacles we are all facing and gain update knowledge in the field of protection of the marine environment. This will no doubt be a great contribution from all of us towards our Earth and the Marine Environment in preserving and protecting it for our future generations.

Captain A. M. Al-Janahi MEMAC Director

> ص.ب: ١٠١٢ المنامــة - مماكنة البحـرين - هــاتف: ١٧٢٧٤٥٥٤ - فاكــس: ١٧٢٧٤٥٥١ - فاكــس: ٧٢٧٤٥٥١ - فاكــس: ٩٠١٢٢ P.O. Box. : 10112, MANAMA, KINGDOM OF BAHRAIN, TEL: 17274554 - FAX: 17274551 E-mail: memac@batelco.com.bh

Web site: http://www.memac-rsa.org









An oil spill is a major disaster for any country, more so in case of a country which has a coastline in excess of 7000 kms. While we would all like to avoid such an environmental disaster, accidents do happen. At such times, it is important that we are able to be ready to face such a catastrophe.

Oil Spill India (OSI) 2018 is a forum which will provide the relevant persons to come together and debate, discuss and deliberate on ways and means to deal with such a situation as well as preventive measures that would mitigate the possibility of such a disaster.

We understand that the theme this year is 'Commitment, Synergy, Excellence' which speaks to the intention of the organisers and the focus area of this conference.

The Indian National Shipowners' Association supports such efforts and feel that these regular interactions and debates can make a difference to this world that we live in and emphasise the importance to adopt a different attitude towards our world. This conference will take a look at the role we all play, as individuals, corporations and society as a whole, so that we can hopefully make better choices for the future. This, by itself is an important step forward.

We wish the conference great success.

Anil Devli CEO Indian National Shipowners' Association









On behalf of ITEN Media, it is my privilege to extend you all a warm welcome to the 5<sup>th</sup> edition of Oil Spill India-International Conference & Exhibition.

Organized by The Energy & Climate Initiatives Society (ENCIS) & managed by ITEN Media, OSI 2018 will provide an exclusive technical forum for participants to discuss, deliberate, exchange and explore the innovations in oil spill prevention, preparedness, response & restoration. It also strives to be a focused networking forum, providing you with the opportunity to meet and interact with the leading experts, researchers, friends and colleagues and key industry partners.

We are honored & thankful to OSI 2018 Partners, The Directorate General of Shipping, Ministry of Shipping, Government of India, the Federation of Indian Petroleum Industry (FIPI), country partner Great Britain & Northren Ireland and our esteemed sponsors like ONGC, IOCL, Oil India Ltd, HPCL, SP BUMI Armada among many others for their kind support to this conference, their continued benefaction is a testimonial of the exceptional value that OSI offers both as a traditional conference & a global networking forum.

Showcasing over 50 prolific national & international speakers, nearly 400 industry delegates & 30+ Exhibitors, the success of OSI 2018 has been a reflection of the immense support of our Conference Advisory Committee Members; Conference Chairman, Dr. R.K. Malhotra, DG, FIPI, Conference Co-Chairman, Shri. T.K. Sengupta, Director (E&), FIPI & Shri. Anand Kumar, Co-Chairman, ENCIS. Without their outstanding contribution, guidance & support this conference would not have been possible.

I would like to convey our special thanks to our esteemed speakers, delegates, exhibitors & media partners from across the world for joining us at OSI 2018.

I convey my best wishes to all the participants for a very interactive, successful & meaningful conference.

Abhishek Bhatnagar CEO, iTEN Media Pvt. Ltd.







### **DAY 1, THURSDAY, 05<sup>™</sup> JULY 2018**

#### 0800 - 0930 HRS. - REGISTRATION

#### 0930-1030 HRS - INAUGURAL SESSION

0930 Hrs - Arrival of Chief Guest

0930 - 0935 Hrs - Announcement by Emcee

0935 - 0940 Hrs - Welcoming of Chief Guest & Dignitaries - Presentation of Bouquets

0940 - 0945 Hrs - Lamp Lighting Followed By Ganesh Vandana

0945 - 0950 Hrs - Welcome Address by Conference Co-Chairman - Shri T. K. Sengupta, Director (Exploration & Production), Federation of Indian Petroleum Industry

0950 - 0955 Hrs - Theme Address by Conference Chairman - Dr. R. K. Malhotra, DG, Federation of Indian Petroleum Industry

0955 - 1005 Hrs - Special Address by Guest of Honor, Mr. Jose Maura, Director, IOPC Funds

1005-1025 Hrs - Inaugural Address by Chief Guest, IG VS Pathania, PTM,TM, Deputy Director General (Policy & Plans) Indian Coast Guard

1025-1030 Hrs - Vote of Thanks by Shri. Anand Kumar, Co-Chairman, ENCIS

#### 1030 - 1100 HRS. - EXHIBITION INAUGURATION / TEA-COFFEE BREAK

#### 1100-1200 HRS - LEADERSHIP PANEL

(Global, Regional & National Initiatives)

#### PANELISTS:

- 1. Shri. S. RATH, Member, Petroleum and Natural Gas Regulatory Board (PNGRB)
- 2. Shri. P. K. Sharma, Director Operations, Oil India Limited
- 3. Mr. Jose Maura, Director, IOPC Funds
- 4. Shri. Arti Chopra, Sr Exe Preparedness Solutions, OSRL

5. Dr. P. B. Rastogi, Former Advisor to the Govt. of India, Ministry of Environment, Forests and Climate Change **MODERATOR:** Shri. Ashok Varma, Former Director (Onshore), ONGC Limited & Co-Chairman, ENCIS

#### 1200-1300 HRS - TECHNICAL SESSION - I

(Emerging & Future Risks in Marine Environment)

#### **SESSION CHAIRMAN**

DIG KR Deepak Kumar, OiC CGTC Kochi, Indian Coast Guard

#### **SPEAKERS:**

- 1. Mr. Badal Roy, General Manager Head Offshore Safety, ONGC Limited "Oceans at Risk"
- 2. Capt. Sivaraman Krishnamurthi, Past President, The Nautical Institute, London "Navigational Risk in Indian Seaports-Isn't Prevention better than cure"
- 3. Ms. Anne Reglain, Technical Adviser, ITOPF Ltd
  - "Global Trends and Case Study"

#### 1300 - 1400 HRS. - LUNCH

#### 1400-1500 HRS - TECHNICAL SESSION - II

(Prevention, Contingency Plans & Integrated Response Capabilities)

#### **SESSION CHAIRMAN:**

Dr. J. S. Sharma, Former GGM Corporate HSE, ONGC Limited

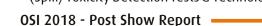
#### **SPEAKERS:**

- 1. Capt. D C Sekhar, Director, AlphaMERS Ltd "Response capability - Closing the gaps"
- 2. Ms. Arti Chopra, Senior Business Development Executive, OSRL "An Oil Spill Preparedness Journey"
- 3. Mr. Trond Gulbrandsoy, International Sales Manager, AllMaritim AS "New Oil Spill Response strategy making oil Spill Response more cost efficient"

#### 1500-1530 HRS. - HI - TEA

16

1530-1630 HRS - TECHNICAL SESSION - III (Spill/Toxicity Detection Tests & Technologies)











#### **SESSION CHAIRMAN**

D. B. Kamble, General Manager HSSE (Corporate), BPCL

#### **SPEAKERS:**

- 1. Capt. Kuldeep Singh, Vice President Technical, Gallagher Marine Systems Llc "Oil Spill - A perspective"
- 2. Dr. Maria Mansurova, Junior Scientist, Federal Institute for Materials Research and Testing (BAM), Germany "Spectrocube: A sensor for rapid oil test in water and soil"
- 3. Dr. Gopal Bera, Assistant Research Scientist, Texas A & M University "Impacts of Deep-Water Horizon Oil spill on deep-sea species: Use of passive dosing and Petrotox Model"

#### 1630-1730 HRS - TECHNICAL SESSION - IV

(Technologies - Mapping, Modelling & Remote Sensing)

#### **SESSION CHAIRMAN**

Shri. R. K. Mehra, Former ED, BPCL

#### SPEAKERS:

- 1. Dr. Theo Hengstermann, Business Development & Sales, Optimare Systems GmbH "Quantitative Airborne Pollution Surveillance; Technology and Recent Results"
- 2. Ms. Nethraa Ganesan, Nethraa Ganesan, Viraj Clean Sea Enterprises Pvt Ltd "The Tactical Sheet...a serious Oil Spill Response Approach"

#### **1730 HRS - EXHIBITION VISIT**

#### 1900-2200 HRS. - NETWORKING DINNER

#### END OF DAY 1

#### **DAY 2, FRIDAY, 06<sup>™</sup> JULY 2018**

#### 0930-1030 HRS - TECHNICAL SESSION - V

(Advances in Response Management & Mitigation)

#### **SESSION CHAIRMAN**

Mr. Joydev Lahiri, GM (Engg & HSE), Oil India Limited

#### SPEAKERS:

- 1. Mr. Kevin Mirise, CFA, COO, MicroSorb "Practical Response for Volatile Fuel Spills on Water and Land"
- 2. Mr. Michael Green Lauridsen, Segment Director Oil Spill Response APAC, DESMI Singapore Pte Ltd "Oil Spill Equipment Systems"
- 3. Mr. John Hughes, Engineering Design Manager, Ayles Fernie International "Dispersant Application Engineering"

#### 1030-1130 HRS - TECHNICAL SESSION - VI

(Case Studies & Emerging Technologies) SESSION CHAIRMAN Shri. R. K. Mehra, Former ED, BPCL SPEAKERS:

- 1. Mr. Pallav Kumar Singh, National Head for Outreach and Programme Implementation, Federation of Associations of Small Industries of India
  - "Practical Response for Volatile Fuel Spills on Water and Land"
- Mr. Udai A. Dutta, Dy. CE O&GPS, Oil India Ltd "Disaster Management in a High Pressure Producing Well of Oil India Limited"
- 3. Dr. Sakshi Gupta, Scientist D, Explosives Agent Detection Division, Laser Science and Technology Centre (LASTEC), DRDO

"Oil spillage identification using Laser Induced Fluorescence (LIF)"

4. Mr. Aashish Panwar, Member, Social and Environment Committee, UPES SPE Student Chapter "Controlling the Extent of Oil Spill Using Modified Oil Digesting Microbes"





#### 1130-1200 HRS. - NETWORKING OVER TEA/COFFEE

#### 1200-1300 HRS - TECHNICAL SESSION - VII

(Conventions, Claims & Compensation - Developments & Industry Perspectives)

#### SESSION CHAIRMAN

Mr. Jose Maura, Director, IOPC Funds

#### **SPEAKERS:**

- 1. Mr. Thomas Liebert, Thomas Liebert, IOPC Funds, London "The IOPC Funds: Recent Developments"
- 2. Mr. Tony Paulson, Director, The West of England (International Group of P&I Clubs) "The 2003 Supplementary Fund Protocol and STOPIA/TOPIA: An IG perspective"
- 3. Mr. Dominic Johnson, Partner, Holman Fenwick Willan (HFW) "Oil Spill Compensation: Who pays and how much? A global perspective"

#### 1300 - 1400 HRS. LUNCH

#### 1400-1500 HRS - TECHNICAL SESSION - VIII

(Inland Spills, Shoreline Cleanup & Wildlife Response)

#### **SESSION CHAIRMAN**

D. B. Kamble, General Manager HSSE (Corporate), BPCL

#### **SPEAKERS:**

- 1. Ms. Sangeeta Nemani Venkata, Manager- Technical, HPCL "Effective handling of Soil contamination and oil spill recovery on the land surface: Case study of HPCL"
- Mr. Deepam Sheth, Marketing Head, Potential Engineering "Use of 'Electro-mechanical and Environment Automation Systems' (EMEAS) for Pollution Control and Recovery in API separators, Storm water pits, oil catchment areas and Inland water bays"
- 3. Mr. Bokam Rajasekhar, Ph.D Scholar, Environmental and Water Resources Engineering, IIT Madras "Characterization of petroleum contaminated ground water due to an inland oil spill in Chennai and Human health risk assessment by Probabilistic methods."

#### 1500-1530 HRS. NETWORKING OVER TEA/COFFEE

#### 1530-1630 HRS - TECHNICAL SESSION - IX

(Disaster Resilience: Assessment & Remediation)

#### SESSION CHAIRMAN

Shri. Anand Kumar, Co-Chairman, ENCIS

#### **SPEAKERS:**

- Dr. Banwari Lal, Senior Director, The Energy and Resources Institute "A Case Study; Bioremediation of Oil Spill in Kuwait Oil Fields by using KT-Oil Zapper"
- 2. Dr. Manoj Kumar Upreti, Sr Research Manager (Biotechnology), Indian Oil R&D
- "Confined Space/Bioreactor based process for bioremediation: From Lab to Field" 3. Dr. K. Ramesh, Research Officer, HPCL R&D

"Development of Novel Soft Porous Materials for Mitigation of Oil Spillage on Water"

#### 1630-1730 HRS - VALEDICTORY SESSION

(Crisis Leadership: Communication & Engagement)

#### MODERATOR

Shri. Ashok Varma, Former Director (Onshore), ONGC Limited

#### **PANELISTS:**

- 1. Shri. Anand Kumar, Co-Chairmain, ENCIS
- 2 Shri. T.K. Sengupta, Director (Exploration & Production), Federation of Indian Petroleum Industry
- 3. Mr. Jose Maura, Director, IOPC Funds
- 4. Mr. Dominic Johnson, Partner, Holman Fenwick Willan (HFW)

#### END OF DAY 2



SESSION PARTNER





#### HALL OF FAME





IG VS PATHANIA, РТМ, ТМ Deputy Director General (Р&Р) Índian Coast Guard



ASHOK VARMA Former Director (Onshore) ONGC Limited



DR. J S SHARMA Former Corporate HSE ONGC Limited



ANNE REGLAIN Technical Adviser ITOPF



ARTI CHOPRA Sr. Business Development Executive OSRİ



PALLAV KUMAR SINGH National Head (OPI) FASII



DR. K. RAMESH Assistant Manager HPCL R&D



DR. R. K. MALHOTRA Director General FIPI & Conference Chairman, OSI 2018



JOSE MAURA Director IOPC Funds



DR. BANWARI LAL Senior Director TERI



TONY PAULSON Director IGP&I Club



**DR.THEO HENGSTERMANN** Business Development & Sales Optimare Systems GmbH



DR. SAKSHI GUPTA Scientist D LSTC, DRDO



DEEPAM SHETH Marketing Head Potential Engineering

S RATH Member Petroleum And Natural Gas Regulatory Board



DIG KR DEEPAK KUMAR OiC CGTC Kochi Indian Coast Guard



BADAL ROY GM - Head Offshore Safety ONGC Ltd



DOMINIC JOHNSON Partner Holman Fenwick Willan



DR. MARIA MANSUROVA Junior Scientist BAM



CAPT. D C SEKHAR Director AlphaMERS Ltd



NETHRAA GANESAN Head (HR, Admin & Finance) Viraj Clean Sea Enterprises



Director (Operations) Oil India Limited



CAPT. S KRISHNAMURTHI Former President The Nautical Institute



JOYDEV LAHIRI GM - Engg & HSE Oil India Limited



**KEVIN MIRISE, CFA** C00 MicroSorb



International Sales Manager AllMaritim AS



DR. GOPAL BERA Assistant Research Scientist Texas A & M University



BOKAM RAJASEKHAR Ph.D Scholar Environmental and Water Resources Engineering, IIT Madras



T. K. SENGUPTA Director (E&P) FIPI & Conference Co-Chairman, OSI 2018



THOMAS LIEBERT Head, External Relations & Conference IOPC Funds



D B KAMBLE GM - HSSE (Corporate) BPCL



CAPT. KULDEEP SINGH Vice President - Technical Gallagher Marine Systems LLC



JOHN HUGHES Engineering Design Manager Ayles Fernie International



**UDAI ANAND DUTTA** Deputy Chief Engineer Oil India Ltd



AASHISH PANWAR Member, Social & Environment Committee UPES SPE Student Chapter



ANAND KUMAR Co-Chairman **ENCIS** 



R K MEHRA Former Executive Director BPCL



DR. P B RASTOGI Former Advisor to the GoI MOEFCC



MICHAEL GREEN LAURIDSEN Segment Director Oil Spill Response APAC DESMI Singapore Pte Ltd



N V SANGEETA Manager- Technical HPCL



DR. MANOJ KUMAR Sr Research Manager (Biotechnology) Indian Oil R&D

19













There are thousands of oil and chemical spills in coastal waters around the nation every year. The causes of these spills range from small ship collisions to fuel transfer mishaps, leakages from offshore construction platforms, to massive spill events. Oil Spill India (OSI), known for its rigorous work in this field, organized their 5<sup>th</sup> Annual Conference & Exhibition at the plush Constitution Club of India, New Delhi to highlight the global concerns on protection of marine environment.

The exclusive two-day conference held on July 05<sup>th</sup> & 06<sup>th</sup> focused on commitment towards preserving the marine environment and synergic efforts using technology to combat the aftermath of disasters. Representative form the Indian Coast Gard, ONGC, IOCL, BPCL, ITOPF, IOPC Funds, OSRL, P&I club, OSROs, OEMs & related sectors, encompassing entire Oil & Gas + Maritime industry, were amongst the participants.

The Chief Guest for the event was IG VS Pathania, PTM, TM, Deputy Director General (Policy & Plans) Indian Coast Guard. Guests of Honour were Shri T. K. Sengupta, Director (Exploration & Production), FIPI, Dr. R.K. Malhotra, DG, FIPI, Mr. Jose Maura, Director, IOPC Funds & Shri. Anand Kumar, Co-Chairman, ENCIS.

The Congress kick-started with and inspiring Welcome Address by Conference Co-Chairman - Shri T. K. Sengupta, Director (Exploration & Production), FIPI, Special Address by Conference Chairman - Dr. R. K. Malhotra, DG, FIPI, Special Address by Guest of Honor, Mr. Jose Maura, Director, IOPC Funds, Inaugural Address by Chief Guest, IG VS Pathania, PTM,TM, Deputy Director General (Policy & Plans) Indian Coast Guard & Vote of Thanks by Shri. Anand Kumar, Co-Chairman, ENCIS.

The opening Leadership Panel discussion focused on Global, Regional & National Initiatives. The panelists were S. Rath (Member, PNGRB) threw light on how oil India limited came into existence and the glorious days of India petroleum Industry that began with its Inceptions. He desired that some pilot project can be undertaken to use LNG as fuel for vessels working in Indian sea and also in the backwater boats in Kerala to reduce the chance of oil spill and also to take care of the climate. The same is extensively used in Norway. He also discussed the Socio economic issues that arises after an oil spill; P. K. Sharma (Director Operations, Oil India Limited) enlighten us with the story of discovering of oil in India and the glory the Indian oil industry has reached since digging up the first well at Digboi. He also talked about innovating in oil tourism in northeast India. He brought out his experience of oil spill from a trunk oil pipeline leakage due to sabotage in Brahmaputra river of Northeast region and how that can be controlled effectively at a fast pace; **Jose Maura (Director**, **IOPC Funds)** explained how IOPC promotes safer shipping and transport while providing assistance training and tools for combating oil spills. He maintained that our efforts are not just enough and more needs to be done. He also guoted "All have to stand together for India to become strong"; Arti Chopra (Sr Exe -Preparedness Solutions, OSRL) focused her talk on delivering urgent regional response for combating oil Spills. She highlighted upon the OSRL's emergency response tactics; & Dr. P.B. Rastogi (Former Advisor to the Govt. of India, MoEFCC) encourages the companies to take commitment to environmental sustainability and to research on toxicity reduction technology. He also encouraged the corporate to collaborate and develop research together. The Panel discussion was Moderate by Shri. Ashok Varma, Former Director (Onshore), ONGC Limited.

The first technical session highlighted Emerging & Future Risks in Marine Environment. The session Chaired by DIG KR Deepak Kumar, OiC CGTC Kochi, Indian Coast Guard had Badal Roy (General Manager - Head Offshore Safety, ONGC Limited) discussed the issue of ocean reserves being overdrawn and spoke of unsustainable development and threats to the oceans. Sir highlighted the emerging need to harness oceanic energy and promote marine tourism; Capt. Sivaraman Krishnamurthi (Past President, The Nautical Institute, London) discussed the eminent need to improve the quality of the Indian ports. He drew the audience's attention towards the carelessness of operators while unloading the oil tankers which results into oil spilled waters near ports. He suggested Double hull concept and increased penalties for oil tanker to stop this problem & Anne Reglain (Technical Adviser, ITOPF Ltd) brought to light the overlooked oil spill cases from the Indian Coasts. Talking about the incidents at the Chennai coast, she highlighted various challenges like lack of necessary







equipments and lack of training as the most eminent problems there.

Dr. J. S. Sharma, Former GGM Corporate HSE, ONGC Limited chaired the second technical session in which Prevention, Contingency Plans & Integrated Response Capabilities were discussed. The speaker were Capt. D C Sekhar (Director, AlphaMERS Ltd) introduced the audience to a nonprofit foundation International Spill Control Organization, ISCO which provides guidelines for oil spill response strategies. He discussed the problem of group V sinking oils, which are rather forgotten about during the oil spill combat procedures. He discussed how these affect the marine flora and fauna. He urged the corporate to develop night time response services; Arti Chopra (Senior Executive- Preparedness Solutions, OSRL) talked about oil spill emergency management, plan development and structural approach for oil spill response. She focused on the necessity of training the employees in oil spill response exercises to reduce futher gaps & Trond Gulbrandsoy (International Sales Manager, AllMaritim AS) pressed on improving the mechanical oil spill response strategy and developing products that could actually make a difference. He focused on improving the existing technology and conventional systems and to deliver better options for preparedness in the market.

The third technical session of the day was chaired by D. B. Kamble, General Manager HSSE (Corporate), BPCL with the theme "Spill/Toxicity Detection Tests & Technologies". The speakers were Capt. Kuldeep Singh (Vice President - Technical, Gallagher Marine Systems Llc) pressed upon the need to increase oil spill response awareness among the corporate. He highlighted the use of drones in aerial surveillance equipped with the FLIR photography instruments. He discussed how the Spill modeling using various algorithms could help predict the oil spill movement; Dr. Maria Mansurova (Junior Scientist, Federal Institute of Material research and Testing, BAM Germany) introduced her tech, the spectrocube and presented the principle and capabilities of the device. She also tackled the issue of aquifer and ground water contamination during various oil projects & Dr. Gopal Bera (Assistant Research Scientist, Texas A&M University) introduced the Petrotox model and how it can be used to calculate the effect of oil toxicity within the organisms of oil contaminated waters. He introduced a remedial passive dozing system for the infected organism to treat the effects of contamination.

**R. K. Mehra, Former ED, BPCL chaired** the **fourth technical session** in which Technologies - Mapping, Modelling & Remote Sensing were discussed. The speakers were Dr. Theo Hengstermann (Business development and sales, OPTIMARE Systems, GmbH) expressed concerns regarding accidental and illegal discharges form ship traffic and offshore installations. He discussed the use of SLAR and IR/UV technology for precise aerial scanning of hotspots in an oil spill & Neethra Ganesan (Head, HR, Admin & Finance, Viraj Clean Sea Enterprises Pvt. Ltd) discussed various strategies and plans that could actually be put to use for better oil spill response. She displayed that with better planning the oil spill response can actually be made cost efficient.

The day concluded with an open question-answer forum where the audience shared their observation with the speakers of OSI 2018. The Gala entertaining evening & dinner, with a very astounding acts form a celebrity illusionist & Mentalist Preveen Pandita.

The second day commenced with a **technical session five** was on **Advances in Response Management & Mitigation & chaired by Joydev Lahiri, GM (Engg & HSE), Oil India Limited. Kevin Mirise, CFA (COO, MicroSorb)** discussed about bioremediation through the Archea Lifeform and gave a new insight towards new data studies and application technologies. **Michael Green Lauridsen, Segment Director Oil Spill Response APAC, DESMI Singapore Pte. Ltd** shared his views on Investing in Complete offshore and Nearshore oil spill solutions with the latest technology demonstrating significant benefits in regards to interconnect ability, service, training and operations. John Hughes, Engineering Design manager, Ayles Fernie International told about the role of dispersants. He further talked about dispersants and how they are used on Oil spills being a pollutant or not. His discussion also included the basis of dispersant application engineering.







The sixth technical session, chaired by R. K. Mehra, Former ED, BPCL had the theme "Case Studies & Emerging Technologies". Pallav Kumar Singh (National Head for Outreach and Programme Implementation, Federation of Associations of Small Industries of India) talked about oil and ocean diplomacy. Further he added the need of compliance among the neighboring nations who tackle the oil spill situations in the international waters. Udai A. dutta (DY. CE - O&GPS, Oil India Limited) has provided an idea about the Basis schematics of well heads. He further talked about history of wells and what problems are being faced by us. Lastly, he talked about the remedial measures for the such problems. Dr. Sakshi Gupta (Scientist D, explosives Agent Detection Division, Laser Science and Technology Centre(LASTEC), DRDO) talked about the Laser Induced Fluorescence. She further elaborated the involvement of LASTEC towards the development of Laser based sensors. Her discussion ended with the future scope of this field in the years that are to come. Ashish Panwar (Committee member, social and Environmental Committee, UPES SPE student chapter) italked about the technology of DNA recombination. He also talked about the most commonly used Oil digesting Microbes.

Session seven on Conventions, Claims & Compensation - Developments & Legal Perspectives was chaired by Mr. Jose Maura, Director – IOPC Funds. The speakers were Thomas Liebert (Head, External Relations and conference, IOPC Funds, London) talked about the various incidents in different places such as Malaysia and Greece along with this he added the recent developments in these places. He ended his discussion with the adoption of internal assessment criteria for the employee's losses. Tony Paulson (director, International Group of P&I clubs) talked about the international group of P&I clubs and about the way of working of STOPIA and TOPIA. Dominic Jhonson (Partner, Holman Fenwick Wilan) talked about Oil Spill Compensation: who pays and how much? A global perspective.

**D. B. Kamble, General Manager HSSE (Corporate), BPCL chaired the eighth technical session in Inland Spills, Shoreline Cleanup & Wildlife Response** were discussed. **Sangeeta Nemani Venkata (Manager- Technical, HPCL)** spokes on how the Mumbai Refinery has been able to efficiently produce over the years while keeping harmony with the environment and nearby vegetation. She explained the efficient usage of Online Robotic Cleaning of API Separators. **Deepam Seth (Marketing Head, Potential Engineering)** introduced the new generation of floatable skimming systems with gooseneck arrangements. The skimmers that were explained by him were of such great specifications that adapt according to different circumstances of oil spills. **Bokam Rajshekhar (Phd Scholar, IIT Madras)** effectively explained the hazardous aftereffects of oil spills that are due to inland oil spills. These spills prove to be carcinogenic and he clearly displayed through Monte Carlo Simulations that cancer risk levels have exceeded significantly well above the acceptable reach.

Technical session nine focused on Disaster Resilience: Assessment & Remediation chaired by Anand Kumar Co-Chairman, ENCIS. Speakers are Dr. Banwari Lal (Senior Director, The Energy and Resources Institute), Dr. Manoj Kumar (Sr Research Manager (Biotechnology), Indian Oil R&D & Dr. K. Ramesh (Assistant Manager, HPCL R&D) talked about new technology & Product related to the session theme.

This was followed by Valedictory session comprising of Conference Shri. Anand Kumar, Shri. T.K. Sengupta, Mr. Jose Maura & Mr. Dominic Johnson. The session was moderator Shri. Ashok Varma. The entire two-day conference was well summarised by the panelists, action points highlighted.

The two-day event was sensational, informative, with thought provoking deliberations, house full attendance, lots of takeaways, global perspectives shared & appreciation form the world community for hosting such a mega congress on Indian soil.





#### Inauguration ceremony



**The lamp lighting ceremony** was followed by Inaugural Session. OSI 2018 was inaugurated by chief guest IG VS Pathania, PTM, TM, Deputy Director General (Policy & Plans), Deputy Director General (Policy & Plans) with Dr. R.K. Malhotra, Conference Chairman, OSI 2018 & DG, FIPI, Mr. T. K. Sengupta, Co- Chairman, OSI 2018 & Director (E&P), FIPI, Mr. Jose Maura, Director, IOPC Funds & Shri. Anand Kumar, Co-Chairman, ENCIS.

#### **Inaugural Session**



**In Inaugural session**, Welcome Address by Conference Co-Chairman - Shri T. K. Sengupta, Director (Exploration & Production), FIPI, Special Address by Conference Chairman - Dr. R.K. Malhotra, DG, FIPI, Special Address by Guest of Honor, Mr. Jose Maura, Director, IOPC Funds, Inaugural Address by Chief Guest, IG VS Pathania, PTM,TM, Deputy Director General (Policy & Plans) Indian Coast Guard & Vote of Thanks by Shri. Anand Kumar, Co-Chairman, ENCIS

#### Sessions OPENING PANEL

**On day 1, Opening Panel**: Focused on Global & National Initiatives, Panelist from PNGRB, Oil India Limited, IOPC Funds, OSRL, Ministry of Environment, Forests and Climate Change. The Panel discussion was Moderate by Shri. Ashok Varma, Former Director (Onshore), ONGC Limited.

#### TECHNICAL SESSION I



**On day 1, Technical Session I:** Focused on Emerging & Future Risks in Marine Environment, Speakers from ONGC Limited, The Nautical Institute & ITOPF Ltd. The session was chaired by DIG KR Deepak Kumar, OiC CGTC Kochi, Indian Coast Guard





#### **TECHNICAL SESSION II**



**On day 1, Technical Session II:** Focused on Prevention, Contingency Plans & Integrated Response Capabilities, Speakers from OSRL, AlphaMERS Ltd & AllMaritim AS. The session was chaired by Dr. J. S. Sharma, Former GGM Corporate HSE, ONGC Limited.

#### **TECHNICAL SESSION III**



**On day 1, Technical Session III:** Focused on Spill/Toxicity Detection Tests & Technologies, Speakers from Gallagher Marine Systems Llc, Federal Institute for Materials Research and Testing (BAM) & Texas A & M University. The session was chaired by D. B. Kamble, General Manager HSSE (Corporate), BPCL.

#### TECHNICAL SESSION IV



**On day 1, Technical Session IV:** Focused on Technologies - Mapping, Modelling & Remote Sensing, Speakers from Optimare Systems GmbH & Viraj Clean Sea Enterprises Pvt Ltd. The session was chaired by R. K. Mehra, Former ED, BPCL.

#### TECHNICAL SESSION V



**On day 2, Technical Session V:** Focused on Advances in Response Management & Mitigation, Speakers from MicroSorb, DESMI Singapore Pte Ltd & Ayles Fernie International. The session was chaired by Joydev Lahiri, GM (Engg & HSE), Oil India Limited.





#### **TECHNICAL SESSION VI**



**On day 2, Technical Session VI:** Focused on Case Studies & Emerging Technologies, Speakers from Federation of Associations of Small Industries of India, Oil India Ltd, DRDO & UPES SPE Student Chapter. The session was chaired by R. K. Mehra, Former ED, BPCL.

#### **TECHNICAL SESSION VII**



**On day 2, Technical Session VII:** Focused on Conventions, Claims & Compensation - Developments & Legal Perspectives, Speakers from IOPC Funds, International Group of P&I Clubs & Holman Fenwick Willan. The session was chaired by Jose Maura, Director, IOPC Funds, London.

#### **TECHNICAL SESSION VIII**



**On day 2, Technical Session VIII:** Focused on Inland Spills, Shoreline Cleanup & Wildlife Response, Speakers from HPCL, Potential Engineering & IIT Madras. The session was chaired by D. B. Kamble, General Manager HSSE (Corporate), BPCL.

#### **TECHNICAL SESSION IX**



**On day 2, Technical Session IX:** Focused on Disaster Resilience: Assessment & Remediation, Speakers from The Energy and Resources Institute, Indian Oil R&D & HPCL R&D. The session was chaired by Anand Kumar, Co-Chairman, ENCIS.





#### **VALEDICTORY SESSION**



**On day 2, Valedictory Session:** Focused on Crisis Leadership: Communication & Engagement, Where Shri. Anand Kumar, Co-Chairmain, ENCIS, Shri. T.K. Sengupta, Director (Exploration & Production), FIPI, Mr. Jose Maura, Director, IOPC Funds & Mr. Dominic Johnson, Partner, Holman Fenwick Willan participated and discussed the issue. The valedictory session was Moderate by Shri. Ashok Varma, Former Director (Onshore), ONGC Limited.

#### **Exhibitions OSI 2018**

Exhibition was inaugurated by IG VS Pathania, PTM,TM, Deputy Director General (Policy & Plans) Indian Coast Guard. Exhibition Showcased participation from 31 companies from 20 countries.

International brands like 3M India, AllMaritim AS, Blossom Enterprise, Darcy, DESMI, Ecoservice Neftegaz Ltd, Elektroniklab, Ergen Plastic, Expandi, IOPC Funds, JVM Marketing, Lakshmi Factory Tools, Lamor Corporation, Log 9 Materials, Mizun Consultants, Netzsch, New Pig, NorLense, Oilex, Optimare, Potential Engineering, Rutter, Ocean Waves, Safe Trading, Siddharth Enterprises, Spilcare, Swan Environmental, United Sorbents, Viraj Clean Sea, Vogelsang & Wyuna Participated and Presented their latest technologies and advancements.

Exhibitor got opportunities to discuss the same with the delegate came from 25 countries worldwide.

















"5<sup>th</sup> Edition of Oil Spill India 2018 was organized at an opportune time as it provided an effective platform to stakeholders namely Policy makers, Oil Producers' top management, Regulators, Technology Providers etc to align Swachh Samundra with Swachh Bharat campaign through global focus on oil spill management to preserve marine environment through synergistic efforts using technology."

D Basu, Executive Director, ONGC Limited

The OSI platform brings about the much needed awareness through constructive discussions and deliberations and covers the spill subject in a holistic manner. With international participation a huge exchange of knowledge is earned. I appreciate this effort and wish OSI a great success in the future.

Udai A. Dutta, Dy. CE – O&GPS, Oil India Ltd

Conquering Newer Horizons



Oil Spill India 2018 event is great Platform for industries to get interact with national and international experts from different spheres dealing with oil spills, equipment suppliers and enables to strengthen the wherewithal of the individual teams with strong connectivity amongst the like-minded with brilliant networking opportunities.

P. S. RAO, DGM, Corporate HSE Department, HPCL

Excellent opportunity to interact with subject matter experts from Oil & Gas and Shipping industry. The international exposure made a lot of difference in terms of exposure to the latest trends in the industry worldwide. This was a good platform for networking with key representatives of globally known organisations that you normally only read about.

Capt. Sachin Matwankar, Head – Marine Risk, Reliance Industries Limited



Conference was well organized with ample time for networking with people working in the same field. It was very informative. ENCIS has done good job. This is the only conference of its type dealing with the one of the major issues like Oil spill. I am happy to be part of it.

Dr. Sakshi, DRDO

A well organised Conference that brought together all the stakeholders to share their expertise and offer their resources to contribute to mitigating the environmental consequences of oil spills. I do hope the outcomes will lead to a national policy on prevention and response to oil spills on Indian coast.

#### Capt.S.Krishnamurthi, The Nautical Institute

Thank you for all the support that you've extended throughout the event. It was a great time and indeed, a qualitative one! Your entire team was appreciable and so the event was, to sum it up; it was a great team work. I also thank you personally as well as on behalf of 'OILEX' for making this event eventually a very good opportunity to interact with people all around the globe.



The

**itical** Institute

Reliance

Industries Limited

Growth is Life

Mohamed Amir Shah, Oilex Exclusive Partner, Martrade Group – Indian Region







ORGANISER





The Energy & Climate Initiatives Society Registered Under Societies Registration Act 1860

The Energy and Climate Initiatives Society (ENCIS) is a registered non-profit organisation that supports, encourages & catalyzes the development, discussion and dissemination of consequential research and projects in energy and climate protection industries. An independent, nonpartisan organisation that facilitates stakeholder's analysis and decisions on policy frameworks and initiatives within the global frameworks of sustainable development.

ENCIS produces exclusive and pertinent multi-platform contents fostering inclusive economic prosperity through safer, cleaner, more equitable and climate-friendly energy initiatives.

With leading experts on environment, natural resources and energy, the Advisory Board of ENCIS provides the key impetus to the organisation's initiatives & strategic insights on the evolving global industry, steering an immensely profound impact on the economic, environmental and strategic landscapes of the future.



EN MEDIA<sup>™</sup>

oilspillindia 💼 🗗 🎔 🚱

www.oilspillindia.org