

# 23<sup>rd</sup> Annual World Congress on Environment Management and Climate Change



## GOLDEN PEACOCK AWARDS

for Environment, OHS, Energy Efficiency &  
Eco-Innovation for the year 2022

Promoting **Climate-Resilient**  
Economic Growth through  
effective Leadership  
and Board Strategy

THEME

August 25 - 26, 2022

Hotel The Lalit Ashok  
Bengaluru



Distinguished Guests during **Lighting of the Lamp** ceremony  
(from L to R): **Mr. Damon DuBord**, **Mr. Ashok Kapur**, IAS (retd.),  
**Lt. Gen. J. S. Ahluwalia**, PVSM (retd.), and  
**Mr. Friedrich Birgelen**



Lighting of the Lamp ceremony (from L to R): **Mr. Damon DuBord**, **Lt. Gen. J. S. Ahluwalia**, PVSM (retd.),  
**Ms. Cassandre Marcellin**, **Mr. Kenneth Wong**, **Mr. Friedrich Birgelen** and **Mr. Arun Balakrishnan**.

The Institute of Directors (IOD), India organised its **23<sup>rd</sup> World Congress on Environment Management & Climate Change – 2022** & Presentation of the famed **Annual Golden Peacock Awards for Environment Management, Energy Efficiency, Eco-Innovation & Occupational Health & Safety** on August 25 – 26, 2022 at Hotel The Lalit Ashok, Bengaluru, India. The sub-theme of the Congress was: '**Promoting Climate Resilient Economic Growth through Effective Leadership and Board Strategy**'.

The event witnessed more than 400 business professional participants comprising Industry and Business leaders, Board members, Directors, policy-makers, educationalists, private as well as public Sector Institutions. It also witnessed participation by senior principal including Officials from the Government of Karnataka as well as Delegates from foreign countries – including Canada, Germany, United States of America, as well as United Nations Framework Convention on Climate Change (UNFCCC), besides India.

The **Government of India** was represented by:

- Ms. Leena Nandan, IAS**  
Secretary, Ministry of Environment  
Forest & Climate Change
- Dr. N. Kalaiselvi**  
Director General, Council of Scientific and Industrial  
Research (CSIR) and Secretary  
Department of Scientific and Industrial Research (DSIR)
- Mr. C. K. Mishra, IAS (retd.)**  
former Union Secretary  
Environment Forests & Climate Change
- Mr. S. Srinivasan, IAS (retd.)**  
former Secretary to Govt. of India & Member (Finance),  
Public Interest Director, India International Exchange

The **State Government of Karnataka** was represented by:

- Dr. Shalini Rajneesh, IAS**  
Additional Chief Secretary - Planning, Programme  
Monitoring and Statistics Department



Release of **Convention Souvenir** by distinguished speakers during the **Inaugural Session**  
(from L to R): **Mr. Arun Balakrishnan**, **Lt. Gen. J. S. Ahluwalia**, PVSM (retd.), **Mr. Friedrich Birgelen** and **Mr. Kenneth Wong**



Release of **Golden Peacock Awards Winners' Digest** on 'Environment Management' 'Energy Efficiency', 'Eco-Innovation' (from L to R): **Mr. Arun Balakrishnan**, **Lt. Gen. J. S. Ahluwalia**, PVSM (Retd.), **Mr. Friedrich Birgelen** and **Mr. Kenneth Wong**



**Ms. Leena Nandan, IAS**  
Secretary  
Ministry of Environment  
Forest & Climate Change



**Dr. N. Kalaiselvi**  
Director General, Council of Scientific  
and Industrial Research  
(CSIR) and Secretary  
Department of Scientific and  
Industrial Research (DSIR)



**Mr. C. K. Mishra, IAS (retd.)**  
former Secretary  
Environment Forests &  
Climate Change  
Government of India



**Mr. S. Srinivasan, IAS (retd.)**  
former Secretary to Govt. of India  
& Member (Finance),  
Public Interest Director,  
India International Exchange

2. **Dr. K. S. Krishna Reddy**  
Secretary  
Public Works Department
3. **Dr. N. V. Prasad, IAS**  
Secretary  
Tourism & Transport Department
4. **Mr. D. Randeep, IAS**  
Commissioner  
Health & Family Welfare Services
5. **Dr. Richard Vincent Dsouza, IAS**  
Managing Director  
Karnataka State Warehousing Corporation (KSWC)
6. **Mr. Ashwin D. Gowda, IRS**  
Managing Director  
Karnataka Skill Development Corporation (KSDC)
7. **Mr. K. P. Rudrappaiah**  
Managing Director  
Karnataka Renewable Energy Development Limited  
(KREDL)
8. **Mr. Srikar M. S., IAS**  
Secretary to the Chief Minister, Govt. of Karnataka  
Managing Director, Karnataka Power Corporation Limited  
(KPCL)
9. **Mr. Manoj Kumar, IFS**  
Additional Principal Chief Conservator of Forests,  
Managing Director  
Jungle Lodges and Resorts Limited

The events commenced with the traditional **Lamp Lighting ceremony**.

#### Day: 1

#### Plenary Session I - Opening Session

The '**Inaugural Address**' was delivered by:

#### **Ms. Leena Nandan, IAS**

Secretary  
Ministry of Environment, Forests & Climate Change  
Govt. of India

**Ms. Nandan** introduced and explained the theme of the Congress. She emphasized the importance of 'acting' on this most relevant and burning global issue of Environment Management & Climate Change. She highlighted some critical and actionable issues towards building the path of self-reliance in the Green & Sustainable Environment and reminded everyone of the environmental targets set by the **Prime Minister** at the COP 26, Glasgow for 'net zero commitments'. She deliberated on the concept of '**Innovate & Upscale**' (I & U) and urged all the dignitaries and participants to popularise these practices in the mainstream by adopting the right policies.

This was followed by the '**Welcome Address**', which was delivered by:

#### **Mr. Arun Balakrishnan**

former CMD, HPCL  
Founder Chairman - HPCL- Mittal Energy Ltd.  
Honorary Chairman – IOD, Bangalore

**Mr. Balakrishnan** extended a warm welcome to all distinguished dignitaries and guests. He highlighted various

# THE STATE GOVERNMENT OF KARNATAKA WAS REPRESENTED BY:



**Dr. Shalini Rajneesh, IAS**  
Additional Chief Secretary  
Planning, Programme Monitoring  
and Statistics Department



**Dr. K. S. Krishna Reddy**  
Secretary  
Public Works Department



**Dr. N. V. Prasad, IAS**  
Secretary  
Tourism & Transport Department



**Mr. D. Randeep, IAS**  
Commissioner  
Health & Family Welfare Services



**Dr. Richard Vincent Dsouza, IAS**  
Managing Director  
Karnataka State Warehousing  
Corporation (KSWC)



**Mr. Ashwin D. Gowda, IRS**  
Managing Director  
Karnataka Skill Development Corporation  
(KSDC)



**Mr. K. P. Rudrappaiah**  
Managing Director  
Karnataka Renewable Energy  
Development Limited (KREDL)



**Mr. Srikar M. S., IAS**  
Secretary to the Chief Minister  
Govt. of Karnataka  
Managing Director, Karnataka Power  
Corporation Limited (KPCL)



**Mr. Manoj Kumar, IFS**  
Additional Principal Chief  
Conservator of Forests,  
Managing Director  
Jungle Lodges and Resorts Limited

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## THE IOD EDGE

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**Lt. Gen. J. S. Ahluwalia**, PVSM (retd.)  
President  
Institute of Directors  
delivering the  
**'President Address'**



**Mr. Arun Balakrishnan**  
former CMD, HPCL &  
Founder Chairman  
HPCL - Mittal Energy Ltd.  
Honorary Chairman – IOD, Bangalore  
delivering the **'Welcome Address'**



**Mr. Kenneth Wong**  
Consul General  
Consulate General of Canada,  
Bengaluru  
delivering the **'Special Address'**



Virtual Address by:  
**Mr. Ovais Sarmad**  
Assistant Secretary-General &  
Deputy Executive Secretary  
United Nations Framework  
Convention on Climate Change  
(UNFCCC)

Government initiatives where Industries have participated in taking Government policies forwards towards building the nation, especially countries like Canada, Germany & USA, which have contributed positively to the national economy. He also briefly discussed issues like Global Warming, Ozone Layer Depletion, Carbon Emissions, Fossil fuel, etc., and their combined impact on the Environment.

**Lt. Gen. J. S. Ahluwalia**, PVSM (retd.), President, Institute of Directors in his **'President Address'** highlighted the environmental problems that were faced in the 20th century, but last decades of which focussed on identifying problems and termed it as **'Recognition & Creation'**, whereas the 21st century bears the burden of **'Resolving'** these problems which are current but still complex. Media attention to environmental problems has emphasised environmental issues but little action is being done to prepare the world to combat the impending catastrophe.

He pointed out that on the face of it, India's per capita footprint looks benign, yet India is home to ten of the most polluted cities in the world. Hence, a coordinated global effort in addressing the issue of Climate Change is the need of the day. India is striving to become a US\$ 5 trillion economy in the next 5 years with Green Renewable Energy, Disaster Resilient Infrastructure & planned eco-restoration systems as the centre of the focus. He said that the **Prime Minister** has set the aim to achieve Net Zero Carbon state by 2070, and also has set up an International Solar Energy hub. He added that India is already working proactively towards building a Hydrogen Economy and has invested 70 billion US dollars for such development. However, more research into clean hydrogen could help reduce the impact of some of these processes, which are only in their

infancy stage. He said that India will need international cooperation and finance to deploy this at the scale needed. He said that India will be updating its NDCs in the upcoming COP27 to be held at Egypt. He also stressed on the idea that Corporates have to re-design their Boards of the Future in order to achieve the Net Zero Carbon Emission Target.

This was followed by the **'Special Address'** delivered by:

**Mr. Kenneth Wong**  
Consul General  
Consulate General of Canada, Bengaluru

**Mr. Wong** commenced his **'Special Address'** with an anecdote about the Canadian Coast Guard Heavy Arctic Icebreaker, *St Louis S. St-Laurent's*. He then went on to discuss the policies & initiatives taken by the Government of Canada under a focussed plan of Climate Change called **'Healthy Environment and a Healthy Economy'**. He pointed out that the Canadian Government has already instituted a strengthening plan with significant growth measures such as 'Clean Growth & Climate Tech Sector' by investing around 17 billion dollars over and above the 100 billion dollars already invested. He highlighted many joint-initiatives of the Indian government in trade, service sectors, and other fields. According to him, the theme of the event – 'Promoting Climate Resilient Economic Growth' is closely aligned to the Canadian Government's commitment towards taking effective action to fight climate change while accelerating on the path to 100 per cent 'net zero future'.

This was followed by the release of the **Convention Souvenir** as well as the Release of the **Winners' Digest on Environment Management, Energy Efficiency, Eco-Innovation** and **Winners' Digest on Occupational Health & Safety**.

## Plenary Session II - Promoting Climate-Resilient Economic Growth through Effective Leadership & Board Strategy

The '**Keynote Address**' was virtually delivered by:

### 1. Mr. Ovais Sarmad

Assistant Secretary-General & Deputy Executive Secretary  
United Nations Framework Convention  
on Climate Change (UNFCCC)

### 2. Mr. C. K. Mishra, IAS (retd.)

former Secretary, Ministry of Environment  
Forests & Climate Change  
Government of India

**Mr. Sarmad** highlighted how Climate Change has remained the most significant, alarming, and rapidly escalating crisis being faced by humanity by citing examples of extreme heat conditions, drought, and floods playing havoc globally. Though long-term planning is very essential, the present decade is for action, he added. He requested business leaders to not only have a clear implementable plan but also actively make transformational changes to get back to, or below, the 1.5 degree celsius trajectory. While explaining the reasons for today's worsening climate scenario, he said that Business Models are changing from the traditional 'Profit' approach to '3Ps i.e. People, Planet & Profit'. Such transformation requires commitment, action, monitoring and follow up from all the stakeholders. He also highlighted two important levers, i.e. Internationalisation of negative externalities & the correct price of these negative externalities.

Before concluding, he gave his perspective on the forthcoming **COP27**, where he informed that the stress on International Implementation, Support, Accountability, Assessment and Partnership, to deal with climate crisis. In his conclusion, he said that the future will be a sum of decisions made, as we have the means today to influence this by reversing the over-reliance on power intensive energy sources and decoupling the benefits of economic activities from its cost at all levels, an essential parameter.

**Mr. Mishra** shared concern over the statement, "Things are happening and also, things are not happening". He stressed that all countries are stakeholders should be accountable to the Global Community. Since time is running out, we as a Global community should act fast and address the problem with more intensity and a focused approach, i.e. '**Global Concerns have to be addressed as Country Concerns**'. Industries, organisations, economic fora and Boards of directors have to discuss and include this agenda into their goals and take action effectively. He discussed the issues of Development, Growth, and Ecology while laying special emphasis on Infrastructure. He highlighted the importance of Climate - Resilient Projects and the significance of strengthening the Community and Workforce

using 'Finance' & 'Technology'. He said that countries have to break the barriers of 'Transfer of Technology'. The Effective utilization of Technology can help in controlling the Green House Gas Emissions & achieve the goal of 'Decarbonisation'. As far as Resilient - Economy is concerned; he gave a holistic view of Climate Change, highlighting the need to prevent additional damage and be prepared for Climate Impact.

## Plenary Session III - Combating Climate Change: The Edge of a New Frontier

The Session had the following Distinguished Speakers:

### 1. Dr. Shalini Rajneesh, IAS

Additional Chief Secretary  
State Planning, Programme Monitoring & Statistics Dept.  
Govt. of Karnataka

### 2. Dr. N. V. Prasad, IAS

Secretary, Tourism & Transport Department  
Govt. of Karnataka

### 3. Dr. Jagmohan Sharma, IFS

Director General  
Environmental Management and Policy Research Institute  
(EMPRI)

**Dr. Rajneesh** commenced her talk by highlighting the importance and relevance of the UN's 17 Sustainable Development Goals. She commented that if efforts are to be made, these have to be peaceful & prosperous, and we as a community have to be responsible enough to implement them. She discussed issues such as Solid Waste Management, 100% Source Segregation, Hazardous (Plastic) Waste, per capita Fossil Fuel Consumption & Afforestation. She then moved on to discuss a few of the successful efforts of Karnataka in addressing Climate Change based on empirical evidence from NITI Aayog. She cited some successful instances of non-profit institutions including, Bhartiya Jain Sangh (BJS), Selco Foundation, Hewlett Packard (HP), as well government initiatives such as 'Akansha Portal'.

**Dr. Prasad** offered his insights into the Transport and Tourism Sector. He said that since Transport Sector contributes 25% of all emissions, the shift to electric mobility has become necessary. He pointed out that the Government is taking cognizance of the traffic congestion which leads to high emissions and to address this, the State has already come out with an Electric Vehicle Policy. He said that sustainable efforts are being made to mitigate, control and reduce carbon emissions. Measures like integrating ward level plan with the Department of Urban Transport, use of IT systems in the transport sector such as 'Intelligent route optimization', effectively making use of emerging technologies like AI, Block Chain, etc., converting public transport to EVs, providing subsidies, scrapping of vehicles which have exceeded 15 years' service and so forth, are being implemented in the State. He



**Plenary Session III on 'Combating Climate Change: The Edge of a New Frontier'**  
(from L to R): **Mr. Arun Balakrishnan**, Chairman, IOD- Bengaluru Chapter, founder Chairman & Independent, Director, HPCL-Mittal Energy Ltd. (HMEL) & former CMD, HPCL, **Dr. N. V. Prasad IAS**, Secretary, Tourism & Transport Department, Govt. of Karnataka and **Dr. Jagmohan Sharma, IFS**, Director General, Environmental Management and Policy Research Institute.

strongly advocated for the wider adoption of EV's and reminded us of its advantages.

He then moved on to share his opinion on the Tourism sector. He informed that the Government of Karnataka has taken cognizance of the debilitating impact of the pandemic on the tourism ecosystem and is working to create a conducive environment to support the industry. He laid stress on providing adequate climate resilient infrastructure & amenities and also spoke on other policy measures such as Capacity Building, Product Development, Partnership, Technology, etc.

**Dr. Sharma** raised three very critical and pertinent questions:

- Is inadequate 'risk perception' the reason for our lethargic response to Global Warming?
- Who has the capacity & responsibility to drive the course correction under a changing climate?
- What framework for Development can be adopted in an environmentally sick world?



**Dr. Jagmohan Sharma, IFS**  
Director General  
Environmental Management and  
Policy Research Institute (EMPRI)  
delivering the '**Special Address**'



**Mr. B. V. Sudharshan**  
Deputy Managing Director  
Nettur Technical Training  
Foundation (NTTF)  
delivering the '**Special Address**'



**Mr. Abhay G. Chebbi**  
Pro-Chancellor  
Alliance University  
delivering the '**Special Address**'



**Mr. Safil Sunny**  
Founder & CEO  
Tranzmeo IT Solutions Private Limited  
delivering the '**Special Address**'

While addressing these questions, he said that funding activities made during the Paris Agreement are yet to be addressed, as significant financial resources are needed to reduce the impacts of a changing climate. He highlighted the impact being felt by the global community due to the Ukraine – Russia conflict, Taiwan – China tussle, heat waves, wildfires and dry river beds, and the inflationary pressure on the global economy. He recommended that since businesses – the private Financial Sector & Industrial Community are the 'demand creators' & trendsetters; they must play their part in achieving Environmental Sustainability. He went on to explain the "**Common but Differentiated Responsibilities & Respective Capabilities**" (CBDR-RC) principle, outlined in the United Nations Framework Convention on Climate Change (UNFCCC). With regard to developing a framework for the environmentally sick world, he suggested that we should deal with the 'cause' of crises rather than addressing the negative impacts of crises. He suggested that the cause of the crises can only be addressed through Innovation & Technology.

#### **Plenary Session IV - Environmental Governance for Economic Growth & Financing**

The Session had the following Distinguished Speakers:

- 1. Mr. B. V. Sudharshan**  
Deputy Managing Director  
Nettur Technical Training Foundation (NTTF)
- 2. Mr. Ashwin D. Gowda, IRS**  
Managing Director  
Karnataka Skill Development Corporation (KSDC)  
Govt. of Karnataka
- 3. Mr. Abhay G. Chebbi**  
Pro-Chancellor  
Alliance University



**Plenary Session IV on 'Environmental Governance for Economic Growth & Financing'** (from L to R): **Mr. Damon DuBord**, Chief - Energy, Embassy of the United States of America, New Delhi, **Mr. Ashwin Gowda, IRS**, Managing Director, Karnataka Skills Development Corporation and **Mr. Abhay G. Chebbi**, Pro-Chancellor, Alliance University.

#### 4. Mr. Safil Sunny

Founder & CEO

Tranzmeo IT Solutions Private Limited

**Mr. Sudharshan** explained the '*Pancha Bhutas*', meaning 'the five physical elements of the earth', found in traditional Indian philosophy and discussed the spirit of the Sanskrit phrase, '*Sarva-bhūta-hite*' referring to 'Welfare of all Beings'. While referring to issues like water scarcity, threat to rainforests and issues linked to animal and agricultural products, he discussed the hazards to Climate in detail. He further went on to discuss how Corporates are now working towards Sustainable Business Solutions to be able to reduce Greenhouse Gas (GHG) Emissions. He mentioned the 'Triple Bottom Line' and deliberated that if the first two aspects, i.e. **"People & Planet are taken care of, good Profit will automatically fall into place"**. He opined that big and leading companies have the muscle & money power to take aggressive action towards reducing emissions and becoming more resilient to the inevitable climate impacts. He highlighted that our food choices are responsible for 30% of the world's greenhouse gas emissions & we have the potential to reduce it by 50% by selecting 'Smart Food Choices', which will not only reduce greenhouse gas emissions but also improve the overall health & animal welfare.

**Mr. Gowda** discussed the work and activities undertaken by the Karnataka Skill Development Corporation (KSDC) under the aegis of the Department of Skill Development, Entrepreneurship and Livelihood (SDEL), which provides courses in designing, implementing, and monitoring across Karnataka which include 'distance learning' and e-learning programmes to impart short term training to unemployed youth of the State across 27 different sectors be it Agriculture, Aviation, IT, ITeS, Hospitality, etc. The Department is also working closely with other organizations & departments especially EMPRI which provides training in Green Jobs, i.e. Solar Power Installation,

Waste Management, STP Operator, Waste Segregator, E-Waste Management, etc. He also informed that the Government has come up with an innovative project called **"Skills on Wheels"** where training related to Solar Panels and EVs is provided.

**Mr. Chebbi** commenced his talk with a brief introduction to the role of the Education Sector, and how it is helping in mitigating Climate Change. He discussed the importance of Environmental Protection, Preservation & Management and opined that saving the environment is feasible by collaborating with industries and undertaking a solution-oriented research on pressing topics. He further elaborated that an educator has a moral responsibility of producing future citizens who can protect & harness natural resources towards creating a sustainable climate. He referred to the Brundtland Report titled, '*Our Common Future*', where Sustainable Development had been first defined. He laid stress on the three R's., i.e. Reduce, Reuse & Recycle. He briefly discussed the existing Indian legal mechanism & Framework and recommended that to achieve a pollution-free environment, a continual review & support framework from organizations will be required to achieve the goal of a Sustainable Green Environment.

**Mr. Sunny** spoke virtually on how Tranzmeo is working on converting traditional anomaly detection. He said that by using the principle of remote sensing and anomaly & intrusion detection in pipelines, rails, smart roads, power cables, etc. by effectively using innovative & advanced technology of AI, ML & Fibre optics, it is thus playing a significant role in protecting the environment and cutting down on carbon footprint.

#### **Plenary Session V - Addressing Climate Change through Waste Management Practices**

The Session had the following eminent Speakers:

1. **Mr. D. Randeep, IAS**  
Commissioner, Health & Family Welfare & Ayush Services  
Govt. of Karnataka
2. **Mr. Manoj Kumar, IFS**  
Additional Principal Chief Conservator of Forests  
Govt. of Karnataka  
Managing Director, Jungle Lodges and Resorts Limited
3. **Dr. K. S. Krishna Reddy**  
Secretary, Public Works Department  
Govt. of Karnataka
4. **Mr. Sunil. K. Mallanagoudar**  
Director  
KIS Group
5. **Mr. D. C. Sekhar**  
Director  
AlphaMERS Limited





**Mr. Sunil. K. Mallanagoudar**  
Director, KIS Group  
delivering the 'Special Address'



**Mr. D. C. Sekhar**  
Director  
AlphaMERS Limited, India  
delivering the 'Special Address'

**Mr. Randeep** gave out his perspective on e-waste management, stating that e-waste is one of the most rapidly growing environmental problems, and lack of awareness about the correct manner of disposal of electronic waste has further compounded the problem. He informed that for e-waste management, many technical solutions in terms of advanced equipment & processes are available, but the need of the hour is to plan a preventive strategy that can be adopted in the management system in terms of legislation & logistics, comprising collection, disposal, and manpower. Though e-waste trade and primitive recycling activities provide employment, improper dismantling and processing of e-waste are perilous to human health and the ecosystem. Thus, it is essential to review public health risks and strategies to combat this growing menace.

**Mr. Kumar** gave out insights in his work in the arid regions of North Karnataka, where he has successfully found local-based solutions to solve the grave issue of shortage of drinking water in 40 odd villages of Bidar located in the northern region of

Karnataka. He said that it was a real challenge for the District administration and the Zila Panchayats. With his extensive knowledge and expert adaptation of soil and moisture conservation techniques, most of the villages and hamlets have now become self-sufficient in drinking water. He said that the district had in fact registered an increase in groundwater levels. He gave a presentation, where he showcased the various structures and interventions implemented in villages to help people deal with a challenge of water shortage.

**Dr. Reddy** spoke on Sustainability, Development & Infrastructure Projects undertaken by the Public Works Division in Karnataka. He briefed the large gathering about the onerous responsibility of undertaking construction and maintenance of road works & public buildings. He gave a presentation and discussed the 'Milestones' achieved by the State PWD and the Impacts of adequate Planning and Environmental Management. He emphasized the importance of developing an Action Plan, which according to him should include adequate planning & management at the camp site, rejuvenating water bodies by construction & protection of embankments, plantation of trees, grass etc. He said that these measures will help in controlling the pollution levels and mitigating Climate Change.

**Mr. Mallanagoudar** introduced the KIS Group by sharing the work undertaken by them. He said that KIS Group has a global footprint with offices in 14 countries and has been instrumental in completing 70 projects till date. The Group is presently working on several innovative projects in 20 locations. He informed that they manage waste and provide sustainable energy solutions by segregating inorganic and organic components, where organic components are subjected to the processing of methane, to produce energy by anaerobic fermentation, composting, and land application. He explained that Biogas is a mixture of methane and CO<sub>2</sub> and other gases, which is generated by the decomposition of organic waste or from existing landfills & sewage sludge. He emphasized that



**Plenary Session V on 'Addressing Climate Change, through Waste Management Practices'** (from L to R): **Mr. D. C. Sekhar**, Director, AlphaMERS Limited, India, **Mr. Manoj Kumar, IFS**, Additional Principal Chief Conservator of Forests, Govt. of Karnataka & Managing Director, Jungle Lodges, **Mr Srikar M S, IAS**, Secretary to the Chief Minister, Karnataka, Managing Director, Karnataka Power Corporation Limited, **Mr D. Randeep IAS**, Commissioner, Health & Family Welfare and Ayush Services, Govt. of Karnataka, **Dr. K. S Krishna Reddy**, Secretary, Public Works Department, Govt. of Karnataka and **Mr. Sunil K. M.**, Director, KIS Group.

using the 'state of art Green Technology' will result in the 'Reduction in Green House Gas Emissions' & 'Reduction in Carbon footprint'. He added that the KIS group is also adept at handling other organic wastes like cow dung, poultry, paddy straw, agricultural waste, food waste, and other organic wastes. He said that they are working on 'bio-hydrogen' and soon shall be launching new projects.

**Mr. Sekhar** through a video explained how they are working on river cleanup projects by harnessing wave energy. He said that they also provide oil spill response services to the port and oil industry. He informed that the company has developed designs for their concept and has built prototypes for arresting trash from rivers and seas. He spoke on the issue of Riverine Plastics and briefly explained the journey of Plastic from Dimensional Drains to Streams to Rivers and then to three-dimensional seas/oceans. He also suggested that instead of boats, one should use water currents and the water flow to arrest the plastics and trash. He said that by using the ocean energy, they have been able to arrest about 22,000 tons of trash and 2200 tons of plastic in the first year itself, without using even a single drop of fuel. They handed over the trash to the Municipal Corporation for necessary processing & disposal. He also informed the gathering that they are in the process of designing a 'passive silt trap', to trap silt mechanically which is also an economical proposition. He ended his speech optimistically by saying that with the right technology and more efforts, we can change the condition of oceans within a matter of 10 years.

#### Plenary Session VI - Energy Security - Sustainable Energy Options

##### 1. Mr. Srikar M. S., IAS

Secretary to the Chief Minister, Govt. of Karnataka  
Managing Director, Karnataka Power Corporation Limited (KPCL)



Virtually Addressed by:  
**Mr Akhil Mehrotra**  
Managing Director &  
Chief Executive Officer  
Pipeline Infrastructure Limited (PIL)



**Mr. Damon DuBord**  
Chief - Energy Unit, Embassy of the  
United States of America, New Delhi  
delivering the 'Special Address'

##### 2. Mr. Akhil Mehrotra

Managing Director & Chief Executive Officer  
Pipeline Infrastructure Limited (PIL)

##### 3. Mr. K. P. Rudrappaiah

Managing Director  
Karnataka Renewable Energy Development Limited (KREDL)

##### 4. Mr. Damon DuBord

Chief - Energy Unit  
Embassy of the United States of America, New Delhi

**Mr. Srikar** outlined a broad context of the theme of this Session and said that India is on the path of renewable energy growth and has set an ambitious goal of contributing towards the UNFCCC mandate, both at the State & National level. He opined that the session was focused on Energy Security in the context of Developmental Paradigm, Development Growth, and Development Needs. Knowing the ideal energy mix of Thermal, Hydro and other Renewable Energy is the only way forward, he added.

**Mr. Mehrotra** discussed the meaning and implications of 'Energy Security'. He said that Energy Security depends on availability, affordability and accessibility of the masses. He said that we should diversify the sources of our import and at the same time focus on 'Local Energy Resources', as many countries are facing a historic energy security risk following Moscow's invasion of Ukraine, with the gas supply disruptions, especially at a time when global supply is tight and prices are sky-high. He said that we must also focus on 'Energy Mix' like Coal, Oil, Gas, Nuclear Energy and Renewable Energy Sources. Focusing on local reserves, he gave alternate energy solutions like Ethanol and Hydrogen. He also deliberated on the large



Plenary Session VI on 'Energy Security: Sustainable Energy Options' (from L to R):  
**Mr. K.P. Rudrappaiah**, Managing Director, Karnataka Renewable Energy Development Ltd.,  
**Mr. Srikar M. S., IAS**, Secretary to the Chief Minister, Karnataka, Managing Director,  
Karnataka Power Corporation Limited, **Mr. Damon DuBord**, Chief - Energy, Embassy of the  
United States of America, New Delhi and **Mr. R. G. Rajan**, Board Member & Honorary Zonal  
Director, Institute of Directors, former CMD, RCF/NFL/PDIL, former Chairman FAI/SCOPE

availability & use of Thorium Based Nuclear Power Generation. Towards the end, he spoke on the challenges and solutions related to expansion & affordability of reliable energy access.

**Mr. Rudrappaiah** gave an overall perspective on Karnataka Renewable Energy and informed that the State of Karnataka stands 4th in the country and holds 2nd & 3rd position in solar & wind installation capacity. He highlighted that the State is leading from the front and gave empirical evidence for the same. He said that the 'Karnataka Renewable Energy Policy (2022-27)' has already been formulated & efforts are being made to realize the vision of developing the State into a 'Hub of Renewable Energy Generation' as well as a 'Hub for Manufacturing of Renewable Energy Related Equipment'. He envisaged that the State of Karnataka is upgrading its energy generation capacity to 10 GW in the next five years, which includes 1GW of rooftop solar energy which will make Karnataka a major exporter of renewable energy to other states. He then discussed the achievements & initiatives undertaken by KREDL such as, Affidavit Based Clearance, Green Economic Corridor, Adoption of New Technology like the solar wind hybrid projects, Wind Re-powering, EV Charging Stations, Energy Storage etc. He said that the establishment of a Renewable Energy Research Chair in collaboration with IIT, Chennai has been proposed, with the aim of developing indigenous technology, products, services, devices and manufacturing systems. He also spoke about setting up of a skill development Centre and other training Centres for students from Engineering Colleges.

**Mr. DuBord** gave an overview of the 75 years of India - US bilateral partnership, especially in the context of Energy Security. He emphasized the two events that shocked the world in terms of energy security and sustainability, i.e. Covid – which disrupted the entire Supply Chain and the conflict in Ukraine, which changed the energy dependency picture from 'Prices' to 'Supplies'. He said that US was pleased to see that just two weeks ahead of COP27, India increased its NDC's which will not only reduce emissions intensity but also increase the percent of installed electricity capacity not generated by fossil fuels, by 2030. He then went on to discuss 'The Inflation Reduction Act – 2022' in detail and emphasized that the act will support the private sector to set up clean energy projects by involving both Governments & businesses, which can work together to develop new technologies and strengthen communities by creating jobs in the field of manufacturing Solar Panels, EVs, Wind turbines, etc. and help in addressing the climate crisis. In the end, he said that the US relationship with India has a deep connection and had many shared values.

#### Plenary Session VII - Golden Peacock Awards Nite

**Lt. Gen. J. S. Ahluwalia**, PVSM (retd.), President, Institute of Directors delivered the '**Welcome Address**'. He started by giving

a warm welcome to the '**Chairman**' of the event, **Hon'ble Justice M. N. Venkatachaliah**, Padma Vibhushan, Honorary Chairman, Institute of Directors, former Chief Justice of India; and the '**Distinguished Guest of Honour**', **Dr. N. Kalaiselvi**, Director General, Council of Scientific and Industrial Research (CSIR) and Secretary, Department of Scientific and Industrial Research (DSIR), Ministry of Science and Technology, Govt. of India. He also welcomed other important distinguished dignitaries & guests, and congratulated all the winners of Golden Peacock Awards.

He informed that the Golden Peacock Award was instituted by the Institute of Directors (IOD), India in 1991, as a public service initiative to raise the quality of products and to create a global benchmark, thus creating 'Intra-Sector Competitiveness' and enhancing the organization's performance. These Awards covering 14 different categories encourage industry and business leaders to think, strategize & also inspire the entire workforce to enhance the organization's performance. He said that the Industrial Revolution marked the onset of environment degradation, and by the mid-20th Century, environment had issues received global attention. In 1997, IOD conducted its First Conference on Environment Management and now conducts such conferences every year since, both in India and abroad.

This was followed by the '**Guest of Honor Address**', delivered by:

#### **Dr. N. Kalaiselvi**

Director General

Council of Scientific and Industrial Research (CSIR)

Secretary, Department of Scientific and Industrial Research

Ministry of Science and Technology, Govt. of India

**Dr. Kalaiselvi** spoke on the role and importance of Science & Technology. She said that 'Change' is the only buzzword that remains 'Unchanged' and this is happening every minute and we all are susceptible to accepting change. While referring to the vast movement of people in search of job opportunities, especially prevalent in the IT Sector, she asserted that '**it's only the rolling pebbles that gather mass**'. She highlighted the importance of 'Change' by giving examples of transient technology, ideas and society trends, and said that people are always welcoming and accepting of such changes; however, the one change people do not accept is 'Climate Change'. She showed appreciation for the current patterns of discourse and engagement of the public in the Environment Management Sphere, but remarked that mere awareness is not enough. She said that Science and Technology alone can lead and offer sustainable solutions; and India is actively coming up with such Sustainable Solutions by means of innovations in Science and Technology.



This was followed by the '**Chairman Address**', delivered by:

**Hon'ble Justice M. N. Venkatachaliah**

National Chairman, Institute of Directors  
former Chief Justice of India;  
former Chairman,  
National Human Rights Commission of India;  
former Chairman, National Commission for Constitution of India Reforms

**Hon'ble Justice Venkatachaliah** in his '**Chairman Address**' complimented Dr. Kalaiselvi for her sterling speech and said that the word "Change" is the only constant in the current atmosphere.

He said 'Many institutions which have ignored these compulsions of change have perished'. He gave the example of the Indigo Plant of India and the Steam Engine. He said, "**In times of crises, you can't manage things by being clever; even applying time-tested standards may not guarantee success, but not doing so will guarantee failure**". He added, "Everything must change in this nuclear-controlled fission and if Humanity has to survive, it has to innovate new ways of thinking".

This was followed by the Presentation of the **famed Golden Peacock Awards** to all winners under the categories: **Environment Management, Energy Efficiency, Eco-Innovation** and **Occupational Health & Safety**.

**Day: 2**

**Plenary Session VIII - Case Study Presentations**

**Success Stories on Effective Implementation of 'Environment Management', 'Energy Efficiency' & 'Eco Innovation'**

**Case Study Presentations**

The Session was Chaired by:

**Mr. S. Srinivasan, IAS** (retd.)

former Secretary to Govt. of India & Member (Finance)  
Public Interest Director, India International Exchange

**Mr. Srinivasan** in his '**Special Address**' discussed a myriad of ideas. He started by pointing out the grave situation of the environment. He said that ESG is an overarching concept; the spirit behind the concept is that there should be a meaningful change, a sustainable change and all our actions should be measurable. He said that theory & wisdom is on one side, and the action is on the other side, and ESG is the buffer or interface between them. He went on to explain the concept of Green Financing. He discussed how there is developing a dedicated Green Platform and a Green Corridor to connect globally with other finances for particularly encouraging the listing of green financing stocks. He said that the plan to take ahead the Climate Movement must take into consideration global issues like Covid, and Ukraine War and other geo-political disturbances. He added that one such way of making such a robust plan is by sharing experiences such as case study sessions. He then warmly welcomed all the presenters.

Case Studies in the '**Environment Management**' category were shared by the below-mentioned companies, which were conferred physically and collected by all the winners with the Golden Peacock Awards in the category of 'Environment Management' for the year 2022:

1. Honda Motorcycle and Scooters India Private Limited, Alwar
2. HARMAN International (India) Private Limited, Pune
3. Bharat Petroleum Corporation Limited, Mumbai
4. Bharat Heavy Electricals Limited, New Delhi
5. West Bengal Power Development Corporation Limited, Sagardighi Thermal Power Station, Murshidabad (West Bengal)
6. JSW Steel Limited, Vijayanagar Works, Ballari (Karnataka)
7. Page Industries Limited, Bengaluru

Case Studies in the '**Energy Efficiency**' category were shared by the below-mentioned companies, which were conferred and collected by all the winners with the Golden Peacock Awards in the category of 'Energy Efficiency' for the year 2022:

1. Daimler India Commercial Vehicles Private Limited, Kanchipuram
2. Lucas TVS Limited, Chennai
3. Kirloskar Oil Engines Limited, Kolhapur
4. Allianz Technology SE, Thiruvananthapuram

5. GAIL (India) Limited, Petrochemical Complex, Pata (Uttar Pradesh)

6. Jindal Stainless (Hisar) Limited, Hisar

Case Studies in the '**Eco-Innovation**' category were shared by the below-mentioned companies, which were conferred and collected by all the winners with the Golden Peacock Awards in the category of 'Eco-Innovation' for the year 2022:

1. Council of Scientific and Industrial Research, New Delhi

### Plenary Session IX - Case Study Presentations

#### Success Stories on Effective Implementation of 'Occupational Health & Safety'

##### Case Study Presentations

The Session was Chaired by:

##### Dr. Richard Vincent Dsouza, IAS

Managing Director

Karnataka State Warehousing Corporation (KSWC)

**Dr. Dsouza** started by introducing the Karnataka State Warehousing Corporation (KSWC) and briefed the gathering about its purpose, services and activities. He then briefly discussed about the Occupational Hazard of transport accidents. He said that this is an alarming issue and must be addressed. He then welcomed the presenters for the Session.

Case Studies in the '**Occupational Health & Safety**' category were shared by the below-mentioned companies, which were also conferred and collected in person by all the winners the Golden Peacock Awards in the category of 'Occupational Health & Safety' for the year 2022:

1. Mercedes-Benz Research and Development India Private Limited, Bengaluru
2. Bosch Limited, Bidadi (Karnataka)
3. EXL Service.com (India) Private Limited, Noida
4. JK Lakshmi Cement Limited, Durg (Chhattisgarh)
5. Shapoorji Pallonji and Company Private Limited, Campus Development for IIT Hyderabad Phase - II Package 3B, Hyderabad
6. JCB India Limited, Ballabgarh
7. Panasonic Life Solutions India Private Limited, Unit 4, Daman
8. Honeywell Automation India Limited, Pune
9. Cummins India Limited, Pune
10. Rashtriya Chemicals and Fertilizers Limited, Trombay Unit, Mumbai
11. Britannia Industries Limited, Guwahati
12. L&T Energy Hydrocarbon, Modular Fabrication Facility, Surat

13. Reliance Industries Limited, KGD6 Onshore Terminal, Kakinada (Andhra Pradesh)

14. Indian Oiltanking Limited, Common User Terminal, Raipur

15. Nuclear Power Corporation of India Limited, Tarapur Atomic Power Station 3&4, Palghar (Maharashtra)

16. NTPC Limited, Rajiv Gandhi Combined Cycle Power Project, Kayamkulam (Kerala)

17. Grasim Industries Limited, Unit: Grasilene Division, Kumarapatnam (Karnataka)

18. South West Port Limited, Goa

### Plenary Session X - Closing Remarks

The '**Closing Remarks**' and a '**Vote of Thanks**' were proposed by:

##### Mr. R. G. Rajan

Board Member & Hon. Zonal Director, Institute of Directors

former CMD, RCF/NFL/PDIL

former Chairman FAI/SCOPE

**Mr. Rajan** proposed the '**Vote of Thanks**'. He started by discussing how human activities had damaged the environment. He then gave a few key highlights of the IOD two day event that included ideas discussed such as: "There is an urgent need to promote sustainable models of business"; "It cannot be business as usual, we have to raise our goals"; "Climate related risks should be fully integrated into the company strategy, and with top management commitment for net-zero emission in the earliest possible timeframes"; "Ownership and stewardship for the big companies and countries is urgently required"; "There should be handholding of MSME's to meet climate related issues with full access to technology and financing". He concluded by saying that though there are very big challenges facing human beings, but by



**Closing Remarks & Vote of Thanks by Mr. R. G. Rajan**  
Board Member & Honorary Zonal Director, Institute of Directors,  
former CMD, RCF/NFL/PDIL, former Chairman FAI/SCOPE



**Mr. Ashok Kapur, IAS** (retd.)  
Director General  
Institute of Directors



**Brigadier Rajeev Kapoor** (retd.)  
Regional Director – Bengaluru Region  
Institute of Directors

working together, it is possible to create sustainable communities and societies, thereby saving the planet.

On behalf of IOD, he extended thanks to the '**Chairman, Hon'ble Justice M. N. Venkatachaliah** and '**Guest of Honour, Dr. N. Kalaiselvi**, for their gracious presence. He also thanked **Dr. Richard Vincent Dsouza, IAS** and **Mr. S. Srinivasan, IAS** (retd.), for Chairing the Sessions. He especially thanked **Mr. Ovais Sarmad** for representing UNFCCC at the event.

He also extended thanks and gratitude to all the Distinguished Speakers, Guest Speakers, Keynote Speakers, Foreign Speakers, Presenters, Participants and Event Partners. Furthermore, on behalf of IOD, he thanked the State Government of Karnataka for extending support and encouragement, for helping in making the event the success it was.

IOD also thanked the Hotel Authorities of 'The Lalit Ashok' for the excellent arrangements.

#### **IOD is especially grateful to its event partners:**

IOD's **Platinum Partner** was:

Bangalore International Airport Limited

IOD's **Gold Partners** were:

1. Dynamatic Technologies Limited
2. Karnataka Department of Tourism  
Government of Karnataka
3. Mysore Sales International Limited (MSIL)
4. The Nettur Technical Training Foundation (NTTF)

IOD's **Silver Partner** was:

HPCL - Mittal Energy Limited (HMEL)

IOD's **Bronze Partners** were:

1. Karnataka Skill Development Corporation (KSDC)

2. The Karnataka State Highways Improvement Project (KSHIP)
3. The Karnataka State Warehousing Corporation
4. Hindustan Petroleum Corporation Limited (HPCL)
5. Bengaluru Metropolitan Transport Corporation (BMTC)
6. The Bruhat Bengaluru Mahanagara Palike (BBMP)
7. Environmental Management & Policy Research Institute (EMPRI)
8. Kanti Sweets
9. Hutti Gold Mines Company Limited (HGML)
10. Karnataka Vidyuth Karkhane Limited (KAVIKA)

IOD's **Associate Partners** were:

1. Alliance University
2. GAIL (India) Limited

#### **In Association with**

1. World Environment Foundation
2. IOD Foundation

This report is compiled by:

**Mr. Ashok Kapur, IAS** (retd.)

Director General  
Institute of Directors  
&

**Brigadier Rajeev Kapoor** (retd.)

Regional Director – Bengaluru Region  
Institute of Directors

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23<sup>rd</sup> World Congress on Environment Management & Climate Change – 2022

# Summary of Recommendations

## A. National Level

1. Ancient Indian wisdom is holistic in regard to our relationship with the environment and natural world. We cannot burn up natural capital, as if there was 'no tomorrow'. We need to challenge assumptions and question expectations. We need to know how resilient would our activities be, in face of sudden and potentially disruptive events. We need to engage more with stakeholders, to seek their views on these aspects.
2. It is time we recognized the price of natural capital, of greenery, rivers, mountains, oceans and glaciers and reflect our financial 'Balance Sheet' on a 'Triple Bottom Line Growth Model'. New concepts such as 'Pricing Natural Capital', 'Circular Economy', 'Carbon budget' and 'Lifecycle impacts', which cover total environment footprint, would be opening new 'market solutions'.
3. India must adopt 'National Mission' on mitigation and adaptation. 'Mitigation' to reduce GHG emissions by switching to alternative measures of green renewable energy, while adoption will reduce the impact of the adverse events.
4. The 'UN 2030 Agenda for 'Sustainable Development' and the 17 SDG's and 69 associated targets provide good opportunity for business to align their strategic goals with globally agreed sustainable targets. Sustainability also needs to embrace 'supply chains'.
5. Energy efficiency is a key enabler for switching energy choices. We need an energy efficient switch for transformation, to achieve a zero-emission future. Energy consumption and energy efficiency need to follow 'Energy Management System' i.e. ISO 50001.
6. India needs green renewable energy to august carbon neutral energy supply. It needs to encourage global collaboration and partnerships for climate change solutions. India has set up 'International Solar Alliance' during the 'Paris Agreement' of 2015. We need to ensure that it becomes the 'global solar energy hub'.
7. A comprehensive, secure, vigilant, and resilient ecosystem is required to address cyber risk, in the critical power sector i.e. generation, transmission, distribution and networks.
8. India is one of the world's top two biggest coal consumer. Coal is India's most abundant fuel. We need to develop 'advance clean coal technologies' to use this asset, and to gradually phase down coal power.
9. Better carbon reporting on climate issues will help business, investors, and the implementing agencies. Recent Launch of an 'International Sustainability Standards Board' (ISSB), will soon help shape global reporting standards. We will need to see, how it can be made mandatory for our industry.
10. India has committed to an ambitious goal of achieving 'net zero state' by 2070 at COP-26. Indian Govt is in the process to prepare proper 'roadmap', involving all concerned ministries, for navigating to a 'Net Zero state'. We need to beat climate crisis by investing in ESG, for a better future.
11. We need to champion adoption of new and more sustainable business models and life styles, to prepare for consequences of climate change, including natural disasters. Climate risk is both physical and transitional. Transitional risks can be mitigated by making provision for it, and socializing the risk.
12. The 'Global Reporting Initiative' launched GRI-4 guidelines in May 2013 with four sub-categories, namely labour practices, decent work, human rights, society and product responsibility. GRI-4 is based on leading indicators rather than lagging indicators, to ensure proper assessment of sustainability approach. While over top 100 Indian firms have adopted this, we need to go for 'Integrated Reported System', which will cover new sustainability standards under finalisation.
13. Green economy has often raised the controversy whether it is 'job creating' or 'job displacing'. ILO Global Economic Linkage Model has reflected that globally a greener economy and more sustainable enterprise has the significant potential to create more decent work opportunities.
14. Empowerment of civic societies by providing adequate resources, information and opportunities for green economy programme implementation, will lead to faster and ethical departure to green development pathway.
15. Government of India will need to support and fund sustainability projects mainly of MSMEs, at national level.

16. Formulation of National Policy by Government of India, for 'Performance and Trade Evaluation' with respect to Environment Management and Climate Change would help speedy transformation.
  17. Policy for banning of outdated equipment's and machineries for 'production and manufacturing' in India has to be enforced.
  18. There is need to introduce Certified Environment Auditors under 'State Pollution Central Boards', to monitor the EMS/ Emission parameters and to take punitive action against violators. (The per capital green score for all sustainable activities of any organisation to be predefined and monitored.)
  19. Regulatory Authority, like RERA, could be set up at the Central and State levels, to monitor compliance, and support funding of research. (This will be separate Regular cannot fund).
  20. There is need to create guidelines / policies for preventing extinction of water bodies around the cities.
  21. An 'App' to be created for highlighting violations, where common citizen can upload photographs and name the violators.
  22. We must champion the adoption of new and more sustainable business models and life-styles, and challenge assumption and question expectations.
- B. Corporate Level**
1. Boards to promote circular economy and consider lifestyle impacts of corporate offerings.
  2. Boards to promote reinvention, regeneration, & transformation, and open up economy to new ideas.
  3. Boards to be aware of environment & climate change issues & lifestyle choices, and spearhead change to a more sustainable world for social, environment & economic transformations.
  4. Boards need to act faster with a more flexible strategy to face challenges and exploit opportunities.
  5. Boards need to ensure climate related risks are fully integrated into their business strategy, and commit for renewable energy with a carbon neutrality campaign, to achieve early net-zero emission. It exudes a breadth of perspectives and 'systems thinking' for effective boards.
  6. Boards need to include green strategies in business processes of corporate sector, both public and private. Climate change and other environmental and social risk management are opportunities for re-directing investments required to create innovations.
  7. Board of companies should set ambitious targets for reducing energy and resource consumption, carbon emissions and wastes. Board should regard reducing energy and resource consumption as central to competitiveness and profitability and just as part of corporate social responsibility or regulatory compliance.
  8. It is for the boards to determine what is possible and desirable for an individual company when formulating corporate and sustainability strategy. Boards have to make choices that may need difficult trade-offs considering competitive pressure, uncertainty and insecurity. The directors have to weigh a variety of contending factors when formulating visions and values, and deciding corporate goals, objectives and policies, including those relating to environmental challenges and opportunities.
  9. The allegiance of stakeholders cannot be taken for granted, if relationships with them are to last they must be mutually beneficial. Particular attention needs to be paid to the evolving interest of all stakeholders.
  10. Directors of companies individually and collectively make effective contribution to representative bodies- and help government bodies to achieve environmental and sustainability objectives by providing advice on implementation and looking out for barriers and distortions, created by public measures. ■

Compiled by:  
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 Vice President  
 Institute of Directors