

National Workshop on Net Zero, Vision Zero & Social Security 22nd April 2022 Organized by Centre of Excellence KIIT University with Indo German Focal Point (IGFP) India with Strong Support of DGUV, Germany

News & Views



Release of IGFP 6th Issue Booklet on Safety, Health & Social Security



Technical Plenary I : 1145–1300 hrs[Vision Zero is complementary to Net Zero]
Session Chairperson - Mr. Parth Pratim Mitra, IES(Retd.), Former Principal LEA, MOLE

1145 – 1200 hrs	Net Zero – India Perspective	Mr. Parth Pratim Mitra, IES(Retd.) Former Principal LEA, MOLE
1200 – 1215 hrs	Concept of Net Zero in Sundergarh / Odisha Perspective	Prof. Singam Jayanthu, Professor (Through VC) Mining Engineering
1215 – 1230 hrs	Vision Zero - the path to Net Zero	Dr. M.K. Pradhan. GM, OSDMA, Govt. of Odisha
1230 – 1245 hrs	Present status and future prospect of Industries to attain Net Zero	Mr. K J Patel Sr ED, IFFCO
1245 – 1300 hrs	Net Zero from Mining Sector perspective	Mr. Helmut Ehnes (Through VC) Secretary General ISSA Mining, Chairman ISSA Vision Zero Steering Committee

Takeaways of Plenary-I

1. All speakers agreed that both the concepts are indeed complementary to each other
2. At the global level cooperation is required to ensure that technologies for reducing GHG emissions go hand in hand with a preventive safety culture at the international national and unit levels for which efforts to meet NetZero targets at all levels are accompanied with not only technology which minimizes burning of fossil fuel and increased use of renewables but the energy transition is carried out through the 7golden rules of vision zero which ensures commitment to safe, healthy and well being of the workforce.
3. In the mining sector at the international level the role of supply chains become important and golden rule 4 focuses on the usefulness of vision zero in achieving the objectives of reducing the carbon foot print envisioned in the concept of net zero
4. At the national level in the mining sector, the focus on mineral rich districts like Sundergarh in Odisha has to focus on scientific mining which may not always be measured through GHG emissions but the carrying capacity of mining activity, which is critical in taking decisions on either opening new mines or closure of existing mines. There is a need for a wholistic approach which should take into consideration the carbon foot print of industries such as steel and power in the region
5. Already in the steel sector the shift from the blast furnace technology to sponge iron technology has reduced the carbon foot print of the steel industry considerably but this

process is continuous if the objectives of NetZero are to be met. The existing Factories Act has provisions for maintaining proper distancing between individuals while carrying out work at the shop floor but also providing adequate protective gear to work men with sanitation. The Covid 19 protocols at the shop floor only reiterate what was provided in the Factories Act in 1948.

6. In the Fertilizer sector sufficient efforts have been made to reduce the carbon foot print by improving technology, reducing costs but the Ukraine war has affected adversely prices of raw materials including oil thereby affecting the pace of progress in the industry to reduce its dependence on fossil fuels and overall carbon foot print.

7. The world of work in recent years has undergone considerable changes with the emergence of digital and platform work. As a result the work has got trifurcated between the platform aggregator, platform worker and the client or the customer. The work has also got differentiated into offsite and on site work and the work process itself has got divided into different tasks to be performed either simultaneously or at different times. These changes in the world of work have extended the hours of work, increased stress levels of workers and raised safety issues including work hazards and data privacy issues of workmen. A new approach is called for risk assessment and pre-work risk and safety surveys with the involvement of both management and workers at all levels both as individuals and as a team. It is important that more clarity be brought into the concept of employer and employee in the area of platform work so that safety, health and wellbeing at the workplace is holistically addressed.

Prepared By

Mr. Parth Pratim Mitra, IES(Retd.) Former Principal LEA, MOLE,
Member of IGFP Advisory Board

Technical Plenary II : 1400–1515hrs, Vision Zero vis-à-vis Net Zero – Sectorial Approach Session Chairperson - Dr. Shyam Pingle, Sr. OH Specialist & Adjunct Professor, Indian Institute of Public Health.		
1400 - 1415 hrs	Future of Public Health @ Net Zero	Dr. Shyam Pingle, Sr. OH Specialist & Adjunct Professor, Indian Institute of Public Health.
1415 – 1430 hrs	Physiology – A Path to Net Zero	Prof. Subhasish Sahu Associate Professor & Head, Dept of Physiology, Kalyani University
1430 – 1445 hrs	Emission related Health Hazards	Dr. Somnath. CEO, Hyderabad, Medical Centre

1445 – 1500 hrs	Net Zero @ Construction Perspective	Dr. Krishna Nirmalya Sen Head EHS,L&T
1500 – 1515 hrs	Net Zero @ Transport Perspective	Mr. Dipti Ranjan Patra BE (Mech.) OTES (I) SB Deputy Commissioner Transport Odisha, (Tech), Northern Division, State transport Authority

Takeaways of Plenary-II

1. Dr. Shyam Pingle spoke on Future of Public Health @ Net Zero. He briefly reiterated the concept of Net Zero and raised three questions.
 - What are the factors affecting Public Health?
 - How is lack of Net Zero affecting Public Health currently?
 - What would be the effect of Net Zero on Public Health?

Public health can be affected by disruptions of physical, biological, and ecological systems, including disturbances originating locally and elsewhere. Factors affecting Public Health include Individual Factors such as Lifestyle, Environmental factors such as Temperature, Rainfall, Air Pollution and Workplace Exposures. Climate change impact is leading to Rising temperatures, More extreme weather, Rising sea levels, and Increasing carbon dioxide levels

Lack of Net Zero currently is leading to Extreme Heat, Severe weather, Air Pollution, Changes in Vector Ecology, Increasing Allergens, Water quality Impact, Water and Food Supply Impact and Environmental Degradation. All these effects are detrimental to public health leading to increased morbidity and mortality.

Achieving Net Zero will benefit the public health by reduced respiratory and cardiovascular disease, reduction in injuries and premature deaths related to extreme weather events, positive changes in the prevalence and geographical distribution of food- and water-borne illnesses, reduction in other infectious diseases and reduction in threats to mental health.

Unpublished climate research with which Dr. Pingle is associated with, has shown that, the population-weighted PM_{2.5} concentration will decrease under the mitigation & adaptation scenario of Net Zero but will increase under business-as-usual assumptions if there are no interventions. Net zero activities are predicted to reduce PM 2.5 air pollution resulting in fewer premature deaths due to air pollution annually. He concluded that Net Zero initiatives are essential to contain threats to public health.

2. Prof Dr.SubhasishSahu spoke on Ergonomics- apath to Net Zero. He shared the Time trend 1980 – 2010 of number of days with WBGTmax at 29 oC or higher at Kolkata airport weather station. He explained the Productivity goes down as the environmental heat levels go up. He claimed that the solution lies in Ergonomics.

He explained that Ergonomics leads to better workplaces & work processes, minimizing the work-related stress & fatigue, reduces the possibilities of human error & wrong decision, contributes to the prevention of workplace accidents and industrial accidents and prevents occupational diseases (such as MSDs).

He explained the concept of cognitive ergonomics, areas of intervention and how to reduce exposure to physical agents. He dwelt upon the path to sustainable ergonomic solution and need of natural resources. He showcased some low-cost interventions revealing that partnerships are equally important for a healing environment.

3. Dr.Somnath spoke on Emission related Health Hazards. He explained the concept of emission in simple terms. He explained about types of Air Pollutants by Emission, Effect of pollutants on health and effect of air pollution on human health. He informed that air pollution adversely affects various systems in human body mostly respiratory and cardio vascular systems. He stressed on the economic and human health damage being caused by the increasing number of vehicles in our country.

4. Mr. Sabyasachi Sengupta spoke on Net Zero – Construction Perspectives. He shared the– Global & Indian Scenario in the Construction Sector. Construction industry in India is the second biggest employer next to Agriculture. Estimated number of construction workers are over 74 Million. The industry contributes to 9 -11% of the GDP. He shared the empirical data on accidents, Indian Construction workers subjected to the highest risk at the workplaces among all the industries and accounts for 24% of all fatalities due to accidents at work.

L&T has adopted Digital Technology in construction. He shared L&T initiatives Occupational Health & Welfare. He explained that the Environmental Burden of Construction includes Air Pollution, Water Pollution and Waste Generation Soil/Land Pollution.

He said that the Environmental Protection Measures at L&T include Conservation of Natural Resources: Water, Topsoil, Sand, Wood, Air Quality Management: Noise Control Measures: Waste Management and Wastewater Management. He further explained that Leadership Commitment is vital for Realizing Vision Zero and Net Zero.

5. Mr. Dipti Ranjan Patra spoke about the Transport Perspective of Net Zero with focus on initiatives in the state of Odisha. He started with the historical perspective sharing the landmark Supreme Court judgment (1992) leading to steps in controlling vehicular pollution.

He briefed the audience about the Indian emission standards for controlling Emissions from Vehicle and various Mitigation Strategies. He shared the Current Legal Framework in India regarding fitness of vehicles and pollution under control rules. He spoke about the new Vehicle Scrap Policy 2021 which has specified the Incentives for scrapping old vehicles and buying new ones and disincentives for keeping old vehicles.

Mr. Patra further shared various initiatives of the Odisha Government such as I&C Test Centre, e-Detection to detect faulty vehicles. Odisha Electric Vehicle Policy, 2021, and other initiatives which he elaborated in details.

Prepared by

Dr. Shyam Pingle, Sr. OH Specialist & Adjunct Professor, Indian Institute of Public Health.

Takeaways of Plenary-III

Technical Plenary III : 1530–1645 hrs [Social Security to achieve Net Zero with a Human Face] Session Chairperson - Mr. Panchanan Kanungo, Former Finance Minister, Odisha.	
Net Zero for Zero Harm	Mr. Panchanan Kanungo, Former Finance Minister, Odisha
Curtain Raiser	Dr. Ashok Sahu, IES (Retd.) Former Secretary General, NHRC & LEA, MOLE
Social Security measures @ ESIC, India	Mr. Partha Sarathi Panda, RD ESIC Odisha
Social Security measures @ PF, India	RPFC @ Bhubaneswar
Social Security for Unorganized workers in Karnataka - Implication of Net Zero Effect on Social Security Schemes for Workers, particularly in the Unorganized sector	Dr. Suresh V. Nadagoudar, (Through VC) Chairman PG. Department of Studies in Law, University Law College, Bengaluru University

1. Since Net Zero will impact the entire population universalization of social security as human and constitutional right acquires significance. It also necessitates broadening of the contours social security.
2. Social Security for the entire population covers food security, shelter security, clothing security, fuel, fodder & water security, health security, energy security, technological obsolescence, rehabilitation, education & skill development, employment & livelihood security.
3. Unorganized sector workers requires special social security protection. Certain meanings like registration of which workers under E-Shram portal, introduction of one-nation one ration card scheme etc have already been taken up. At state level also certain social security scheme are being implemented as MGNREGA scheme in the state of Karnataka.
4. For organized sector workers, ESIC is implementing various social security schemes. There is however scope for plugging loopholes in certain cases, so that better services are available to insured persons.
5. The EPFO is implementing various social security schemes for the organized sector workers. Redesigning of the Employees Pension Scheme (EPS) to provide universal pension for gig workers and self-employed persons is also being contemplated.

Prepared by

Dr. Ashok Sahu, IES (Retd.)

Former Secretary General, NHRC & LEA, MOLE, Member of IGFP Advisory Board

Minutes

The list of panelists is annexed.

At the outset of the workshop, Sri B.K Sahu, Director of IGFP welcomed all the distinguished guests, panelists and participants to the workshop. Sri Sahu also pointed out the challenges being faced due to covid-19 pandemic, like problems relating to migrant workers, occupational safety & health, social security issues etc. Its important recommendations have been adoption of Vision Zero fatality rate, registration of migrant/informal workers to create awareness among them and introduction of Occupational Health and Safety study in the academic curriculum.

Prof K.H Noetel, President, ISSA Construction joined the workshop through virtual mode. In his presentation he focused on the concept of vision zero. How different organizations like WHO, ILO, ISSA and other National organizations are working on the vision zero goal. Different ways should be found out to establish safe and healthy working conditions worldwide and advance implementation of global vision zero prevention strategy. All these organizations are using various tools for better cooperation like video clips, picture booklets, making available the data online etc. He stated that more than 100 countries in the world are using the vision zero strategy. Then he conveyed thanks to all the distinguished guests and mebers.

Dr K Murugesan, IFS started his speech regarding frequent climatic effects in Odisha like cyclones, heat wave, heavy rainfall etc because of its geographical position. Specially in the coastal belt people are suffering a lot due to the cyclones occurring every year. Odisha is rich in resources & minerals. Many small & big industries are emerging in Odisha, so the emission of Carbon dioxide is very high in the atmosphere. Hence annual atmospheric temperature and sea level is increasing every year. Pollution Control Board in Odisha is gearing up the action plan for the green environment. Solar generation , Biogas , using of renewable energy sources are the best way to achieve net zero.

Prof Sasmita Samanta, Vice-chancellor, KIIT University stated that Survival is the success from the last two year during covid-19. Nature is the source of energy, wealth & economy. India connected the nature with devotion & worship. Our environment is connected to our soul. During the pandemic the people who live in remote area and who are illiterate have taken steps for prevention and awareness of the people. She told that humanization is the only way to achieve the goal of Net Zero. She also said that a curriculum on OSH to be introduced in near future, as this subject has a lot of potential and it may benefit a lot of people.

Mr Partha Pratim Mitra, IES (Retd.) conveyed his thanks to all the participants. He emphasized on the environmental pollution is affecting the human life. If we can control the pollution then so many problems can be solved. He focused on some of the following points: installation of non-fossil fuel generation capacity of 500 Giga watt.

Sourcing 50% of India's energy requirement from renewable source. Reduce 1 billion tons of projected emissions from current emissions. Achieving carbon intensity reduction of 40% over 2005 levels by 2070.

Dr Helmut Ehnes presented the topic regarding Net Zero from Mining Perspective. He stated that to develop social security conditions we need peaceful non-violent environment. He also invited the professionals to join for excellence for safety & health in mining sector, ISSA. We should have a mindset of Every minor returns safe & healthy from his work everyday. There are three pillars of Vision Zero in mining i.e: Safety, Health, Well-being. Concept of vision zero can be implemented only if we care from our heart, act by common sense and keep it simple. He also stated that every supply chain starts with either mining or agriculture. We should adopt the process of circular economy, minimize the emission of carbon print and consumption of mineral resources.

Mr Partha Sarathi Panda, RD, ESIC, Odisha stated that ESIC is the largest social security organization in Odisha. Around 60 crore employee of unorganized sector needs to be covered under ESIC yet. ESIC is playing a major role in nation building, as it is providing death benefits, pension benefits, disability benefits to the members or to the nominees. The Govt of India preparing Action plan, so that Social Security should reach to the needy employees covered under the Act. ESIC is providing various benefits to the employees as and when required as per the provisions under ESIC Act. Dr Panda suggested to amend the rule regarding death benefits and disability benefits.

Mr Sabyasachi Sengupta, L&T presented Net Zero from construction perspective to be taken into account. Construction sector is a major employment generator and about 74 millions workers are contributing 9 to 11% of the GDP. All such workers need social security. Physical hazards like slips, trips, falls, electricity, noise, vibration, radiation, heat, cold etc to be looked into. Chemical hazards are wilding fume, vapour, gases, construction, dusts etc also to be looked into and pre-caution measures nto be taken to avoid such hazards. Biological hazards are created by Bacteria, Viruses, Fungi etc.

Prof Subhashish Sahu informed to the house that Ergonomics (the study of people in their working environment) is a path to Net Zero. We need Net Zero for Industrial Revolution. Human Activities like burn-up fossil fuels such as oil and coal, deforestation lead to

accumulation of Green House Gases in the atmosphere. Accordingly Ergonomics can be defined as better work place & work processes, minimizing the work related stress & fatigue. Also to reduce the possibility of human error as well as to prevent occupational diseases.

Prof Singam Jayantu started regarding Net Zero from Mining Perspective. There are so many mining units in Odisha. 28% iron ore, 24% coal, 59% Bauxite and 98% chromite is mined from Odisha only. To avoid pollution, insisted huge plantation which may help to absorb carbon dioxide gas. There are 243 numbers of various mines existing in the state of Odisha. Various efforts to be taken towards Net Zero by plantations and other aspects. All mining workers to be covered under Social Security scheme of Govt of India.

Dr Shyam Pingle stated about the factors that affect the public health like environmental factors, workplace factors, climatic factors, change in vector ecology, water quality impact, water & food supply impact, environmental degradation.

Dr K.J Patel informed to the house that over 17% of global population in India consuming less than 5% of total energy used in the world. India has also reduced its emissions by 22% (2005 as the base year). He stated that challenges to industries are:-

High cost of energy/increase price of raw material/high coal reserve in India lead to pollution. He stated about circular economy concept where he told waste product of one industry is the raw material for another industry. Energy monitoring is a basic requirement. Energy conservation opportunities for industries like electrical saving, thermal savings.

Dr Somnath stated that for vision zero & net zero, the cause of Air-pollution causing many diseases to be avoided by any means. Also air pollution is sensitive to change the climate. Due to air pollution many of us are suffering from many kind of pulmonary diseases. Every year many people died prematurely for air pollution.

Mr Dipti Ranjan Patra stated that now Delhi has become the 1st city in the world to have complete public transportation running on CNG instead of diesel to prevent air pollution. Accordingly to check Air pollution steps being taken to issue Vehicle Fitness certificate for 2 years for transport vehicles and for non-transport vehicles it is valid for 15 years. We should increase share of public transport, advancement of emission norms, banning 10 year old commercial vehicle. He also shared about the Scrap page policy 2021.

Hon Member Sri Panchanan Kanungo presided the meeting at the summing up session. Sri Kanungo got clarified some aspects regarding E.S.I Scheme and also E.P.F.O.act from the Regional Director ESIC and P.F.Commissioner . Sri Kanungo expressed his heartiest congratulation and thanks for organizing such workshop on Net Zero and Vision Zero.

Dr. Ashok Sahu stated that achievement of net zero is important for human survival. The focus must be shifted to Green Financing, Green Technology ,Green Management & Social Security with human face for the enter population like shelter security, clothing security, education & skill development, health security & rehabilitation etc to be looked in to for net zero.

Mr. P S.Panda the Regional Director stated about the spreading of E.S.I. benefits to the needy beneficiaries. He also informed to the house that E.S.I.scheme of India has moved forward a long way in the realms of Social Security over the last five decades and more of its service to the Nation. The social usefulness of the scheme can be judged from its horizontal growth, infrastructural development, demographic reach and extent of applicability, achieved over the years. A vedeo showing how the beneficiaries are getting cashless treatment in the tie up hospitals was displayed in the house.

Dr. Suresh of Bangalore university stated about MGNREGA scheme to protect unorganized workers. He brought out various welfare measures taken by Karnataka Govt for workers like drivers, conducted involving accident & death including hospitalization besides schemes which can benefit workers for achieving safe workplace & adoption of vision zero. He stated that & omnibus approach will not be helpful & specific problems require specific solutions.

RPFC represented by Mr. A. C. Sahu staed that EPFO organization is providing quality of benefits and the speed with which benefits are delivered to the needy, being the essence of a purposive and responsive Social Security set up, it is imperative that every individual concerned with administrative and operational part of the EP.F.O., is fully conversant with the latest rules and regulations governing the act.

**Prepared by
Indo German Focal Point of India (IGFP)**

Annexed:-List of Speakers (International & National)

Sl. No	Name	Designation
1	Prof K.H Noetel,	President, ISSA Construction
2	Dr. K .Murugesan, IFS	State Pollution Control Board, Odisha
3	Prof Sasmita Samanta	Vice-chancellor, KIIT University
4	Mr. Parth Pratim Mitra, IES(Retd.)	Former Principal LEA, MOLE
5	Mr. Helmut Ehnes	Secretary General ISSA Mining, Chairman ISSA Vision Zero Steering Committee
6	Mr. Partha Sarathi Panda	RD ESIC Odisha
7	Mr Sabyasachi Sengupta	Sr. Manager,L&T
8	Prof. Subhasish Sahu	Associate Professor & Head, Dept of Physiology, Kalyani University
9	Prof. Singam Jayanthu	Professor Mining Engineering
10	Dr. Shyam Pingle,	Sr. OH Specialist & Adjunct Professor, Indian Institute of Public Health
11	Mr. K J Patel	Sr ED, IFFCO
12	Dr. Somnath	CEO, Hyderabad, Medical Centre
13	Mr. Dipti Ranjan Patra	Deputy Commissioner Transport Odisha, (Tech), Northern Division, State transport Authority
14	Mr. Panchanan Kanungo	Former Finance Minister, Odisha
15	Dr. Ashok Sahu, IES (Retd.)	Former Secretary General, NHRC & LEA, MOLE
16	Mr. Partha Sarathi Panda	RD ESIC Odisha
17	Mr. A. C. Sahu	Enforcement Officer RPFC @ Bhubaneswar
18	Dr.Suresh V. Nadagoudar	Chairman PG. Department of Studies in Law, University Law College, Bengaluru University

Presentations:-

 <p>National Workshop on 'Net Zero, Vision Zero and Social Security' @ Centre of Excellence, KIIT University, Bhubaneswar, 26.02.2022</p> <p>Social Security Helping to Achieve Net Zero With a Human Face</p> <p>Curtain Raiser</p> <p>By Dr. Ashok Sahu, IES (Retd.) Member, Advisory Board, Indo German Focal Point (Formerly: Secretary General, National Human Rights Commission, Principal Adviser, Planning Commission, Economic Adviser and Labour & Employment Adviser, Ministry of Labour & Employment)</p> <p>Vision Zero - the path to Net Zero</p> <p>By Dr. M K Pradhan General Manager (F&B) OSDMA, Govt. of Odisha Mob - 9439210915 Email - mpradhan@yahoo.com</p> <p>Net-zero commitments are rising, but the net-zero equation is not yet solved.</p>	<p>Future of Public Health @ Net Zero</p>  <p>Dr. Shyam Pingle Sr. OH Specialist & Adjunct Professor Indian Institute of Public Health Gandhinagar Past President, Indian Association of Occupational Health Board Member, International Commission on Occupational Health</p> <p>Importance of International Cooperation for Vision Zero and Net Zero</p> <p>National Workshop on Net Zero, Vision Zero & Social Security</p> <p>22nd April 2022 at KIIT University</p> <p>Prof. Kailash Chandra Nayak President of ISSA Construction</p> <p>INDIAN FARMERS FERTILISER COOPERATIVE LIMITED</p> <p>National Workshop on Net Zero, Vision Zero & Social Security</p> <p>Present Status and Future Prospect of Industries to attain Net Zero</p> <p>22nd April 2022 KIIT University, Bhubaneswar</p> <p>K J Patel Sr. Executive Director IFFCO Paradeep</p>
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Prepared by
Indo German Focal Point of India (IGFP) with Support of Center of Excellence KIIT University
Dated 28th April 2022