

INTERNATIONAL CONCLAVE ON CLIMATE CHANGE MITIGATION AND ADAPTATION (ICCCMA 2021)

A global conversation that aims to address the issues, challenges, and local solutions for Climate Change, Mitigation and Adaptation under the ambit of
SDG -13

UN DECADE ON ECOSYSTEM RESTORATION
2021 – 2030

Report

4th September 2021



**Association of Professional Social Workers and Development
Practitioners (APSWDP)**

Association in Special Consultative Status with Economic and Social Council (ECOSOC) of the United Nations
Affiliated with the Department of Global Communications (DGC) of the United Nations
Accredited with United Nations Environment Programme (UNEP) and United Nations Environment Assembly (UNEA)
Associated with UNESCO MIL Alliance, Registered with NITI AAYOG (Former Planning Commission), Government of India

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INTERNATIONAL CONCLAVE ON CLIMATE CHANGE MITIGATION AND ADAPTATION (ICCCMA 2021)



4TH SEPTEMBER 2021, (SATURDAY) | 11.00 AM - 02.30 PM (IST)

"UN DECADE ON ECOSYSTEM RESTORATION 2021 – 2030"

A global conversation that aims to address the issues, challenges, and local solutions for Climate Change, Mitigation and Adaptation under the ambit of SDG -13

Platform



Chief Guest
Dr. Mushtaq Ahmed Memon
Regional Coordinator for Resource Efficiency,
United Nations Environment Programme (UNEP), Asia Pacific
Regional Office, Bangkok, Thailand



Patron
Mr. Navjot Pal Singh Randhawa, I.A.S.
Chief Executive Officer, PEDA
Government of Punjab, India



Guest of Honor cum Key Note Speaker
Dr. Dai-Yeun Jeong
Director, Asia Climate Change Education Center (ACCEC), Jeju and
Emeritus Professor Environmental Sociology,
Jeju National University, South Korea

Guests



Mr. Aditya Pundir
Country Head,
India and South Asia
The Climate Reality Project-India



Mr. Michael Gasser
Co-Founder and Secretary
Social Impact Startup E[Co]work,
Switzerland & India



Dr. Anshu Kumar
Cold Chain Specialist
UNICEF, Bhutan
Ex-Technical Advisor, Montreal Protocol Unit



Er. M. P. Singh
Director,
PEDA, Government of Punjab,
India



Mr. Xabier Arruza
Manager
Bilbao Urban & Cities, Founder of
Basquium, Bilbao, Spain



Dr. Muthusami Kumaran,
Associate Professor
University of Florida, USA



**Dr. António Domingos
Abreu**
Manager, UNESCO Chair
BSSD, University of Coimbra,
Portugal.

Panel Speakers



Mr. Vivek Trivedi
Principal Convener
Founder-cum- Principal Adviser,
APSWDP



Dr. Sumit Arora
Convener & Moderator
President, APSWDP



Er. Paramjit Singh
Co-convener
Senior Manager (EC), PEDA



Dr. Radhika Dev Varma
Co-Convener
Chandigarh University



Mr. Bhavesh Swami
Co-Convener
The Climate Reality Project-India



Mr. Hitesh K. Gulati
Rapporteur
Hon. Director General, APSWDP

Organizing Team

Virtual Center of Excellence for Social Welfare Administration, (VCoE-SWA), Punjab Energy Development Agency (PEDA), The Climate Reality Project-India, Asia Climate Change Education Center (ACCEC), Jeju, South Korea and Chandigarh University, Punjab, India

*under the aegis of
Association of Professional Social Workers and Development Practitioners (APSWDP)*

In Special Consultative Status with Economic and Social Council of the United Nations since 2019

#SustainableDevelopment

#GlobalAgenda2030

#ClimateChange

#ESD

“We are the first generation to feel the effect of climate change and the last generation who can do something about it.”

Barack Obama, Former US President

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BACKGROUND OF CONCLAVE



BACKGROUND

Climate change is affecting every country on every continent. It is disrupting national economies and affecting lives. Weather patterns are changing, sea levels are rising, and weather events are becoming more extreme.

Although greenhouse gas emissions are projected to drop about 6 percent in 2020 due to travel bans and economic slowdowns resulting from the COVID-19 pandemic, this improvement is only temporary. Climate change is not on pause. Once the global economy begins to recover from the pandemic, emissions are expected to return to higher levels. Saving lives and livelihoods requires urgent action to address both the pandemic and the climate emergency.

The Paris Agreement, adopted in 2015, aims to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels. The agreement also aims to strengthen the ability of countries to deal with the impacts of climate change, through appropriate financial flows, a new technology framework, and an enhanced capacity-building framework.

To address this issue and to provide sustainable solutions, the International Conclave on Climate Change Mitigation and Adaptation (ICCCMA) shall discuss various Issues, Challenges, and Solutions to UN SDG-13. The Association of Professional Social Workers and Development Practitioners (APSWDP) in collaboration with Asia Climate Change Education Center (ACCEC), Jeju, South Korea, The Climate Reality Project-India (TCRP), Punjab Energy Development Agency (PEDA), Government of Punjab, and the Chandigarh University, Punjab has jointly organized this International Conclave on 4th September 2021 through virtual mode.

OBJECTIVES

- 1.To develop continuous support for leading a discussion, identifying alternatives, and implementing the solutions to Climate Change and Sustainable Development;
- 2.Sensitizing youth, professionals, social workers, community, and people from all walks of life about SDGs and climate change as the need of the hour; and
- 3.To understand various issues and solutions for building a sustainable future together.



PROFILE OF GUESTS & SPEAKERS



CHIEF GUEST

**DR. MUSHTAQ AHMED
MEMON**



Dr. Memon is working with the United Nations Environment Programme (UNEP) as a Regional Coordinator for Resource Efficiency in Asia Pacific Office located in Bangkok.

He is supporting resource efficiency, sustainable consumption and production, green economy, green financing, sustainable public procurement, sustainable tourism, sustainable industries and various areas for Asia and the Pacific.

Dr. Memon is also Project Manager for the Regional Policy Advocacy Component of the EU-funded SWITCH-Asia Programme to promote sustainable consumption and production and uptake of SDG 12 in Asia.

Dr. Memon has a Doctorate degree in environmental and resource economics from Hiroshima University in Japan, a Master's degree in national development and project planning from University of Bradford in UK. He has also published various papers in international journals and has delivered various training programmes.

GUEST OF HONOR

DR. VIVEK TRIVEDI



Dr. Trivedi is Masters in Social Work, PG Diploma in Journalism and Mass Communication, and completed Ph. D. in Social Welfare Administration from the Centre for Social Work, Panjab University, Chandigarh. He is Honorary National Coordinator - Climate Disasters, Poverty and Livelihoods with The Climate Reality Project India and guiding Climate Reality Leaders (CRLs) in Northern India on various initiatives of Climate Change and Action.

He has been awarded Hindustan Times Brightest Young Climate Leadership Award 2010 by the British Council, New Delhi, and conferred twice State Award in 2014 and 2020 by Chandigarh Administration on 65th Republic Day and 74th Independence Day 2020.

He is a global traveler and given global fellowships over the last 15 years including by UN agencies. He has been instrumental in getting global affiliations and accreditations to APSWDP from UN agencies

GUEST OF HONOR

PROF. DAI-YEUN JEONG



Prof. Jeong is presently the Director of Asia Climate Change Education Center and an Emeritus Professor of Environmental Sociology at Jeju National University in South Korea.

He received BA and MA Degree in Sociology from Korea University (South Korea), and PhD in Environmental Sociology from The University of Queensland (Australia). He was a Professor of Sociology at Jeju National University (South Korea) from 1981 to 2012.

His past major professional activities include a Teaching Professor at the University of Sheffield in UK, the President of Asia-Pacific Sociological Association, a Delegate of South Korean Government to UNFCCC, a Delegate of South Korean Government to OECD Environmental Meeting, and a Member of Presidential Commission on Sustainable Development, Republic of Korea, etc.

He has published 60 environment-related research papers in domestic and international journals and 13 books including Environmental Sociology. He has conducted 91 unpublished environment-related research projects funded by domestic and international organizations.

PANEL SPEAKER

ADITYA PUNDIR



Mr. Pundir is Director – India and South Asia at The Climate Reality Project India. He took over the branch in 2010 and is posted in New Delhi. He received his training from Honourable Vice President of US, Al Gore in 2009 on Climate Change, and was selected for Australian Leadership Awards Training 2013 in Environment. He has worked extensively in the field of climate change and sustainability in India.

He has authored 2 Books on Natural World Heritage Sites for UNESCO, 5 Environment Education CD ROM's and 8 Comics for children on environmental issues. He is also represented on consultation committees on climate change in India formed by UNDP, World Bank and UNESCO.

PANEL SPEAKER

MICHAEL GASSER



Mr. Gasser is a co-founder and Secretary of E[co]work and former Empa alumni having extensive knowledge in e-waste management and plastics.

He was working as project lead in several international e-waste projects, among others the Sustainable Recycling Industries (SRI) Programme for which he also went to India several times.

He is also experienced in multi-stakeholder dialogue and capacity-building activities.

PANEL SPEAKER

DR. ANSHU KUMAR



With 34 years of long experience in Project Management, Capacity Building in Refrigeration and Air-Conditioning, Cold Chain and Energy Efficiency, Dr. Anshu Kumar has worked with various UN bodies like UNICEF, UNDP, UNEP, and UNIDO apart from GIZProklima Germany, INFRAS Swiss, Energy Efficiency Services Ltd. India, Department of Technical Education, Punjab (India) and Military Engineering Services.

He is currently working as Cold Chain Specialist for UNICEF Country Office, Bhutan. Prior to that, he has served as a Regional Technical Advisor for Montreal Protocol/Chemicals in Regional Office of Asia Pacific, UNDP, Bangkok.

He was prudent in conceiving, drafting, and negotiating a project worth 3.5 million USD which was implemented, monitored and evaluated as the first project on Kigali Amendment under the Montreal Protocol for Bangladesh reducing 329,801 CO₂-equivalent tonnes due to refrigerant alteration. Under his leadership, the project reached its final closure stage, which was before time. The project planning was highly appreciated by the Global Montreal Protocol Community.

PANEL SPEAKER

ER. M.P.SINGH



Mr. Singh is the Director of Punjab Energy Development Agency (PEDA). He is a Mechanical Engineer and MBA from Panjab University.

Since inception of PEDA, a Punjab Government Undertaking in the year 1991, Mr. Singh is working with in the field of Renewable Energy (RE). He has more than 25 years of insightful experience in the field of Renewable Energy.

He has done his fellowship programme in Waste to Energy-GHG Emissions abatement programme under GOI-UNDP programme in Germany and has been involved in setting up of various Renewable Energy (RE) projects in the State & Country.

PANEL SPEAKER

XABIER ARRUZA



Mr. Arruza is an economist specializing in the design of urban economic strategies and the development of new businesses, especially related to the green economy sector.

With more than 15 years of experience in the public sector, first in the European Business and Innovation Center of Bizkaia - BEAZ and later in the Bilbao City Council and its Development Agency - Bilbao Ekintza.

In this second stage he worked closely to the urban transformation process of the Metropolitan area of Bilbao, especially with regard to economic strategies.

During 2018, he also assumed the role of advisor for the Municipality of Barakaldo which is the second largest (100,000 inhabitants) of the Bilbao Metropolitan area and also the protagonist of the urban regeneration process. At the moment, work is being done on the smart specialization design of the municipality.

He is also the author of different articles for international medias related to urban transformation strategies for publications such as BW Smart Cities, Energy Next magazine, the WTC publication "On Trade" or IMC Journal among others.

PANEL SPEAKER

DR. ANTONIO DOMINGOS ABREU



Dr. António holds a PhD in Marine Biology being an environmental expert and highly versatile professional with expertise in transposing scientific and technical research into international policy management and governance. Works across multiple government and non-governmental stakeholders in building international alliances to help define and shape projects, policies and practices ensuring balanced and practically workable outcomes.

Currently he is researcher and manager at the UNESCO Chair in Biodiversity safeguard for Sustainable Development at the University of Coimbra, Portugal and Scientific Coordinator of Príncipe Island UNESCO Biosphere Reserve.

He has an extensive international experience, working in several projects and programmes, covering from climate change to natural resources management, protected areas, biodiversity conservation and impact assessment, in countries such as Angola, Mozambique, Malawi, Cabo Verde, Ghana, The Gambia, Sudan, São Tomé & Príncipe, Suriname, as well as in Portugal and Europe.

On the academic side, since more than 30 years, he teaches environmental management and sustainable tourism in universities as well as supervises Master and PhD projects in several national and international universities.

PANEL SPEAKER

DR. MUTHUSAMI KUMARAN



Dr. Kumaran is the Associate Professor of Nonprofit Management and Community Organizations, Department of Family, Youth & Community Sciences, University of Florida.

He earned a Ph.D. (Public Administration) from the University of Madras and a Ph.D. (Urban & Public Affairs) from the University of Louisville. He teaches advanced courses on various aspects of nonprofit/NGO management.

He conducts research on operations, impacts, and capacity building of nonprofits/NGOs. He has published and presented his work extensively. Dr. Kumaran has trained more than 3000 NGO leaders on their organizational capacity building in nine countries through grants from USAID and the U.S. Department of State. He was a 2019-2020 Senior U.S. Fulbright Scholar at the Jeju National University, South Korea.

Prior to his academic career, Dr. Kumaran worked for a major nonprofit organization in Washington, D.C, and as an official of a state government in the U.S.A. He currently serves on the Boards of three nonprofit organizations in Florida, and an International NGO. He also serves as a Trustee of a major educational NGO in Southern India. He has received numerous awards including the Lifetime Achievement Award for Services to the NGO Sector.



CONCLAVE PROCEEDINGS



Patrons



Patron-in-Chief
Mr. Navjot Pal Singh Randhawa, I.A.S.
Hon'ble Chief Executive Officer, PEDA
Government of Punjab, India



Patron
Prof. H. B. Raghavendra,
Hon'ble vice chancellor,
Chandigarh university

Guests



Chief Guest
Dr. Mushtaq Ahmed Memon
Regional Coordinator- Resource Efficiency,
United Nations Environment Programme
(UNEP), Asia Pacific Regional Office, Bangkok, Thailand



Guest of Honor cum Key Note Speaker
Dr. Dai-Yeun Jeong
Director,
Asia Climate Change Education Center
(ACCEC), Jeju, South Korea

Inaugural Session

Formal Welcome and Introduction to Chief Guest & Guest of Honor: Dr. Vivek Trivedi

Dr. Vivek Trivedi, Principal Convenor, ICCCMA-21, and Founder-cum-Principal Advisor, APSWDP gave formal welcome to the august gathering during the International Conclave on Climate Change Mitigation and Adaptation (ICCCMA) 2021. He acknowledged the presence of all the participants, esteemed delegates, distinguished guests, eminent and renowned speakers, and faculty members and students of Chandigarh University for their participation in the virtual dialogue. Dr. Trivedi also preceded with the program background and courtesy to all the partnering agencies for being thoughtful toward the issue of Climate Change and collaborating with APSWDP to achieve the transformative promise of the 2030 Agenda for Sustainable Development and Sustainable Development Goals (SDGs) – Leave no one behind.

He introduced the Chief Guest Dr. Mushtaq Ahmed Memon, Regional Coordinator for Resource Efficiency and SWITCH-Asia RPAC Project Manager, United Nations Environment Programme (UNEP), Regional Office for Asia and the Pacific; and the Guest of Honour Prof. Dai-Yeun Jeong, Director, Asia Climate Change Education Center, South Korea and an Emeritus Professor of Environmental Sociology at Jeju National University in South Korea to the audience.

Message by Patron-in-Chief Shri Navjot Pal Singh Randhawa IAS, Chief Executive Officer, Punjab Energy Development Agency (PEDA), Government of Punjab.

Due to the paucity of time, the patron-in-chief could not join the International Conclave and therefore he was kind enough to record his video message which was played before the audience. In his message, Shri Randhawa talked about the renewable sources of energy that are available in abundance in India and the role of the Punjab Energy Development Agency (PEDA) in facilitating and encouraging the residents of Punjab to switch to Solar Energy thereby saving a substantial amount of energy.

Message by Patron Prof. (Dr.) H.B. Raghavendra Hon'ble Vice Chancellor, Chandigarh University

Prof. Raghavendra mentioned that amid rising issues and challenges associated with Climate Change, it is imperative for humankind to understand the science of climate change and how we all can make a difference. He congratulated the Association of Professional Social Workers and Development Practitioners (APSWDP) for conceiving the idea to have this International Conclave which is likely to leave long-term impacts and yield results in terms of adhering to the approach of Climate Change Mitigation and Adaptation.

Inaugural Address by Chief Guest Dr. Mushtaq Ahmed Memon

The Chief guest of the event addressed the audience with his exceptional understanding of the issues of Climate Change. Dr. Memon began with the concept of circular economy and its role in climate change mitigation and adaptation. He gave a few examples of South Asian countries that are very much prone to the perils of climate change and the strategy adopted by them in combating and overcoming the detrimental impacts on the individual, communities, and society at large. He also emphasized the plastic waste generation is becoming a major threat to many nations which otherwise can be recycled. Dr. Memon congratulated APSWDP for envisioning the event in a strategic way and embracing all the key features that are coupled with the issue of Climate Change.

Address by the Guest of Honour and Key Note Speaker Prof. Dai-Yeun Jeong.

Dr. Jeong shared his perspective and overview on the issues of Climate Change with his experience in academics for more than 03 decades and enormous global research exposure. Prof. Jeong was prudent in sharing the case of Jeju Island in South Korea, officially known as Jeju Special Self-Governing Province which is one of the nine provinces of South Korea.

He mentioned the first Jeju Project, which was launched in 2009 by the Government and implemented smart grids on Jeju Island to test the technologies necessary to aid new renewable energy sources. Moreover, it also created a foundation for efficient energy consumption, creating the structure for an expansive distribution of electric vehicles, managing clean energy, and finally, providing new electricity services. Lastly, he talked about the Climate Change Education Center (CCEC) in Jeju which is working on the diversity of issues associated with the Environment and Climate Change.

For more details of his keynote address, the presentation is annexed in Annexure.

Vote of Thanks by Dr. Satbir Singh Sehgal, Registrar, Chandigarh University.

Dr. Sehgal extended the deepest gratitude to, Mr. Navjot Pal Singh Randhawa (IAS), Chief Executive Officer, Punjab Energy Development Agency, and Dr. Mushtaq Ahmed Memon, United Nations Environment Programme, for gracing this event with his inspiring address. He further extended his sincere thanks to Prof. Dai-Yeun Jeong, Director, Asia Climate Change Education Center, and an Emeritus Professor of Environmental Sociology at Jeju National University, South Korea. Finally, thanked Dr Vivek Trivedi, Principal Convener, ICCMA 2021 and the entire team led by DR Sumit Arora and Dr. Radhika Varma.

Panel Discussion



1. Role of Educators and Youth in Climate Advocacy and Community Outreach - Mr. Aditya Pundir

Mr. Aditya Pundir spoke on the Role of Educators and Youth in Climate Advocacy and Community Outreach by making a comprehensive presentation. In the presentation, he highlighted the need to have Green Campus Program, and the Teachers Training Program, which entirely focuses on the involvement of youth and educators. Moreover, he talked about building the capacity of educators through the Training of Trainers (TOTs) which further propagates the message to the wider audience on understanding the concept of Climate Change, Mitigation and Adaptation, Climate Advocacy and Community Outreach to address lifestyle modification and behavioral change at an individual level whereas Green Campus program focuses on transforming institutional environment keeping in view the available Green Technologies in construction.

Mr. Pundir also emphasized the need to have a comprehensive set of understanding environmental degradation during any construction activity which ultimately impacts the Climate Change and amplifies the damage caused. However, he categorically mentioned that in order to reduce the negative impacts, it is vital for all the youth, and educators to develop their institutional environment and campus reformation through behaviour change, making the campus zero waste and understanding the importance of Climate Change Mitigation and Adaptation.

2. E-Waste Management: The Role of Local Government and Informal Sector - Michael Gasser

Mr. Michael Gasser made a joint presentation with Ms. Deepali Sinha Khetriwal and Ms. Dea Wehrli on E[co]work: Co-Working spaces for inclusive e-waste management in the Indian Context. In his presentation, Mr. Gasser discussed a case study of Ghaziabad in which he highlighted the existing work environment polluting the existing. He also talked about the importance of the livelihood of the informal sector engaged in traditional e-waste remediation. He stressed changing the work environment which is challenging in the context of trust and capacity building.

Further, he shared that those who got involved in the existing setup do not have the investment capital and experience to become e-waste management micro-entrepreneurs. He further emphasized that there is a greater need of providing a shared infrastructure, equipment, PPEs, to these traditional micro-entrepreneurs.

Mr. Gasser emphasized the need of value proposition in this business by making the work environment healthy, efficient and at par with the modern approach towards work. In addition, he also talked about business development which is secure and have more futuristic opportunities vis-a-viz social inclusion through the use of digital platform.

In order to bridge the gaps, Mr. Gasser discussed regarding the E-waste (Management) Rules, 2016 and the need for the organizations to meet with recycling target and the need for the agencies to formalize informal sector.

As part of the presentation, he referred to three (03) SDGs namely Goal 8 (Decent Work and Economic Growth), Goal 11 (Sustainable Cities and Communities) and Goal 12 (Responsible Consumption and Production).

He concluded by mentioning the E[co]work believes in creating value through improved health, environmental friendly work practices and socio-economic development of the informal sector working in the e-waste management, recycling, etc.

3. Climate Change and Ozone Depletion

--Dr. Anshu Kumar

Dr. Anshu Kumar in his presentation talked about the ozone depleting substances such as HCFCs, CFCs and Halons that are primarily responsible for ozone depletion leading to climate change. To ease the process of understanding, he explained the science behind the ultraviolet radiation, green house effect and ozone layer. He further elaborated about the consequences of damaging the Ozone Layer such as suppressed body immune system, skin cancer, damage to eye and impacting the life below water. He shared that 1% ozone reduction leads to 2% increase in cancer cases. In addition, Dr. Kumar discussed about the mitigation measures available for reducing the negative impacts. He further explained the importance and technicalities about Montreal Protocol to Kigali Amendment in layman's language.

He further concluded by citing few examples about the impacts from extreme weather conditions such as sea level rise, floods, draughts, forest fires, tornados, unpredicted rainfall, etc. and mitigation measures such as adoption of more energy efficient technologies, adhering to the policy and regulations by being supportive for technology adoption, harnessing system and component design, less damage to the environment, higher energy efficiency ratio and more green employment opportunities.

Let's Change Tomorrow Together- Harnessing Solar Energy

--Er. M.P.Singh.

During the presentation, Er. M.P.Singh talked on Harnessing Solar Energy by switching from conventional to modern technology by using Solar power. He mentioned that in the present era, technology is much dependent on power which is fetching more resources. Similarly, the country's energy consumption has also escalated due to rising demand. However, the present energy is more from the non-renewable sources such as coals which means more carbon footprints.

Er. Singh then discussed Punjab Energy Development Agency (PEDA) which is the state nodal agency for promotion and development of Renewable Energy Programmes/ Projects and energy conservation programme in the state of Punjab. PEDA is registered as a Society under the Societies Act of 1860.

Punjab Energy Development Agency under the Department of New and Renewable Energy, Govt. of Punjab is the State Nodal Agency for promotion and development of New and Renewable Energy (NRSE) Projects and Energy Conservation measures. The projects are provided financial & fiscal assistance by PEDA under the NRSE Policy 2012 of the Govt. of Punjab. Also, Punjab State Electricity Regulatory Commission has designated PEDA as the Nodal Agency for the purposes of the REC Regulations and monitoring of Renewable Purchase Obligation (RPO) in the State of Punjab. In addition, PEDA is the State Designated Agency for Energy Efficiency and Conservation under the Energy Conservation Act 2001 by Bureau of Energy Efficiency, Ministry of Power.

He further shared that PEDA has done significant work in the domains of Ground Mounted Solar Plants, Roof Top Solar Plants, Roof Top Net Metering, Canal Top Solar Project, Biomass Based Power Generation, Micro/ Mini Hydel Projects, in addition to the few schemes namely Solar Street Light Program, Energy Conservation Program and other Energy Efficiency schemes.

While concluding his session, he mentioned that PEDA is a front runner in the promotion of Solar energy generation and emphasize on switching to modern solar energy based equipments and devices that may save a lot of energy thereby putting less or no pressure on non-renewable sources of energy.

4. Urban Climate Change Resilience in context Sustainable Cities and Communities - Xabier Arruza

Mr. Xabire Arruza in his presentation shared about the fascinating transformation of city of Bilbao, Spain from an industrial polluted european town to a modern knowledge hub and a smart city. He highlighted how the city of Bilbao reached at the bottom due to various factors including Environmental-Economic crisis, and, Social and Urban challenges. He focused on three axis of transformation and development of Bilbao city i.e., External accessibility and the internal mobility, Environmental and urban regeneration and Innovative public management, technology & human resources.

While explaining the first axis, 'External accessibility and the internal mobility', he shared that the port in city centre was moved to create a new urban space, developing new airport as the hub of external connectivity, developing metro connectivity for quick local city movement, eco-friendly tram, boosting sustainable mobility by constructing 78 kms of cycling routes, new mobility models such as introducing electrical pedal vehicles that are low fare deterrent parking spaces next to metro stations, car sharing systems quoting Don't own your car, own your mobility'.

Second Axis: Environmental and urban regeneration by construction of Guggenheim museum bilbao culture as engine of change, environmental regeneration of river, creation of waste management ecopark; Innovative public management, technology & human resources by transforming new architecture and city design making the city looks more complete and balanced, adhering to the environmental commitments, developing a city specific sustainable energy action plan, zorrotzaurre energy self-sufficient island,

While concluding, he discussed about the need to foster national urban planning and planned city extensions, linking them to the overall process of national development, compact designed cities, creating districts with all the public service nearby, in order to avoid the need of transportation,

establishing adequate provision of common property, including streets and open spaces, together with an efficient pattern of building plots, Environmental damage is a competitiveness loss. Sustainable development is necessity and citizenship must be aware of.

Concluding Remarks:

Mr. Bhavesh Swami, Co-convener, ICCCMA-2021 –cum- National Manager Clean Energy, TCP India

Mr. Bhavesh Swami concluded the panel discussion by mentioning the importance of each topic discussed by the esteemed panelists. He emphasized that such deliberations are much required for urban transformation and vis-z-viz for Climate Change Mitigation and Adaptation. Mr. Swami referred to SDG 11 'Sustainable Cities and Communities in the context of this panel discussion and said that in order to make cities more climate resilient and sustainable, the city government has to come forward with other key stakeholders including the academic, civil society for introducing the concept of mitigation and adaptation by developing the city-specific climate action plan, climate manifesto, as demonstrated by the city of Bilbao, Spain to the entire world.

WORKSHOP ON THE ROLE OF CIVIL SOCIETY ORGANIZATIONS IN RESPONDING TO CLIMATE CHANGE

Moderator: Prof. Dai-Yeun Jeong



Prof. Dai-Yeun Jeong



**Dr. António Domingos
Abreu**



Dr. Muthusami Kumaran

The Roles and Capacity Building of NGOs as an Agent Responding to Climate Change.- Prof. Dai-Yeun Jeong

Prof. Dai-Yeun Jeong, Director of Asia Climate Change Education Center, Jeju talked about the Roles and Capacity Building of NGOs as Agency Responding to Climate Change.

He mentioned that an NGO or a Civil Society Organization is an intermediate group between Citizens and the Government and hence plays a pivotal role as a pressure group to the Government and an Educator to the Citizens. While deliberating on this issue, he talked about the issues that the Government might neglect due to various reasons that can be taken up by the NGOs, and information on strategies being implemented at a national and global level can be provided by them.

Prof. Jeong emphasized that the role of NGO/ CSO should not be to criticize the Government's policies but to develop and suggest alternatives on the basis of efficiency and effectiveness analysis of the existing policies being implemented.

He outrightly discussed the role of NGOs/CSOs as a pressure group to the enterprise to practice Green Management as they are the major contributor to climate change. Also, these enterprises must have a Greenhouse gas inventory and utilization records with them. While talking about traditional and green management, Prof. Jeong talked about traditional management that was entirely focused on maximizing profits and had less consideration of its impacts on ecological cost. On the other hand, Green Management envisages saving resources and energy, using them efficiently, minimizing the emission of greenhouse gas and environmental pollution, and fulfilling social and ethical responsibility.

Likewise, he stressed the role of NGO/CSO as an educator to the citizens for providing environmentally friendly behavior in everyday life which is a primordial responsibility. According to Prof. Jeong, it is inevitable for all to promote cultural ethos. The crisis of nature will be as good as a crisis of human existence. Human dominance of nature has already destroyed the balance of nature. Therefore, educating the citizens would save our resources and energy consumption.

**Local Climate Change Adaptation Strategies: The Role of Civil Society --
-Dr. António Domingos Abreu**

Mr. Antonio Abreu gave his presentation on Local Climate Change Adaptation Strategies: The Role of Civil Society, and started his session by discussing the Impact of human interventions on natural systems. He started his presentation by quoting Kenneth E. Boulding Anyone who believes exponential growth can go on forever in a finite world is either madness or an economist.

He emphasized that the level of atmospheric CO2 has increased and the impacts on the natural system are the result of nothing but human interventions. He also mentioned the Governance challenges in dealing with climate change which is complex and everything, and every sector, and everyone is linked together. Moreover, it is because of the heterogeneous interests, priorities, and circumstances that are primarily responsible for this, he added.

Mr. Abreu discussed the role of Civil Society and its relevancy in propagating the idea of Climate Change Mitigation and Adaptation. In this regard, he mentioned the following key points:

1. Local communities are at the forefront of observing and experiencing climate change
2. The role of civil society in the adaptation process is vast, often overlapping with the roles of public or private actors
3. Civil society organizations have an essential role to play in moving the climate change adaptation agenda forward, positively lobbying government, business, and international negotiations

While discussing the role of Civil Society in Adaptation and Mitigation, Mr. Abreu deliberated on the following key points:

1. Articulate and represent the interests of local communities in political fora, forums, national and international congresses, and conferences.
2. Raising awareness of climate change, its impacts, and adaptation measures.
3. Promoting capacity building and training activities in local communities and groups, inserting new knowledge and skills related to adaptation.

4. Research, mapping, and diagnostics analyse information relevant to risk, vulnerability, and adaptive capacity.
5. Support planning and implementation of adaptation measures, as well as monitoring and evaluation of adaptation at the local level.
6. Mobilize resources

The Roles and Responsibilities of NGOs in Responding to Climate Change

-Dr. Muthusami Kumaran

Dr. Muthusami Kumaran, Associate Professor of Nonprofit Management, Department of Family, Youth and Community Sciences, University of Florida took a session on the Roles & Responsibilities of NGOs in responding to Climate Change.

Dr. Kumaran started the session by quoting UN-HABITAT that “Hundreds of millions of people across the world will be affected by climate change. The vulnerability of human settlements will increase through rising sea levels, inland floods, frequent and stronger tropical cyclones, periods of increased heat, and the spread of diseases. Climate change may worsen the access to basic services and the quality of life.”

He discussed the key points of the IPCC report which are as under:

1. Climate change is indisputably human-caused;
2. 2010-20 was the hottest decade in modern human history;
3. Several changes already caused by climate change are irreversible;
4. Greenhouse gas emissions are the leading cause of climate change;
5. Climate ‘events’ are increasing in numbers, severity & impact in every region of the planet.

Moreover, he also talked about the key takeaways from the IPCC report and the same are enumerated below:

1. Warming above 1.5 deg C above pre-industrial levels?
2. It is now a guarantee, but there’s still hope Sea-level rise is a certainty with extreme sea events likely as well.
3. Expect more extreme weather events, but there’s still time to reduce the intensity.
4. Carbon budget is crucial to minimize the intensity of climate change.

Dr. Kumaran mentioned that Environmental NGOs have been at the forefront of Climate Change communication & action since the first IPCC assessment report in 1990. Moreover, they also serve as mediators between scientific expertise and public opinion. While discussing their roles, he mentioned the following points:

1. Collecting, analyzing, and disseminating information on Climate Change;
2. Assessing the environmental impacts of Climate Change;
3. Providing input to agenda-setting and Govt. policy development processes on Climate Change at all levels;
4. Playing the “watchdog” role by monitoring the implementation of policies and compliance with agreements;
5. Advocating for environmental justice;
6. Playing an active role in Climate Change negotiations;
7. Linking climate change to local environmental and developmental initiatives.

Dr. Kumaran mentioned that Environmental NGOs can play a vital role in mitigation. For instance, they can promote nature conservation by protecting the ecosystems; they can initiate innovative approaches to reduce greenhouse gas emissions in urban areas; they can increase action on a host of environment-friendly practices including renewable energy sources; they can promote agroecology and other sustainable farming practices; they can promote civic engagement to discuss and resolve community-based environmental issues; they can prevent forest fires & stubble burning in rural areas, and they can increase & maintain green spaces as carbon sinks.

Similarly, they also play a significant role in adaptation. For instance, they can provide access people to information on climate change; they can develop initiatives to help communities cope with climate change; they can organize citizens' action to pressure local, state, and national governments for investing in climate response; they can assist in coastal communities affected by storm surges; they can address the blights of slum dwellers in cities and poor farmers in rural areas by direct service provisions; they can provide emergency & basic health supplies to citizens, and they can promote the commitments of Local Governments to assist their residents.

Dr. Kumaran also reflected on the challenges that Environmental NGOs face in the Indian Context. For instance, most of these NGOs are not galvanized a Climate Change movement due to a lack of coordination & cooperation; there is a need for a multi-sectoral approach where NGOs with varying missions & causes need to come together, and finally, modern India needs a Climate Change movement to address the unfolding and impending calamities.

Concluding Remarks - Dr. Sumit Arora

Dr. Sumit Arora, President of the Association of Professional Social Workers and Development Practitioners (APSWDP) delivered the concluding remarks and extended his heartfelt thanks to Chandigarh University, Punjab; Asia Climate Change Education Centre (ACCEC) Jeju, South Korea; Punjab Energy Development Agency (PEDA), Govt. of Punjab; and the Climate Reality Project India for rendering their support in organizing this event. Dr. Arora also tendered his appreciation to the Patron-in-Chief Mr. Navjot Pal Singh Randhawa, Patron Prof. H.B.Raghavendra, Chief Guest Dr. Mushtaq Ahmed Memon, and Guest of Honor Prof. Dieu Yuen Jeong for accepting our request and also for taking out time from their busy schedule to address the gathering.

Also, he extended his sincere thanks to Prof. Satbir Singh Sehgal for delivering his vote of thanks.

He also appreciated and acknowledged the presence of Mr. Aditya Pundir, Mr. Michael Gasser, Mr. Xabier Arruza, Dr. Anshu Kumar, Er. M.P.Singh, Dr. Muthusami Kumaran, Dr. Antonio Domingos Abreu for pondering over their knowledge on the diversity of issues associated with Climate Change Mitigation and adaptation. Dr. Arora, mentioned that an event like this requires meticulous planning for conceiving an event like this which cannot be accomplished without having a dedicated team.

He congratulated the organizing team comprising of Dr. Vivek Trivedi, Ms. Rekha Trivedi, Mr. Hitesh Kumar Gulati, Mr. Rajeev Choudhary, Dr. Radhika Dev Varma Arora for their constant support in making this event a great success. Finally, Dr. Arora extended his thanks to all the participants for posing relevant questions to the speakers and for being attentive throughout the conclave.

Vote of Thanks - Dr. Radhika Dev Varma, Convener, ICCMA-2021 and Assistant Professor, Faculty of Law, Chandigarh University, Punjab

Dr. Radhika Dev Varma thanked Dr. Mushtaq Ahmed Memon, United Nations Environment Programme, for gracing this event as a Chief Guest and for his inspiring address. She thanked her sincere thanks to Prof. Dai-Yeun Jeong, Director, Asia Climate Change Education Center, and an Emeritus Professor of Environmental Sociology at Jeju National University, South Korea for gracing this event as a guest of honour and for focussing on the theme “The Role of Civil Society Organizations in Responding to Climate Change”. Further, she extended the courtesy to Mr. Aditya Pundir, Country Head India and South Asia for partnering with the global conclave.



She extended her deepest gratitude to, Mr. Navjot Pal Singh Randhawa (IAS), Chief Executive Officer, Punjab Energy Development Agency, Government of Punjab (India) for gracing the occasion with his kind message and supporting the conclave.

Also, she thanked Mr. Michael Gasser, Co-Founder and Secretary of Association, E[Co]work Switzerland; Dr. Anshu Kumar, Cold Chain Specialist, UNICEF, Bhutan, Er. M. P. Singh, Director, PEDDA, Government of Punjab; Mr. Xabier Arruza, Manager Bilbao Urban & Cities, Founder of Basqviem, Bilbao, Spain; Dr. Muthusami Kumaran, Associate Professor, Department of Family, Youth & Community Sciences, University of Florida; Dr. António Domingos Abreu, Manager, UNESCO Chair, University of Coimbra, Portugal for making the sessions enlightening with their expert knowledge and their wonderful insights over the diverse issues under Climate Change Mitigation and Adaptation.

Apart from the panellists, she thanked with deepest gratitude and thanks to hon'ble vice chancellor Prof. (Dr.) H.B. Raghavendra, who despite his busy schedule graced this event with his welcome address to all the eminent panellists and participants and to Dean Academic Affairs, Chandigarh University, Prof. (Dr.) Priestly Shan for his constant guidance and support for this event.

Lastly, she said that role of Dr. Sumit Arora, President, APSWDP and Prof. (Dr.) S.S Sehgal Registrar, Chandigarh University can not be overruled as both have given confidence in shaping this international conclave.



ANNEXURES



Programme Agenda

TIME	SESSION	MODERATOR/ KEY SPEAKER
 <p style="text-align: center;">International Conclave On Climate Change Mitigation and Adaptation (ICCCMA 2021) 4th September 2021, (Saturday) 11:00 am – 02:30 pm (IST) "UN Decade on Ecosystem Restoration 2021 – 2030"</p> <p style="text-align: center;">A global conversation that aims to address the issues, challenges, and local solutions for Climate Change, Mitigation and Adaptation under the ambit of SDG -13</p>		
PART-I: INAUGURAL SESSION		
11:00 am to 11:05 am	Formal Welcome, Program Background & Introduction to Chief Guest and Guest of Honor.	Dr. Vivek Trivedi , Principal Convener ICCMA-21 and, Founder-cum-Hon. Principal Adviser, APSWDP. Hon. National Coordinator (Climate Disaster, Poverty and Livelihood) TCP-India
11:05 am to 11:10 am	Video Message by the Patron-in-Chief	Mr. Navjot Pal Singh Randhawa, IAS , Chief Executive Officer, Punjab Energy Development Agency (PEDA), Government of Punjab
11:10 am to 11:15 am	Message by the Patron	Prof. (Dr.) H.B. Raghavendra Hon'ble Vice Chancellor, Chandigarh University
11:15 am to 11:25 am	Address by the Chief Guest	Dr. Mushtaq Ahmed Memon , Regional Coordinator for Resource Efficiency and SWITCH-Asia RPAC Project Manager, United Nations Environment Programme (UNEP), Regional Office for Asia and the Pacific
11:25 am to 11:50 am	Address by the Guest of Honor-cum-Keynote Speaker	Prof. Dai-Yeun Jeong Director, Asia Climate Change Education Center, South Korea and an Emeritus Professor of Environmental Sociology at Jeju National University in South Korea
11:50 am to 12:00 noon	Vote of Thanks	Prof. (Dr.) Satbir Singh Sehgal Registrar, Chandigarh University

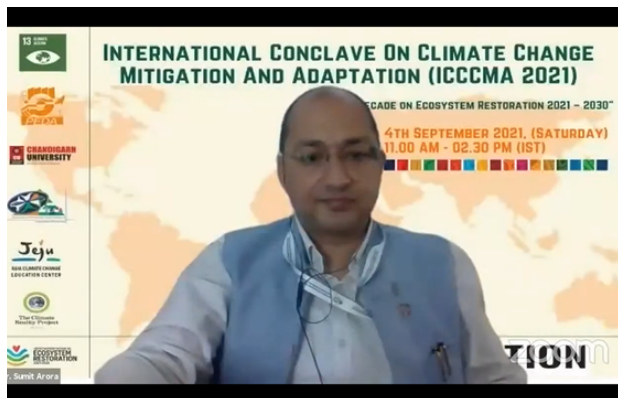
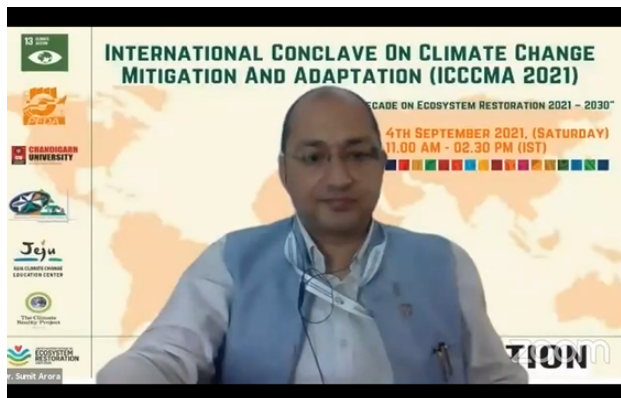
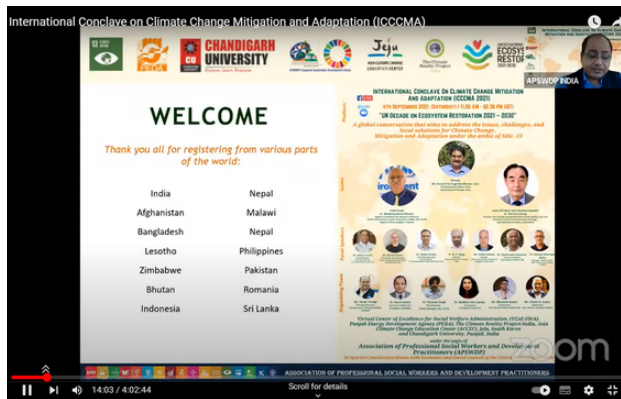
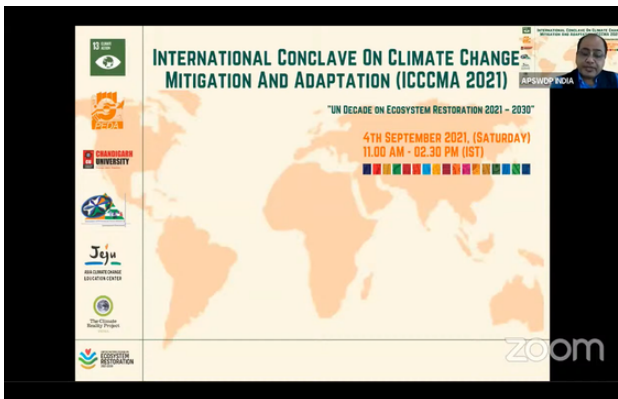
Programme Agenda

PART-II: PANEL DISCUSSION		
12:00 noon to 12:05 pm	Introduction to the Panel Speakers	Dr. Sumit Arora, President, APSWDP
12:05 pm to 12:15 pm	Role of Educators and Youth in Climate Advocacy and Community Outreach	Mr. Aditya Pundir, Head, South Asia, The Climate Reality Project India
12:15 pm to 12:25 pm	E-Waste Management: The Role of Local Government and Informal Sector	Mr. Michael Gasser, Co-Founder and Secretary of Association, Social Impact Startup E[Co]work, Switzerland & India and Project Manager E[Co] work/Bridge Fellow, Empa, St. Gallen, Switzerland
12:25 pm to 12:35 pm	Climate Change and Ozone Depletion	Dr. Anshu Kumar, Cold Chain Specialist UNICEF, Bhutan Ex-Technical Advisor, Montreal Protocol Unit/ Chemicals
12:35 pm to 12:45 pm	Lets Change Tomorrow Together- Harnessing Solar Energy	Er. M. P. Singh, Director, PEDDA, Government of Punjab
12:45 pm to 12:55 pm	Urban Climate Change Resilience in context Sustainable Cities and Communities	Mr. Xabier Arruza, Manager Bilbao Urban & Cities, Founder of Basqviem, Bilbao, Spain
12:55 pm to 01:00 pm	Concluding Remarks	Mr. Bhawesh Swami, Co-convener, ICCCMA-2021 -cum- National Manager Clean Energy, TCP India
01:00 pm to 01:15 pm	Open House/ Question & Answers (along with Questions from Chat Room and e-Participation Process)	Dr. Sumit Arora, Convener ICCCMA-2021 -cum- President, APSWDP. Alumni CIFAL JEJU/UNITAR Climate Leader, TCP-India
PART-III: TRAINING WORKSHOP		
01:15 pm to 02:15 pm	<p>Workshop Theme: The Role of Civil Society Organizations in Responding to Climate Change.</p> <p>The Roles and Capacity Building of NGOs as an Agent Responding to Climate Change.</p>	<p>Moderator Prof. Dai-Yeun Jeong, Director, Asia Climate Change Education Center, South Korea and an Emeritus Professor of Environmental Sociology at Jeju National University in South Korea</p> <p>Speakers: Prof. Dai-Yeun Jeong,</p>

Programme Agenda

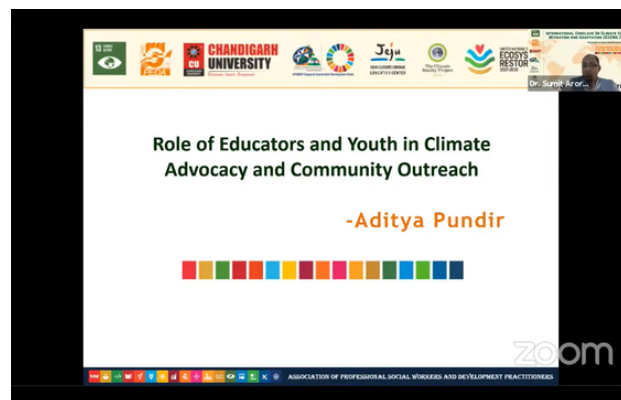
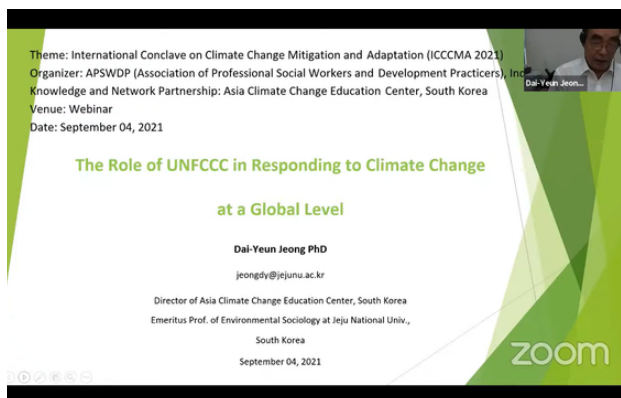
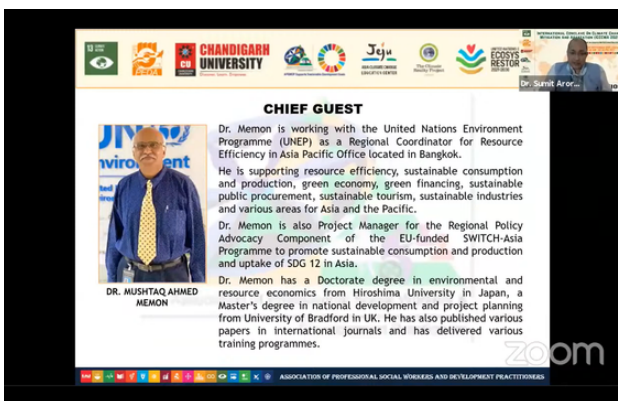
	<p>The Roles and Responsibilities of NGOs in Responding to Climate Change.</p> <p>Local Climate Change Adaptation Strategies - The Role of Civil Society</p>	<p>Dr. Muthusami Kumaran, Associate Professor (Nonprofit Management and Community Organizations), Department of Family, Youth & Community Sciences, University of Florida</p> <p>Dr. António Domingos Abreu, Manager, UNESCO Chair Biodiversity Safeguard for Sustainable Development, University of Coimbra, Portugal</p>
02:15 pm to 02:25 pm	Concluding Remarks, Group Picture & E-Feedback	<p>Dr. Sumit Arora, Convener ICCMA-2021 -cum- President, APSWDP. Alumni CIFAL JEJU/UNITAR Climate Leader, TCP-India</p>
02:25 pm to 02:30 pm	Vote of Thanks	<p>Dr. Radhika Dev Varma, Convener- ICCMA-2021 cum- Associate Professor, Chandigarh University, Punjab</p>

Picture Gallery



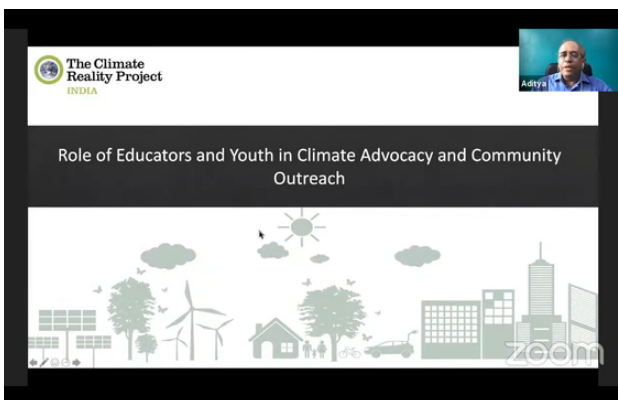
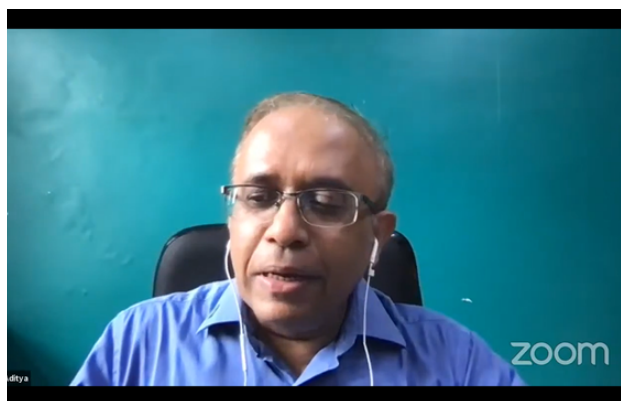
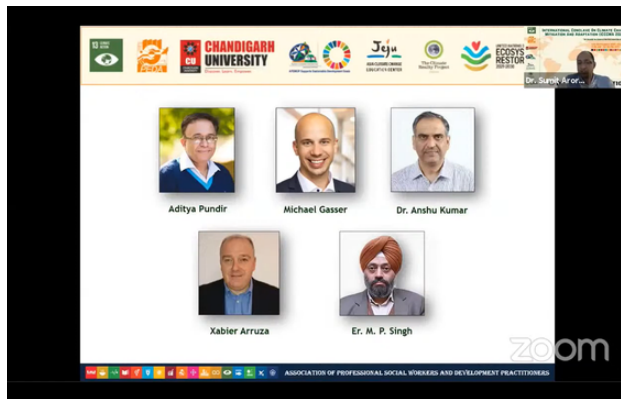
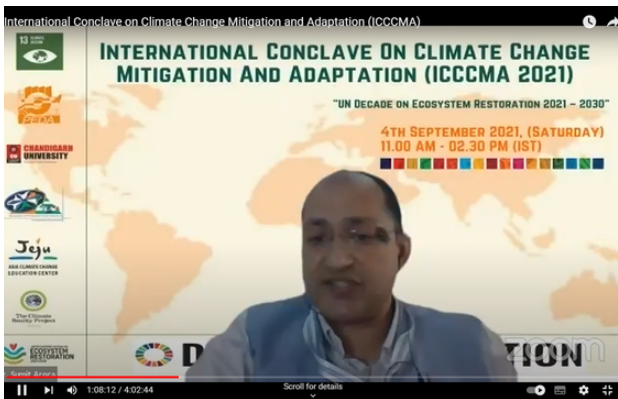
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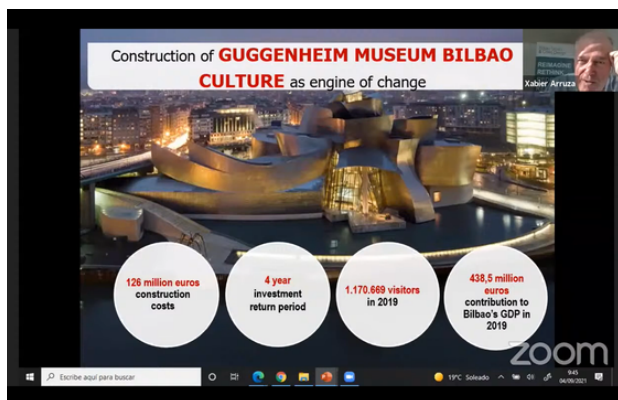
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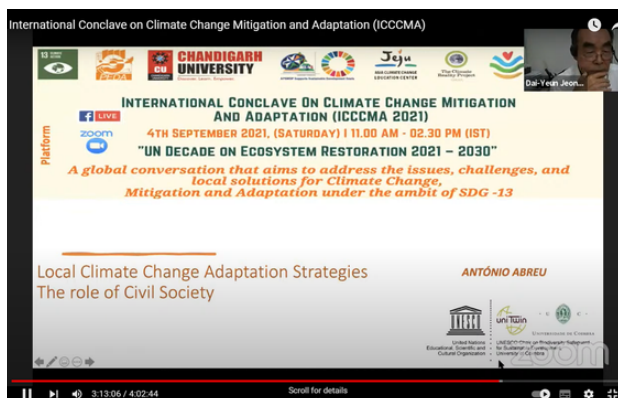
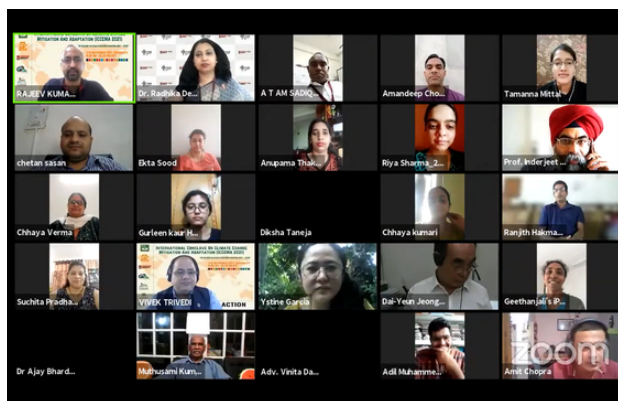
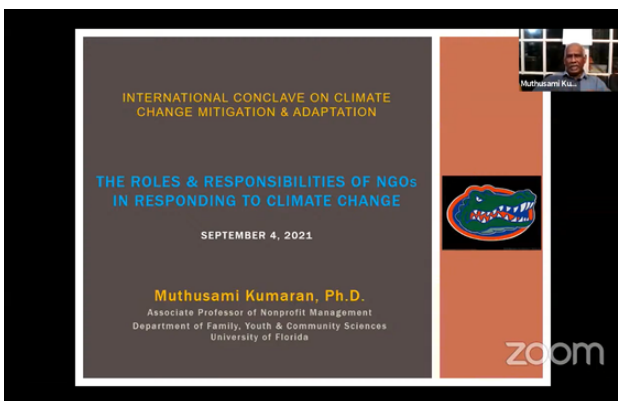
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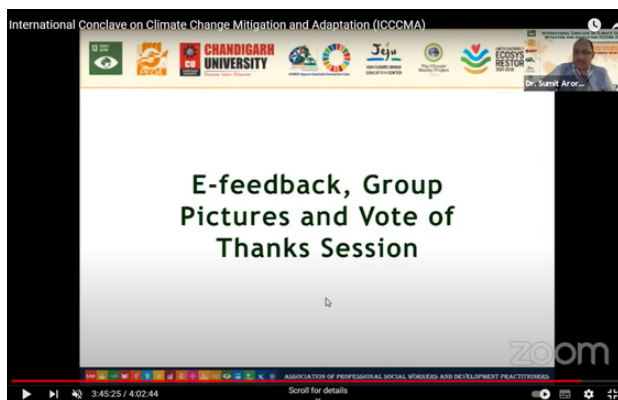
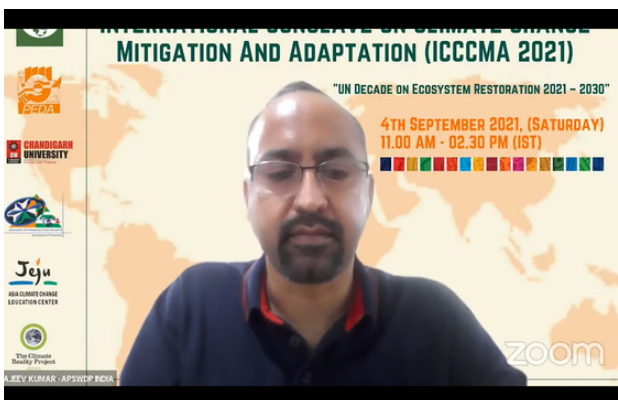
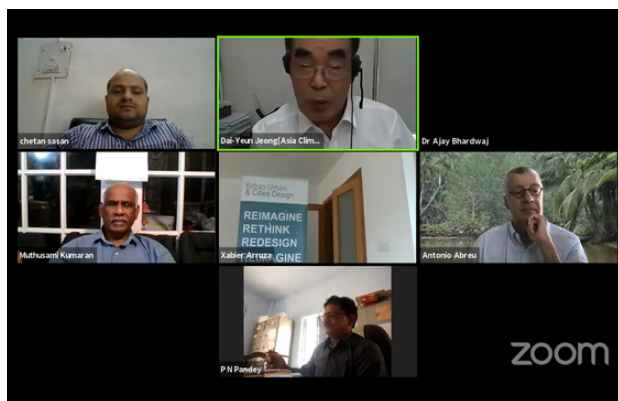
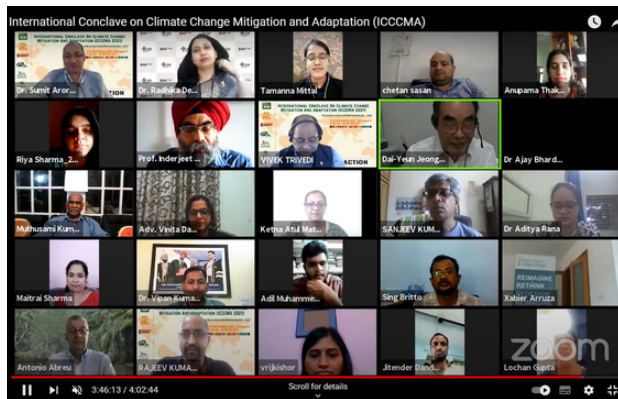
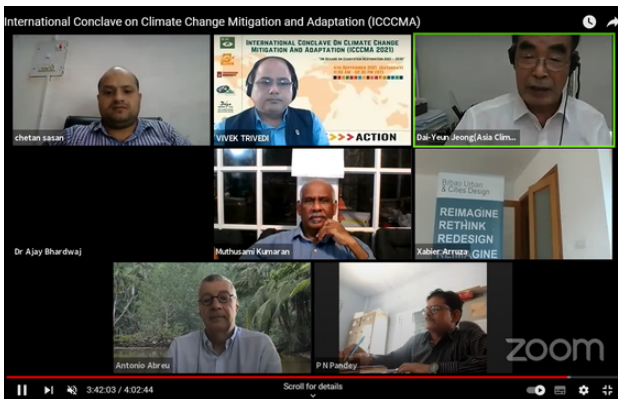
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