

**Supporting First-of-a-Kind Climate Technology  
Copenhagen, Denmark 22-23 May, 2017  
Introduction of participants and abstracts**

**Opening of the meeting – welcome and opening remarks**



**Jukka Uosukainen, Director Climate Technology Centre & Network (CTCN)**

Mr. Jukka Uosukainen has worked in the national and international environmental sector for more than two decades, chairing and facilitating various UN committees, including of the UNFCCC and UNEP. More recently, he served as the Special Envoy for Climate Change for the Government of Finland.



**Karsten Krause, European Commission – panellist session 2**

Policy Officer in the European Commission's Directorate General for Climate Action. In the Directorate for International and Mainstreaming, he works on international technology transfer and innovation policy. As part of the EU's UNFCCC team, he is coordinating the work on technology development and transfer. Karsten studied socio-economics at Hamburg University (Germany), in Dar es Salaam (Tanzania) and Växjö (Sweden) with a focus on environmental policy, international economics and innovation. Before joining the European Commission in 2006, he worked in the administration of the city of Hamburg, the Irish Renewable Energy Centre and the European Federation for Transport and Environment (T&E). Since 2014 he is on the CTCN's Advisory Board and nominated by the European Union as the CTCN's National Designated Entity.

**Session 1 – Setting the stage**



**Jason Spensley, CTCN - speaker session 1**

Mr. Spensley has 20 years of experience in the field of climate change adaptation, ecosystem management and financing for development. He will soon be joining the Green Climate Fund but prior to joining the CTCN, Mr. Spensley has led design and implementation of the United Nations Environment Programme's portfolio of climate change projects in Latin America and the Caribbean. He has also managed initiatives of the Convention on Biological Diversity to facilitate investment and innovation for ecosystem-based solutions.



**Federico Villatico, CTCN - speaker session 1**

Federico is responsible for the CTCN's mitigation technical assistance. Prior to joining CTCN he worked for several years on renewable energy, energy storage and sustainable transport sectors in academia, international organisations, and the private sector. His background is in mechanical engineering, complemented by a PhD in Energy Technologies for Sustainable Development.

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**Heleen de Coninck, CARISMA project - speaker session 1**

Heleen de Coninck is Associate Professor in innovation studies at the Environmental Science department at Radboud University in the Netherlands. Her main field of work is at the interface of international climate policy, energy and technology. Currently, she is a Coordinating Lead Author in the IPCC Special Report on 1.5C in the chapter on strengthening and implementing the global response to the threat of climate change, project coordinator of the H2020 CARISMA project on policy and innovation for climate mitigation technologies and actions, and a Board Member of the climate policy research network Climate Strategies.

**Robby Berloznik, Technology Executive Committee, TEC - speaker session 1, moderator session 2**

Robby Berloznik is Senior Advisor to the General Manager and Research Coordinator for Technology and Society at the Flemish Institute for Technological Research (VITO) located in Mol, Belgium. Momentarily, he is also the Director Programme for G-STIC, a new global science, technology and innovation conference series that focuses on technological solutions for the SDGs. He has a long-standing career in technology assessment and foresight. From 2001 until 31 December 2012 he was the director of the Flemish Institute for Technology and Society of the Flemish Parliament (IST). Berloznik is also member of several international networks academical and cooperative networks in the fields of technology assessment, foresight, studies in science and society and science communication. He served as an expert to the United Nations, the European Commission and the OECD. At the COP22 in Marrakesh he was appointed as a member of the Technology Executive Committee of the UNFCCC.

**Session 2 – Matching needs with solutions****Jonathan Lonsdale, ICF - speaker and panellist session 2**

Jonathan Lonsdale is a Consulting Director with international consultants ICF. With over 20 years of experience working in the fields of energy, environment and climate change, Jonathan leads ICF's European work on low-carbon technology innovation, finance, and supply chains. Jonathan is recognised as an expert in the design and assessment of novel financial instruments for funding low-carbon innovations. In 2016 he directed a complex study for DG Research & Innovation (European Commission) into innovative financial instruments for commercial-scale, first-of-a-kind, low-carbon energy demonstration projects. For DG Climate Action (European Commission) he recently concluded a study to identify key lessons from the €2.1 billion NER 300 grant programme for low-carbon demonstration projects. Jonathan has extensive knowledge of global opportunities in low-carbon markets and associated deployment challenges, gained through working for a £55m low carbon venture fund and the UK government. He has also provided advice to private companies wishing to diversify and enter low-carbon markets.



**Matthew Kennedy, International Energy Research Centre (IERC) -speaker and panellist session 2**

Dr. Matt Kennedy is Head of Strategy and Business in the International Energy Research Centre (IERC), an Irish Government supported, industrial led, collaborative energy research centre. He was previously responsible for Energy R&D for the Irish Government and National Delegate (Energy) for FP6/FP7 and H2020 for Ireland. Matt was lead EU Negotiator for technology transfer at COP21 UNFCCC and was a member of the UNFCCC Technology Executive Committee. Matt was Chair of the UN's Climate Technology Centre, Chair of the IEA's Renewable Energy Technology Deployment Implementing Agreement and the Chair of the Programme Board of the Renewable Energy and Energy Efficiency Partnership (REEEP). Matt holds a PhD in Engineering from Trinity College Dublin, and Masters' degrees from NUI Galway and University College Dublin.



**Girish Sethi, The Energy and Resources Institute (TERI) – panellist session 2, group discussion leader session 9**

Girish Sethi is Senior Director of the Energy Program at TERI, having more than 31 years of experience in the field of energy, environment and sustainable development. His direct responsibilities at TERI include providing strategic direction and coordinating the activities related to industrial energy efficiency, renewable energy and electricity sector including demand side management. These involve energy conservation studies, technology assessments, sectoral studies, capacity building programs and projects concerning rational use of energy. Other areas of interest include GHG inventorization of corporate level GHG emissions and aspects related to technology transfer and promotion of low carbon energy technologies in the context of climate change. He is a Chemical Engineer and holds a Master's Degree in Energy Studies from Indian Institute of Technology, New Delhi. He has also completed a multi-disciplinary Masters course on "Technology in the Tropics" from University of Applied Sciences, Cologne, Germany.



**Nand Kishor Agrawal, International Centre for Integrated Mountain Development (ICIMOD) – panellist session 2**

Nand Kishor Agrawal works as Programme Coordinator for the Himalayan Climate Change Adaptation Programme (HICAP) at ICIMOD. He is a development professional with over 20 years of experience in management and execution of large-scale research and implementation programmes on natural resources, microfinance, livelihoods, and development finance. His current works focusses on climate change adaptation, resilient solutions and putting research in to use, particularly for policy development in the countries of the Hindu Kush Himalayan region. Prior to ICIMOD, he worked for the German Development Bank (KfW) managing their natural resources portfolios in India and the Philippines. He was actively involved in setting up and executing large programmes focusing on watershed management, climate change adaptation, and sustainable financing for natural resource based livelihoods. He has a post-graduate diploma in rural development management from the Institute of Rural Management Anand (IRMA) in India.

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### Session 3 – Financing climate technology and adapting climate technologies to local contexts



**Lars Pehrson, Merkur Cooperative Bank/ Global Alliance for Banking on Values – speaker and panellist session 3**

CEO and co-founder of Merkur Cooperative Bank. Merkur Cooperative Bank is values-based bank committed to social justice within a sustainable economy and is Denmark's foremost financial institution in the field of sustainable banking. From its founding in 1982 and onwards, Merkur has built a solid foundation of expertise in financing social, cultural and environmentally friendly activities and businesses. Lars Pehrson is a member of the board of The Danish Green Investment Fund and Kooperationen, managing director of Merkur Development Loans Ltd. and administrator of Merkur Foundation. He is also the former vice president of INAISE (International Association of Investors in the Social Economy). Lars Pehrson was born in 1958 and is married with three sons.



**Astrid Motta, European Bank for Reconstruction and Development – speaker session 3**

In the Energy Efficiency and Climate change team of the EBRD, Astrid works as Principal in the Sustainable Resource Investments pillar. She is managing FINTECC (Finance and Technology Transfer Center for Climate Change), a program that promotes climate technology transfer in the EBRD region through technical assistance, policy dialogue and investment support. She is also responsible for the development of a Waste Material Marketplace in Turkey as part of the Near Zero Waste initiative of the EBRD.



**Nicole Mueller, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) – moderator session 3**

Nicole Mueller is the PR advisor for GIZ's program Proklima, focusing on integrated ozone and climate protection with a focus on natural refrigerants with low-GWP and energy-efficient applications. Before joining Proklima, Nicole worked as External Relations and Event Coordinator for State Secretariat for Economic Affairs SECO in the field of economic development cooperation. Nicole holds a master degree in social science.



**Daniel Buckley, Green Climate Fund Climate Policy Advisor – panellist session 3 and session 8**

Daniel Buckley is the Climate Policy Specialist for the Green Climate Fund. In this capacity, he provides analytical and technical backstopping for the GCF Board and Secretariat on key policy and operational issues. For over 10 years, he has worked directly with developing countries to enhance access to climate finance. At UNDP, Daniel was the focal point for climate finance capacity building, developing and managing the \$20m GCF readiness program. Immediately prior to joining the GCF, Daniel was the Deputy Country Representative in Vietnam for the Global Green Growth Institute, where he supported the Ministry of Planning and Investment to increase the scale and effectiveness of public climate finance.



**Dr. Rabhi Abdessalem, Institute for Global Environmental Strategies (IGES) – panellist session 3**

Rabhi Abdessalem, from Tunisia, is a holder of PhD in comprehensive economic policies from Kobe University, Japan. He has been working at IGES since Oct 2007. He conducted various projects related to business and environment, mainly those regarding corporate environmental managements and low carbon technology transfer. Countries which he covered until FY2014 include: Bangladesh, China, India, Indonesia, Malaysia, Philippines, Thailand and Vietnam. Since 2015, he has been leading and managing a project on Technology Assessments focusing on the transfer and application of Japanese low carbon technologies in the countries previously mentioned along with others in Central and Eastern Europe and Small Island Developing States (SIDS). He has accumulated excellent capabilities backed by extensive networks and diverse experiences in stakeholders' consultation and match-making, thereby produced a number of recommendations for government and other public and private actors on various programmatic aspects regarding low carbon technology transfer.



**Nagaraja Rao, Private Financing Advisory Network (PFAN) – panellist session 3, speaker session 7**

Nagaraja Rao is the Head Investment Facilitation for PFAN. In his earlier role as Asia Regional Coordinator, Nagaraja has over the last ten years evaluated nearly 350 business plans in clean energy from many developing countries. He has mentored nearly 100 projects making them investment ready with funding structures, business plans, financial modelling and risk mitigation to facilitate such projects to access market funding. Many of these projects won the best business plan awards at the Investors forums and achieved financial closure. He has organized many project development workshops and investors forums both nationally and internationally for Cleantech enterprises. Nagaraja is also cofounder of Dawn Consulting, a boutique corporate financial consulting company specializing in equity and debt funding including foreign direct investments and external commercial borrowings. He has over three decades of experience in corporate finance having worked in large corporates in India and abroad, before founding Dawn Consulting. Nagaraja Rao is a postgraduate from Indian Institute of Chartered Accountants, New Delhi and a graduate from Osmania University, Hyderabad with a university rank.

**Session 4 – Climate Technology support: a CTCN country and partner perspective**



**Gabriel Blanco, NDE Argentina – speaker session 4**

Mr. Blanco is professor and researcher in energy and environmental issues at Universidad Nacional del Centro, Argentina and professor and lecturer at universities in Argentina and Latin America. Mr. Blanco was coordinator of the Climate Change Department of the Ministry of Environment in Argentina, and he is currently advisor for Argentina's Federal Government, including Ministry of Science and Technology, Ministry of Foreign Affairs, Ministry of Energy and Mines, and Ministry of Environment and Sustainable Development, as well as advisor for local governments. He has been a consultant for the World Bank, the IADB and different UN agencies in climate change mitigation projects and is a member of Argentina's delegation at UNFCCC negotiations and former member of the TEC and CTCN AB of the UNFCCC. Mr. Blanco was expert reviewer of the Special Report on Renewable Energy (SRREN) and Coordinating Lead Author of the 5<sup>th</sup> Assessment Report of the IPCC. He also collaborates with IPCC's outreach activities and is author of several publications on energy and climate change issues.

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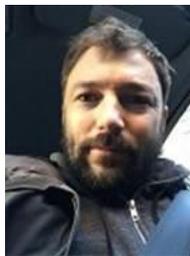
**Shikha Bhasin, RINGO representative to CTCN Advisory Board – speaker session 4**

Shikha Bhasin is an Associate Fellow at the Council on Energy, Environment and Water. She is currently leading the development of a public-private R&D platform to phase-out HFCs in India. A researcher on climate change mitigation policies with a keen interest in innovation systems of low-carbon technologies, Shikha also serves as a research-consultant to the University of Nijmegen on the CARISMA project, and represents the Research Community as an advisory board member of the Climate Technology Centre. She is an alumna of Delhi University and the London School of Economics and Politics.



**Elisha N. Moyo, NDE Zimbabwe – speaker session 4**

Elisha N. Moyo is a Meteorologist currently working as a Principal Climate Change Researcher in the Ministry of Environment, Water and Climate's Climate Change Management Department. He is the National Designated Entity for Zimbabwe with the Climate Technology Centre and Network (CTCN) and Zimbabwe's Alternate National Focal Point for the Green Climate Fund (GCF). He coordinated the development of the Intended Nationally Determined Contributions (INDCs) and participated in the development National Climate Change Response Strategy, National Climate Policy, SADC Climate Change Strategy development, among others initiatives. Elisha N. Moyo has passion in the climate-development nexus. He previously worked at the Meteorological Services' Central Forecasting and Climate Applications offices, as a Visiting Scientist at SADC Climate Services Centre and lectured and worked as an attaché with SIRDC. He is currently studying towards a PhD in Climate dynamics and impacts on maize production with Chinhoyi University of Technology.



**Ulrich Elmer Hansen, Technical University of Denmark (DTU) – moderator session 4**

Ulrich Elmer Hansen is a Researcher at the UNEP DTU Partnership (UDP), Department of Management Engineering, DTU. Ulrich holds a master degree in Economic Geography from the University of Copenhagen and a Ph.D. in innovation studies from the Technical University of Denmark. His main research interests include international technology transfer, R&D offshoring, global value chains, innovation and diffusion of low carbon technologies in emerging and developing countries. Ulrich has explored these research interests from within value chain and innovation system studies, particularly within research on globalisation of innovation, upgrading in global value chains and technological capability building at firm and industry level. His doctoral thesis focused on transfer of technologies, learning and innovation in the biomass power plant equipment industry in Malaysia. Ulrich has undertaken research on the diffusion of solar PV in East Africa, biomass power plants in China and local wind turbine component manufacturing in South Africa.

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## Session 5 – Mapping expertise



### **Joel Pérez Fernández, CATHALAC – group discussion leader session 5**

Joel Pérez Fernández is a Science Atmospheric Specialist focused on inter-annual climate variability and the climate change co-benefits and its relationships with other disciplines that envision integral strategies based on the realizations in the International community. Due to more than 10 years of Mesoamerican regional expertise on work group coordination and well performance, MSc. Perez has participated in 10 regional publications with 3 peer review articles. He has also served as an international expert on several initiatives, including Regional strategies and CC National Communications.



### **Daniele Vettorato, EURAC Research – group discussion leader session 5**

Daniele Vettorato is the coordinator of the Urban and Regional Energy System research group at the EURAC – European Academy of Bolzano (Italy), Institute for Renewable Energy. Since 2015 he is board member of the International Society of City and Regional Planners (ISOCARP) and is part of the task force of the International Energy Agency on Solar Energy and Urban Planning (Task 51). He is working in different European and international projects on Smart Cities and Smart Regions development. Among them the Smart City projects Sinfonia and Stardust, developing innovative concept for the sustainable energy transition of urban settlements.



### **Tim Dixon, IEAGHG – group discussion leader session 5**

Tim Dixon is the Programme Manager for the IEA Greenhouse Gas R&D Programme (IEAGHG), an international non-for-profit R&D organisation focussing on carbon dioxide capture and storage (CCS). IEAGHG's activities include technical reports, research networks, conferences, and summer schools, and inputting technical-evidence base to international regulatory and policy developments.

Previously Tim worked in international technology transfer for low-carbon energy technologies, emissions trading and related areas in the UK Government and AEA Technology. He was a lead negotiator for CCS in the CDM, for CCS in the London Convention and OSPAR, and for CCS in the EU ETS. Tim is also an Honorary Senior Research Fellow at the University of Texas and an Honorary Lecturer at the University of Edinburgh. He is a Director on the Board for The International CCS Knowledge Centre in Regina, Canada, and was a Board Member of the UKCCSRC.



### **Britta Rennkamp, Energy Research Centre (ERC) – group discussion leader session 5**

Dr Britta Rennkamp is a senior researcher at the Energy Research Centre (ERC) and senior fellow at the African Climate and Development Initiative (ACDI) at the University of Cape Town. Her research focuses on climate technology and innovation policy in developing countries and the links between poverty, inequality and mitigation of climate change. Previous work analyzed renewable energy and nuclear programs, carbon taxation, green industrial and innovation policies. She published various articles and book chapters on the overall question on integrating policies on emissions reductions, energy supply and development in Africa and Latin America. Prior to joining ERC, she worked for the German International Cooperation (GIZ) in Brazil and the German Development Institute (DIE) in Germany. Britta Rennkamp holds a PhD in Political Science, and a Diplom/MSc in Regional Sciences – Political Sciences, Economics, Latin American History, Spanish and Portuguese language and literature.

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**David Ojo Olubiyi, NIHORT – group discussion leader session 5**

I am a research director and coordinates of national project 9 related to climate technology needs, technology transfer opportunities and policy formulation inter alia in NIHORT. I have over 18 years of experience on climate change adaptation and mitigation research for policy advisory, project management and implementation. Led climate change initiatives in Rio Brazil UNCED 1992; the EXPO 2000 Unitransfer Institutions for global village Climate Impact Research and the Stockholm Sweden IFS project. I hold climatic change related professional certificates in Horticultural Environmental Management and a PhD in Agronomy of Natural Resources Management. My activities had also resulted in the development of appropriate adaptation and mitigation agricultural production, processing and utilization technologies for farmers and other stakeholders; reviewer/editor of many journals; chaired many conference sessions, invited/appointed as Group Scientist Leader, and who is who in Science honor/certified; reported in media for community development projects; etc.



**Rajiv Garg, CTCN – group discussion leader session 5, moderator session 10**

Rajiv is CTCN's Network and Capacity Building Manager with 20 years of experience on complex technology transfer issues and their solutions using integrated system based approaches. Prior to joining CTCN, he was managing climate change mitigation programme for UNEP in Asia and the Pacific and led the design of the industrial emissions "Cap and Trade" scheme for the Indian government.



**Dr. K. Ajith Joseph, Nansen Environmental Research Centre (India) – group discussion leader session 5**

Dr. K. Ajith Joseph presently the Principal scientist and Executive Director of Nansen Environmental Research Centre - India (NERCI), a non-profit Scientific and Industrial research Organisation recognized by Ministry of Science and Technology for environment and climate research based in Kochi, India. He has a doctorate in Physical Oceanography from Cochin University of Science and Technology (CUSAT), India in 1998. He joined NERCI as Scientist in 2000. He has more than eighteen years of research including ten years of project management experience through implementation of various projects funded by Indian Space Research Organisation, Dept. of Science and Technology, Govt. of India, UNEP, European commission and Norwegian Research council. He also serves as an adjunct Faculty at Kerala University of Fisheries and Ocean Studies (KUFOS) and is a recognized research guide at the faculty of Ocean Science and Technology and Faculty of Ocean Engineering. He implemented an EU-FP7 international project (2012-2015) involving institutes from five EU countries-Norway, Netherlands, Italy, France and UK under INCO-LAB programme.

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## Session 7 – Reporting back: Findings of Day 1 and introductory keynote on de-risking investment in climate technologies



### **Hartwig Kremer, UN Environment – speaker session 7**

Hartwig Kremer holds a doctor grade in marine sciences and a degree as senior governmental advisor of fisheries economy focusing on environmental legislation and administration. In the Science Division of UN Environment, he coordinates the Global Environment Monitoring System - Water, and the World Water Quality Assessment. He works with UN-Water on the provision of meta-data and indicator notes to the Inter Agency and Expert Group in the development of Sustainable Development Goals of the Agenda 2030. He liaises with the global science community at large on the Governing Council of "Future Earth". Earlier he held a leading position in development cooperation designing and coordination capacity building and training on food security and coastal management in over 60 countries. As of 2017 Hartwig Kremer also supports the Climate Technology Centre and Network in the areas of technology innovation, science and finance communities and matchmaking. His experience in general is in combing natural, and socio economic disciplines.

## Session 8 – Regional/national/subnational climate strategies and responses – how best to reduce investment gaps and risks?



### **Arthur Onyuka, NDE Kenya – speaker session 8**

Dr Arthur Onyuka is a Senior Research Scientist at Kenya Industrial Research and Development Institute (KIRDI), the National Designated Entity (NDE) for Kenya. He holds BSc (Hons) and PhD (UK) in Leather and Waste Management. Currently, Onyuka is the national NDE coordinator and is also one of Board Directors of Kenya Climate Innovation Centre (KCIC). Previously, held research position at the University of Northampton (UK) and Quality Control Technologist at E-Leather Ltd (UK).



### **Ambuj Sagar, Indian Institute of Technology, Delhi – speaker and panellist session 8**

Ambuj Sagar is the Vipula and Mahesh Chaturvedi Professor of Policy Studies at the Indian Institute of Technology Delhi. Ambuj's interests broadly lie at the intersection of technology and development. His recent work has focused on innovation policy for meeting sustainability and inclusivity challenges, energy innovation policy and strategies (in areas such as biofuels, clean cookstoves, coal power, automobiles, and institutional mechanisms such as climate innovation centers), climate change policy, and technical higher education. He also has been consultant/advisor to various Indian Govt. ministries as well as many multilateral and bilateral agencies. Ambuj holds a B.Tech. in Mechanical Engineering from IIT Delhi, an M.S. in Aerospace Engineering from the University of Michigan, an M.S. in Materials Science, an M.S. in Technology and Policy and a Ph.D. in Polymer Science from the Massachusetts Institute of Technology.

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**Milan Rusnak, UN Environment DTU Partnership (UDP) – moderator session 8**

Milan Rusnak is currently working at UNEP DTU Partnership in Copenhagen as a Senior Climate Finance Expert in charge of managing several private sector and finance initiatives. His background is mainly in the area of financial structuring, design and implementation of various climate finance/clean energy programs globally for multiple International Financial Institutions in developing countries. Previous positions were held at GreenMax Capital Advisors, International Finance Corporation, East Fund Management with main focus involving work with local and international financial institutions engaged in financing renewable energy and energy efficiency particularly in Europe, Southeast Asia, Latin America, Africa and to a lesser extent in other regions as well



**Bastiaan Louman, CATIE – panellist session 8, group discussion leader session 9**

Bastiaan Louman is the contact person for CTCN in the Tropical Agriculture Center for Research and Higher Education (CATIE) in Costa Rica where he coordinated the climate change and watershed program between 2009 and 2016. As a forester with over 30 years of experience in management of tropical forests, he now leads the forest management and global change unit within the forest and biodiversity program of CATIE. He holds a PhD in Natural Sciences and Development and a MSc in agricultural sciences (tropical silviculture and forest ecology). He has been involved in CTCN from the beginning, leading the first two technical assistance tasks in Latin America in Chile and Colombia, both on monitoring of adaptation. He is a strong supporter of inter-sectorial approaches with multiple stakeholders. Over the past years he has studied adoption of good practices in agriculture, livestock and forestry and is supporting the development of REDD+ and forest restoration strategies in several countries in Latin America.



**Mukand Babel, Asian Institute of Technology – panellist session 8**

Dr. Babel specializes in hydrologic and water resources modeling as applied to integrated water resources management. His interest areas are very much diverse and include watershed modeling and management; water resources allocation and management; water resources and socio-economic development; water supply system and management; and climate change on hydrology and water resources. Research related to groundwater resources management and drought analysis, forecasting and management are also of interest.

**Session 9 – Regional/national/subnational needs and responses – how best to reduce investment risk?**



**Gareth Lloyd, UNEP DHI – group discussion leader session 9**

Gareth James Lloyd works as senior advisor at UNEP-DHI Partnership, a United Nations Environment Programme collaboration center on water and the environment. Based in Denmark, but with an international focus, his portfolio includes U.N. work linked to the Sustainable Development Goals, technology transfer to developing countries, and the development and application of serious games for capacity building. He has degrees in environmental science and environmental policy.



**Libasse Ba, Environment Development Action in the Third World (ENDA) – group discussion leader session 9**

Libasse Ba is a Programme Coordinator at Enda Energy, an international organisation based in Dakar (Senegal) and implemented in Africa, Asia and Latin America. He is registered at the Roster of Experts of the secretariat of the UNFCCC as a specialist in GES Inventories and Mitigation analysis. Basically he is an energy economist planner and got his degrees in the University Cheikh Anta Diop of Dakar, Senegal. He implemented the Kyoto, Think Global, Act Local programme related to REDD+ issues in the Africa Region from 2004 to 2009. He has been conducting the regional implementation of the Technology Needs Assessment (TNA); a UNEP programme for 12 countries in Africa (at the first phase) and coordinating the second phase in francophone countries of Africa since 2015. Enda Energy as a member of the consortium of partners led by UNEP, he is representing Enda in this consortium and implementing the CTCN activities in the francophone African countries. Libasse BA has experience in Policy analysis and evaluation in energy and development in Africa, specialist in integrating rural energy technology development policy and planning. He is working in non-Annex 1 National Communications since 1996 and NDCs (since Paris Agreement) with experience in training on UNFCCC Methodologies and approved Tools like LEAP for mitigation analysis.



**Sara Traerup, UNEP DTU Partnership (UDP) – group discussion leader session 9**

Sara Trærup is a Senior Researcher at the UNEP DTU Partnership (UDP) and she holds a PhD in socio-economic aspects of adaptation to climate change. Since 2010, Sara's work has been focused on technology development and transfer, and she is the project manager for the GEF-funded Global Technology Needs Assessment Project (Phase III) where most of her time is devoted to support developing countries in conducting technology needs assessments and preparing technology action plans. Sara is also responsible for the overall coordination of UDPs collaboration with the CTCN, in UDPs role as a Consortium Partner.



**Daniel Bouille, Bariloche Foundation – group discussion leader session 9**

Daniel Bouille is the Director of Climate and Development and Executive President of the Bariloche Foundation, based in Buenos Aires, Argentina. An Energy Economist by training, he has served on the GEF roster of experts as well as a coordinating lead author of Working Group III of the IPCC. The work program of the Energy Department of the Bariloche Foundation focuses on the development of activities in basic and applied research, training, dissemination and technical assistance in the field of economics, planning and energy policy and its relationship with social and environmental dimensions of the Foundation's activities.



**Ron Benioff, U.S. National Renewable Energy Laboratory – group discussion leader session 9**

Ron is Director of Multilateral Programs at the National Renewable Energy Laboratory. In this capacity, he serves as co-director of the LEDS Global Partnership where he coordinates activities of the partnership across the regional platforms, topical working groups, and more than 300 member institutions. He also directs the Clean Energy Solutions Center, providing clean energy policy resources, expert advice, and training to countries around the world and manages NREL's work in support of multiple Clean Energy Ministerial initiatives and for the Climate Technology Center and Network. Prior to joining NREL in 1997, he worked at the U.S. Environmental Protection Agency for 11 years on climate change and waste management issues.

## ABSTRACTS

**Session 1**

- **Jason Spensely and Federico Villatico, CTCN: Overview of CTCN processes + needs of developing countries**

- **Heleen de Coninck, CARISM: Overview of existing approaches- the CARISMA project**

**International collaboration in research and innovation for climate change mitigation: A preliminary user guide for UNFCCC bodies**

Hundreds, possibly thousands, of international collaboration initiatives in the field of research and innovation exist globally. Some of them are implemented under the auspices of international organisations, many are bilateral, between regions or between industries, or combinations of all the above. The question is: what can we learn from these initiatives? As part of the CARISMA project, Radboud University, CEPS and I4CE have inventoried some 30 initiatives and took a closer look at five of them to see what lessons could be learned. The results will be presented, and recommendations for the particular context of UNFCCC bodies will be drawn.

**Session 2 – Matching needs with solutions**

- **Jonathan Lonsdale, ICF: Innovative Financial Instruments for First-of-a-Kind, commercial-scale demonstration projects in the field of energy**

Jonathan Lonsdale will present some of the key insights and conclusions from a study published in 2016, commissioned by DG Research & Innovation (European Commission), which examined the role of financial instruments in the support of commercial-scale, first-of-a-kind (FOAK) low-carbon energy demonstration projects focused on Sustainable Energy Technology (SET) sectors in Europe. ICF undertook extensive research and consultations to determine the current investment and funding landscape for these large-scale FOAK projects. Three main stakeholder groups helped to shape the study findings: project developers, financial institutions, and public support schemes at the EU, Member State, and international levels. Large-scale FOAK projects are highly risky and so are difficult to finance. Market participants have very different appetites for risk, which in turn leads to complex financial structures being required to enable such projects to achieve financial close. Consequently, there is high demand for a suite of public-sector funding mechanisms to be made available to fill the commercialisation, 'Valley of Death', funding gap. Two EU financial instruments were identified as being needed: equity provision and specialist loans, both at a scale of at least €250 million. Additionally, a clear need was identified for an Advisory Service to help project developers navigate public support and plan better the critical steps in achieving financial close.

- **Matthew Kennedy, IERC: Collaborative business models for energy research**

The focus of my intervention in Session 2 - Matching needs with solutions- will be to introduce a collaborative business model for energy research. It will introduce a public-private joint undertaking, namely the International Energy Research Centre (IERC) for undertaking energy and climate resilient research that could be replicable in developing countries. It will present a collaborative business model for developing project proposals, with key stakeholders including industry, public sector and academia. It will discuss an intellectual property collaborative model to best exploit research endeavor. The presentation will introduce research lenses and new business development models for engaging

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stakeholders and will cite key examples of research relevant to the needs of CTCN network organisations, and developing countries.

### **Session 3- Financing climate technology and adapting climate technologies to local contexts**

- **Lars Pehrson, Merkur Cooperative Bank: Investing in climate solutions- the Global Alliance for Banking on Values**

The Global Alliance for Banking on Values (GABV) is a network of banking leaders from around the world committed to advancing positive change in the banking sector. Our collective goal is to change the banking system so that it is more transparent, supports economic, social and environmental sustainability, and is composed of a diverse range of banking institutions serving the real economy.

Our members have one thing in common: a shared mission to use finance to deliver sustainable economic, social and environmental development, with a focus on helping individuals fulfil their potential and build stronger communities. Triple bottom line approach is at the heart of the business model of all our member banks. Sustainable banks integrate this approach by focusing simultaneously on people, planet and prosperity. Products and services are designed and developed to meet the needs of people and safeguard the environment. Our members invest and support projects related to renewable energy and protection of environment globally. It is our believe that renewable energy helps to ensure that we can meet energy demands of future generations without running out, reduces respiratory-illness-causing pollution at the source, and helps to reduce climate-change-causing carbon emissions. For more information about the GABV and its members please visit our website: [www.gabv.org](http://www.gabv.org)

- **Astrid Motta, EBRD: Leveraging new investment in climate technology**

### **Session 4- Climate Technology support: a CTCN country and partner perspective**

- **Gabriel Blanco, NDE Argentina**

The access and diffusion of clean technologies in developing countries are of utmost urgency for these countries to avoid locking-in themselves for decades into conventional technologies and infrastructure. In fact, developing countries are now taking decisions at a very rapid speed that will define the development pathways to be followed. If clean technologies are not readily available these decisions may not only exacerbate GHG emissions and other pollutants but also increase energy dependence, most likely on fossil fuels. Therefore, the access and diffusion of technologies that can contribute to shift to a sustainable development pathway is necessary not only to address the challenges posed by climate change, but also, and perhaps most important for many countries, to take advantage of the number of co-benefits that a sustainable development pathway can bring in terms of public health, energy diversification and food security. The access and diffusion of technologies occur, in general, either by the innovation and development processes within countries or by the transfer of the technologies from countries or, more precisely, private companies that own them. Development of technologies in developing countries occurs, in most cases, at the sole expense of the public sector, or even individual public, non-profit institutions in these countries, benefiting from the creativity and endogenous knowledge embedded in their human capabilities.

In some cases, multilateral institutions and bilateral cooperation provide seed funding and knowledge exchange for technology development and demonstration activities; in most of these cases, however, the support is insufficient and the administrative processes to access those funds are long and painful.

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In this context, the Technology Mechanism established under the UNFCCC can enhance actions across the technology cycle that can contribute to both the development and transfer of technologies for mitigation of and adaptation to climate change. The Technology Mechanism is in a position to promote cooperation at international level through both arms, the TEC and the CTCN. The TEC by providing the conceptual framework and highlighting the possible barriers and needs for this endeavour to be successful and the CTCN by bringing the stakeholders together and helping to organize them.

- **Shikha Bhasin, RINGO**

I will be highlighting the role of First-of-its-kind technologies in the negotiations (by way of CDM and the linguistic differentiation that Bali brought about). I will emphasise on what actually comprises “first of its kind” and how this is relevant to the work of the CTCN. The second part of my presentation will highlight various examples from India of first-of-its-kind technology development and deployment in India. These relate to the solar, refrigeration, health, and testing/certification as sectors where public and private interventions have been successful.

- **Elisha N. Moyo, NDE Zimbabwe: Zimbabwe’s experience with CTCN - role as matchmaker & challenges in piloting & demonstration of climate technologies**

Zimbabwe submitted its INDCs which require \$US90 billion to attain resilience in the Agriculture sector and reduce per capita energy emissions 33% by 2030. This will enable new genetic stocks for crops and livestock, enhanced water harvesting, conservation and irrigation efficiency as well as changing the national energy mix which is currently dominated by high emitting coal and vulnerable hydro. It will also increase energy security, diversity and improve access to modern energy for domestic use and competitiveness for industries. This requires investment into appropriate means of implementations especially appropriate technology, policy frameworks and finance as several intertwined barriers have been limiting this technology transfer. Since nomination in June 2015 Zimbabwe’s NDE has successfully submitted three technology requests to CTCN. These were aimed at Developing a Climate-Smart Agriculture Manual; Piloting rapid uptake of industrial energy efficiency and; Capacity building in project development. Zimbabwe is also leading the development of Regional Efficient Appliances for 10 SADC countries and pilot a CTCN GCF Concept Development Capacity Development Module which has so far trained 25 people and produced five draft concepts.

The validated CSA manual has already leveraged \$100 000 support for Agriculture policy framework and results are being taken into our first \$80million GCF proposal as Climate Smart Packages thus enhancing use of low carbon climate resilience practices in agriculture. There is still need to increase the country’s readiness to mobilise, access and/ utilise resources in implementing climate actions. This could be through demonstrating how CTCN can transfer technology which increase resilience or mitigate at strategic platforms such as COP and most importantly to key stakeholders in our countries (Private sector, practitioner and decision-makers alike). CTCN TA requests can still better respond to the Country Needs and address challenges related to piloting (financial resources for deployment of hard technologies and understanding what CTCN gives, limited support for the NDA oversight roles, research and development/ demonstration of innovative of climate technologies. There is need for NDE Institutional support to coordinate stakeholders, monitor & evaluate CT work and support in-country climate technology development & transfer building on Africa’s Youth dividend and other regions’ strengths. We need to be innovative to develop climate proof, no regret technologies and engage communities so as to avoid mal-adaptation. Technology approach must include **people who makes things happen**, decision-making & thought processes and informed by countries’ unique circumstances.

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## **Session 7- Reporting back: Findings of Day 1 and Introductory keynote on de-risking investment in climate technologies**

- **Nagaraja Rao, PFAN: Unlocking finance for climate technology**

In recent times, renewable energy has achieved a turning point for energy investment. To quote 2017 report from Bloomberg New Energy Finance – this sector saw an investment \$241 billion and capacity addition of 138 gigawatts indicating the maturing status of this industry where now it is “more for less”. This accounted for 55.3% of all the gigawatts of new power generation added worldwide last year. The maturing technologies, wider acceptance of new energy across markets are attracting private sector investments in billions. There is a clearly visible excitement in disruptive technologies, falling prices, efficiency in operations that are driving new money into this field. Cheaper battery storage, mass as well as personal electric vehicles, hybrid renewable energy farms, off shore wind farms, innovations like pay as you go, internet of things, distributed power generation are game changers that are redefining energy and its usage. All this calls for such a scale of long term investments that investments from private sector becomes a given condition. An economically viable business model thus becomes obligatory. Here comes the financial engineering, risk identification and its mitigation that will attract a wider variety of investors, increase the investable pool, provide investors with a predictable return and an exit when needed summarises my address today. Any viable business in this sector that can articulate its risk return will attract new investments. Other than traditional risks that are present in any business the risks that are manifested in renewable sector needs to be appreciated. Extreme weather conditions, infirm nature of generation that are beyond human ability to control. While we cannot wish always these risks they can nevertheless be insured to mitigate losses. Disruptive technologies constantly change the goal posts. Any application of technology needs to factor such game changers in their investment. In my view, we are in exiting times with a bright future. Investment pay offs can be rich and satisfying along with environmental and social benefits to boot.

## **Session 8- Regional/national/subnational climate strategies and responses- how best to reduce investment gaps and risks?**

- **Arthur Onyuka, NDE of Kenya: Technology transfer for climate change in Kenya**

Kenya is located in the East African region and, like other countries in the region, is vulnerable and bearing the brunt of climate change impacts and the associated socio-economic losses. More than 80% of the country’s land mass is arid and semi-arid land (ASAL) with a lot of developmental challenges including poor infrastructure, poverty, health and sanitation. Overall, the country’s economy is highly dependent on climate sensitive sectors such as agriculture, energy, tourism, water and health. Climate related hazards have caused considerable losses and sufferings across the country’s different sectors and population. The major climate threats include drought and floods which cause economic losses estimated at 3% of GDP. The Government has put in place policy documents and made key initiatives to facilitate adaptation and mitigation measures aimed at accelerating development goals of Kenya vision 2030. Such includes the launch of Kenya Climate Change Act 2016, National Climate Change Action Plan 2013 – 2017, promotion of private sector investment and entrepreneurship. Kenya is also home to one of the Climate Innovation Centres in the world. To address current and long term potential impacts and meet national and local needs priority areas of focus include agriculture, energy, water and forestry. Innovation and adoption of new technologies to suit local and national requirements have been identified as essential to help bring about the transformation and enhance the country’s capacity to compete in the global market. However, despite the willingness to adopt new innovative climate technologies, significant challenges remain. These include inadequate technical capacity, poor

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infrastructure, access to financing, information and communication, weak R&D in climate change, weak linkages between research institutions and the private sector, socio-economic implications, incubation and demonstration programmes, commercialization of the innovation, lack of understanding of the technology and ability to implement.

- **Ambuj Sagar, Indian Institute of Technology: Identifying opportunities and adapting technologies**

The development and deployment of first-of-a-kind technologies in a developing country context requires careful attention to the technical, financial, market, policy and delivery model dimensions, each with its own complexities that are specific to the local context and the relevant technology. This will talk draw on three case studies from India - LEDs, super-efficient fans, and improved biomass cookstives - to illustrate the kinds of strategies have been employed in order to try and achieve such outcomes. It also will then highlight what might be some particularly key issues to consider terms of advancing such technology development and deployment and also possible pitfalls.