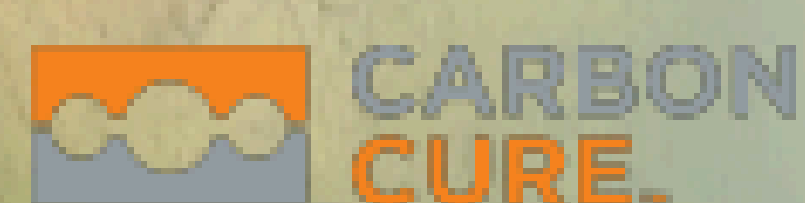


MAY 8TH, 2025
MEXICO CITY, MEXICO

CARBON VISIONS MX

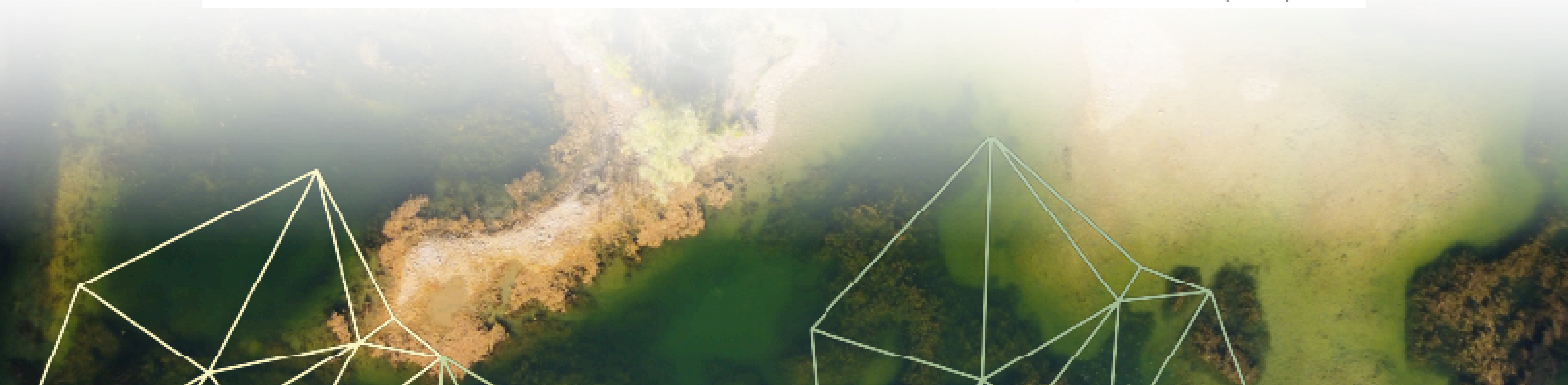
EXPLORING MEXICO'S PATHWAYS TOWARDS
DECARBONISATION THROUGH CCUS



AGENDA

Time	Topic	Speakers
08:20	Registration	
09:00	Welcome and opening remarks	UNAM and SENER
09:10	Housekeeping information	Jazmín Mota, MeCCS
09:15	Mexico's decarbonisation pathways for the energy and industrial sectors	Adrián Ruiz, SENER Martín Aguilar, SEMARNAT
09:25	CCUS in Mexico in a nutshell	Jazmín Mota, MeCCS
09:40	Coffee Break	
10:10	Technological status	Moderator: Jazmín Mota, MeCCS Jarad Daniels, GCCSI * Jon Gibbins, UKCCSRC * Katherine Romanak, UT Austin
11:10	Financing	Moderator: Tim Dixon, IEAGHG Katherine Romanak, UT Austin Nataliya Kulichenko, WB * Riccardo Savigliano, UNIDO*
12:10	Regulatory framework	Moderator: Adrián Ruiz, SENER Tim Dixon, IEAGHG Nathalia Weber, CCS Brasil* and Luciana Braga, ANP* Paul Zakkour, Carbon Counts*
13:00	Lunch and networking	1) Ángel Jiménez, Carbon Cure
13:50	Keynote presentations	2) Doug Rae, 1PointFive
14:30	CCUS in the energy sector: low-carbon energy and EOR	Moderator: Abigail González, Colegio de Puebla Mike Monea, Monea CCS * Silvia Chávez, PEMEX E&P Erick Luna, IMP
15:30	CCUS in industrial decarbonisation: petrochemicals, cement, and steel	Moderator: Augusto Carvalho, SLB Daniel Lopes, FS Fueling * and Milas Sousa, Renovar Sustentabilidade * Nestor Quintero, CEMEX Marco Aguirre, Ternium
16:30	Partnerships and collaboration	Moderator: Jazmín Mota, MeCCS Tim Dixon, IEAGHG Edgar Yáñez, Ecopetrol *
17:00	Wrap-up session	Jazmín Mota, MeCCS

* remote participation



Organising team

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VIRTUAL FORUM


We are opening a virtual forum for you to comment, ask questions and interact with other participants during and after the event.

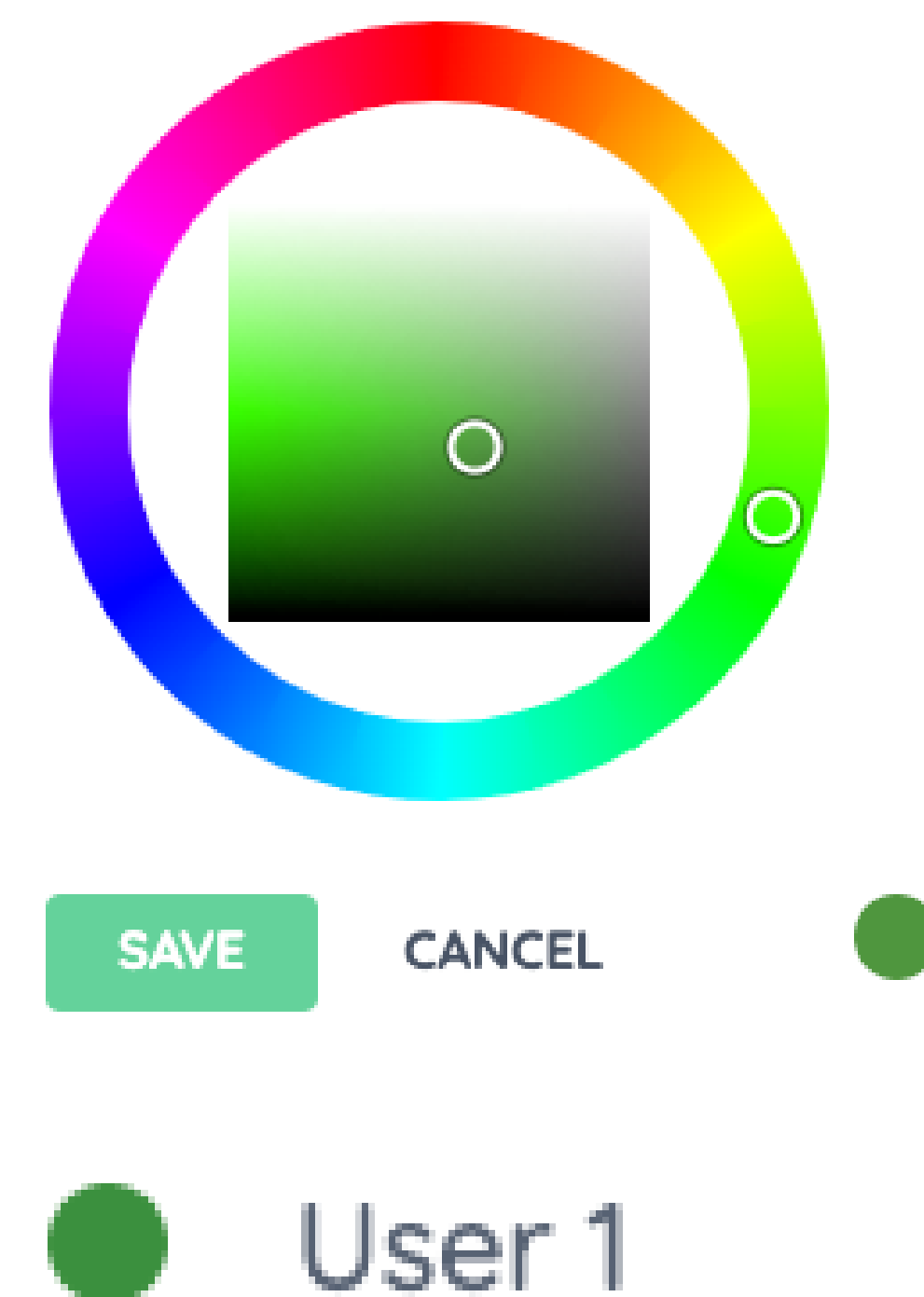
Follow the next instructions to join the forum from your phone or other devices:

1. Scan the QR code or use the link.

[CarbonVisionsMX_Forum](#)



2. Click on the icon  on the top right corner (on your computer) or the bottom right corner (on your phone) to write your name and choose a colour identifier, so each time you write something in the forum, the text will be highlighted with that colour.

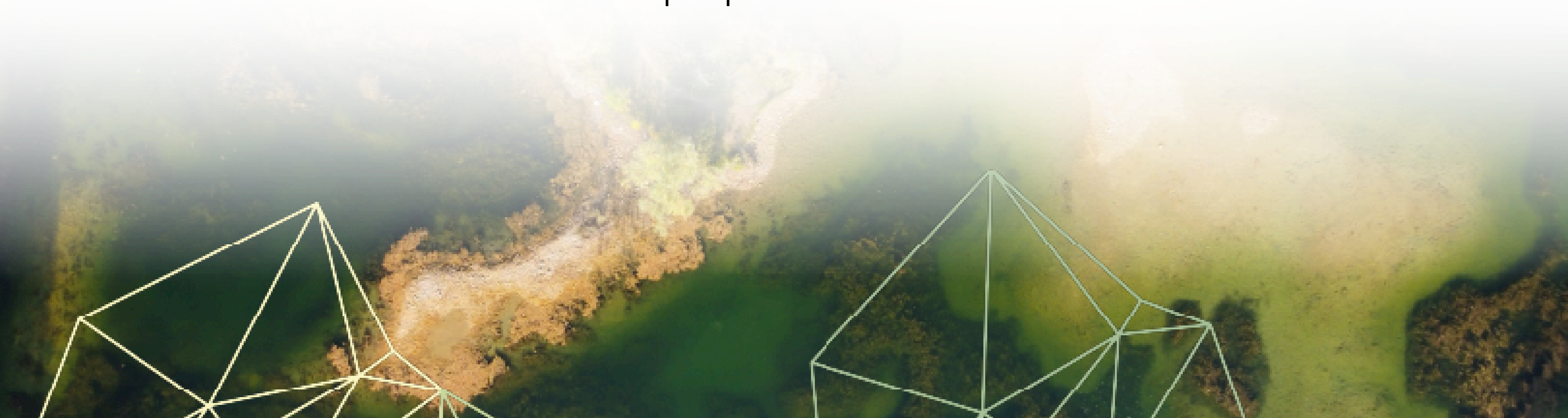


3. Go to the main board and comment, ask questions or share your insights below the text **“Q&A and discussion”**.

Q&A and discussion ->

We are building a new community.

4. **Be careful** not to erase other people's comments!



PANELLISTS

Abigail González

Abigail González holds a Ph.D. in engineering from the University of Edinburgh, and a master's degree in chemical engineering from the University of Guanajuato, Mexico. She is a research engineer with over 20 years of experience in Mexico's clean energy sector. Her work focuses on carbon capture, biomass, clean hydrogen, power plants, life cycle assessment, and renewable energy. Currently, she serves as a Researcher at Colegio de Puebla A.C., Associate Editor for the International Journal of Greenhouse Gas Control, and Editorial Board Member of the Green Energy and Sustainability Journal. Previously, she was Director of Mechanical Systems and Alternative Energies at Mexico's National Institute of Electricity and Clean Energy. From 2018 to 2020, she was a senior researcher at Durham and Newcastle Universities in the UK, contributing to the EPSRC-funded national project on industrial carbon capture and supply chains.



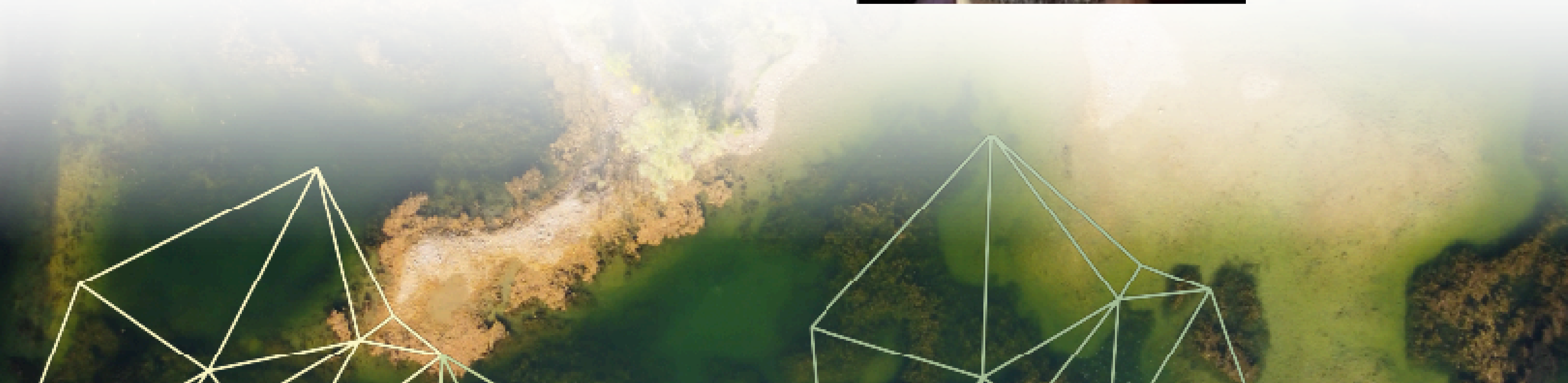
Adrián Ruiz Carvajal

Adrián Ruiz has 15 years of experience in the energy sector over the past 25 years. Since 2024, he has worked at Mexico's Energy Ministry. His previous roles include Energy Policy Specialist at Tetra Tech Ltd. (2016–2018), Deputy Director for Clean Energy Regulation at the Energy Regulation Commission (2014–2016), and Energy Manager at the German Cooperation Agency – GIZ (2009–2014). He currently serves as Mexico's focal point for the Powering Past Coal Alliance (PPCA) and is a member of the Steering Committee of the UN Global Alliance for Buildings and Construction. Dr. Ruiz holds degrees in Environmental Engineering, Natural Resources Management, and a Ph.D. in Applied Economics from the University of Grenoble Alpes.



Ángel Jiménez Moreno

Ángel Jiménez is a construction industry specialist with over 13 years of experience in concrete admixtures. He is currently Sales and Marketing Manager at CarbonCure Technologies, where he promotes sustainable concrete solutions and drives market growth. Previously, he served as Admixtures Manager at CEMEX and spent over nine years at GCP Applied Technologies, focusing on admixture formulation for the Northern Cone region. His expertise includes improving concrete rheology and slump in challenging conditions, such as clay-contaminated aggregates. Ángel also has experience in project coordination, materials management, process simulation, and international sales. He is dedicated to advancing eco-friendly concrete technologies and supporting sustainable construction practices through innovative and efficient solutions.



PANELLISTS

Augusto Carvalho

Augusto Carvalho is the New Energy Business Development Manager for Mexico and Central America at SLB. A geologist with an MBA and currently pursuing a PhD in Energy at the University of São Paulo, he brings 32 years of experience in the energy sector, including over 18 years in oil and gas operations. Augusto has held key leadership roles across Latin America, including Carbon Capture and Storage Director, Commercial Director for SLB Brazil, and Account Director for Petrobras. He has worked closely with national oil companies, IOCs, and independents, developing both technical and commercial strategies. His expertise spans traditional and emerging energy sectors, combining deep technical knowledge with strong business development and sustainability leadership.



Daniel Costa Lopes

Daniel Lopes is the Executive Vice President of Sustainability and Business Development at FS Fueling Sustainability, a top Brazilian producer of corn-based ethanol, animal nutrition, and bioenergy. Since 2021, he has led the company's sustainability and growth strategies. With over 18 years of experience in business strategy, sustainability, and finance, Daniel has held leadership roles in both private equity and corporate sectors. Previously, he was General Manager of Business Development at Votorantim Cimentos, focusing on strategic planning. He began his career as a Financial Analyst at Calçados Azaléia S/A. Daniel holds a Bachelor's and Master's in Economics from Universidade Federal do Rio Grande do Sul and an MBA from INSEAD, blending financial acumen with sustainable development expertise.



Doug Rae

Doug Rae is the Vice President of Asia Pacific and Latin America at 1PointFive, a company focused on Carbon Capture, Utilization, and Sequestration (CCUS). He leads global partnerships with plant developers, investors, and off-takers to support decarbonization, including using Carbon Engineering's Direct Air Capture technology with geologic storage. Previously, Doug spent five years leading international business development at Carbon Engineering. He brings over 25 years of experience in global business development, including serving as VP of Business Development at Canadian tech firm MDA. There, he held various executive roles in management, strategy, and project acquisition, contributing to major business growth and large-scale project success.



PANELLISTS

Edgar Yáñez Angarita

Edgar Yáñez holds a degree in Chemical Engineering (UIS-Colombia), a master's in Mechanical Engineering with a focus on Energy Conversion, an MBA from UNIFEI (Brazil), and a PhD in Energy Systems Analysis from the University of Groningen (Netherlands). He currently serves as a technical authority on decarbonisation and energy transition at Ecopetrol's Vice Presidency of Innovation and Technology, leading applied research for sustainable energy solutions. Previously, he led Ecopetrol's Energy Transition technology strategy, overseeing the development of advanced technologies. He also directed R&D in the bioenergy sector, focusing on biodiesel, cogeneration, pyrolysis, biomass gasification, and life cycle assessments. Edgar is driven by a deep interest in exploring the links between energy, the environment, and the economy.



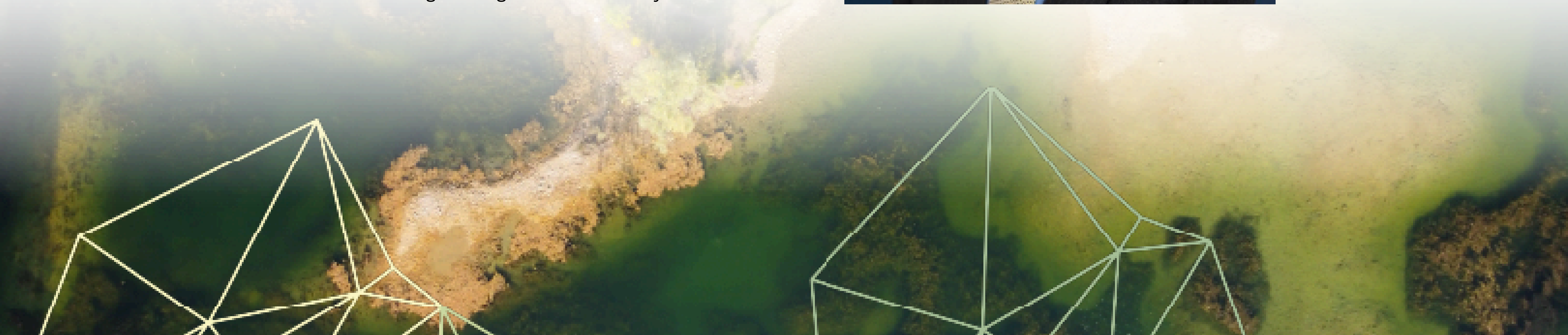
Erick Luna Rojero

Erick Luna is a researcher and professor with over 20 years of experience in Mexico's oil and gas industry. He holds a Ph.D. in Mechanical Engineering, a Master's in Physics from UNAM, and a Bachelor's in Physics from the Autonomous University of Zacatecas. Since 1999, he has been with the Mexican Petroleum Institute (IMP), where he currently serves as Exploitation Research Manager, previously coordinating Flow Assurance and Applied Mathematics programs. He is also a professor at UNAM's College of Engineering, specializing in reservoir engineering, enhanced oil recovery, and numerical methods in petroleum engineering. Dr. Luna has authored 39 scientific papers, holds 12 patents, and supervised 39 graduate theses, making significant contributions to Mexico's energy research and innovation.



Jarad Daniels

Jarad Daniels became the CEO of the Global CCS Institute in 2021, bringing over 20 years of leadership in clean energy and sustainable development. He has extensive expertise in carbon capture and storage, collaborating with countries, organizations, NGOs, and companies on technology development and policy. Prior to joining the Institute, Jarad led the Office of Strategic Planning, Analysis, and Engagement at the U.S. Department of Energy's Office of Fossil Energy and Carbon Management. His government work included managing research and development programs for advanced power systems and environmental stewardship. Jarad's experience also includes life cycle analysis, process engineering, and materials science. He holds a B.S. in Chemical Engineering from Kansas State University and an M.S. in Chemical Engineering from UC Berkeley.



PANELLISTS

Jazmín Mota Nieto

Jazmín Mota holds a PhD from the University of Edinburgh and a BSc in Geological Engineering from UNAM. She was also a visiting research fellow at UNAM's National Laboratory of Sustainability Sciences (LANCIS). Her academic focus includes energy, sustainability, carbon accounting, just transitions, and sociotechnical systems. Professionally, Jazmín served as Director of Clean Technologies at Mexico's Ministry of Energy (SENER) and worked as a consultant for the World Bank and project engineer at the Federal Electricity Commission (CFE). She represented Mexico in multilateral CCS/CCUS forums and has been involved in public consultations, teaching, and scientific dissemination. Jazmín is the founder of the Mexican CCS Platform (MeCCS) and leads a Latin American CCUS working group. She now works as an independent consultant on carbon management and sustainability.



Jon Gibbins

Jon Gibbins is a Professor of CCS at the University of Sheffield and Director of the UK CCS Research Community Network+, with 50 years of industrial and academic experience. His career began with a graduate apprenticeship at W. H. Allen and Imperial College, followed by work at Foster Wheeler and academic roles at Imperial, Edinburgh, and Sheffield, focusing on coal, biomass, and CCS research. He has been involved in CCS since 2002, contributing to key UK initiatives on industrial decarbonisation and CCS clusters. His research on amine post-combustion capture links to the Translational Energy Research Centre. Jon is also a Vice Chair of the UNECE Group of Experts on Cleaner Electricity Systems and actively engages in public discussions on CCS, including responding to the UK's Carbon Capture program reports.



Katherine Romanak

Katherine Romanak is an environmental geochemist at the University of Texas and a leading expert in CO₂ storage monitoring. Since 2007, well before CCS was widely adopted, she conducted research and developed environmental monitoring plans for more than six large-scale injection projects. She pioneered a process-based soil gas method that avoids costly baseline data and now influences global standards for near-surface monitoring. Dr. Romanak introduced the concept of leakage attribution as essential for stakeholder assurance. Her work has helped shape international and U.S. regulations. She is known for clearly communicating complex science, advises countries seeking funding for CCS, and trains oil and gas professionals transitioning to carbon storage.

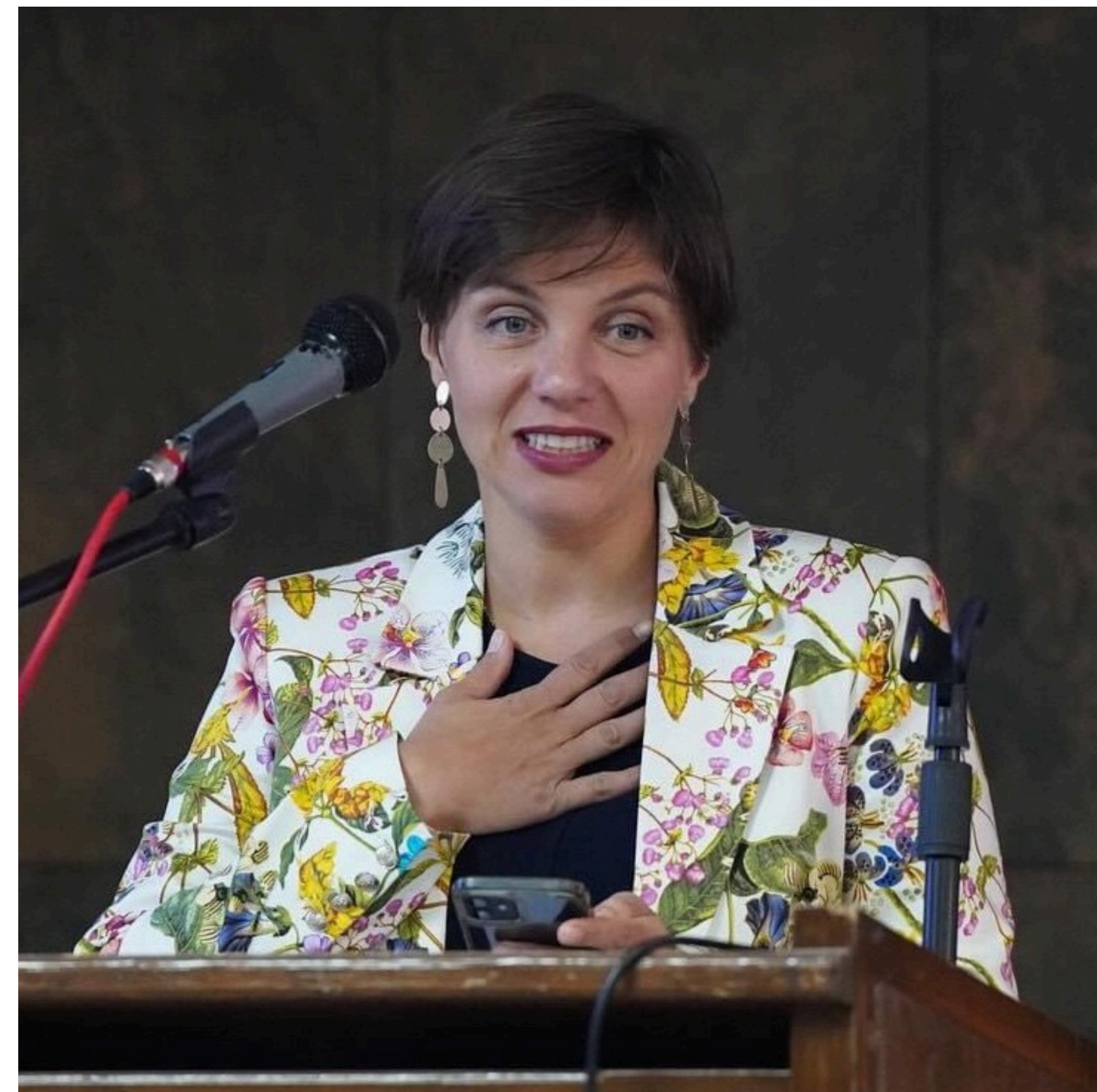


PANELLISTS

Laura Sima

Dr. Laura Sima serves as the Energy Attaché and Director of the U.S. Department of Energy office at the U.S. Embassy in Mexico.

She previously led international climate strategy at DOE, participating in COP26 and helping shape key energy declarations such as the “Breakthrough Agenda.” Since May 2022, she has focused on promoting U.S. private investment in Mexico’s clean energy sector, especially in offshore wind and solar. Dr. Sima advocates for regulatory clarity and legal certainty to foster investment and energy transition. She has raised concerns about delays in permitting and potential impacts of judicial reforms. With a Ph.D. and expertise in energy policy, she plays a key role in advancing U.S.-Mexico energy collaboration.



Luciana Braga

Luciana Braga is currently an advisor to the ANP's Board of Directors and has served the agency since 2006. She has a degree in Law and Public Administration. She holds a Master's degree in

Energy Planning from COPPE/UFRJ and a PhD in Energy Economics from Université Grenoble-Alpes (France). She is the author of several academic publications on the regulation of the upstream sector of the petroleum industry. In recent years, she has dedicated herself to issues related to the regulation of decarbonization actions in the energy sector. She coordinated the production of the ANP's CCUS Report.



Marco Antonio Aguirre

Marco Antonio Aguirre is a Mechanical Engineer from Monterrey, graduated from the Universidad Autónoma de Nuevo León. With over 20 years of experience in the steel industry, he has held various roles at Ternium, leading projects in Direct Reduction and Steelmaking plants. His work spans the design, construction, installation, and operation of both experimental and industrial equipment. Over the past three years, he has been involved in feasibility studies for investments aimed at increasing CO₂ capture in Ternium’s Direct Reduction plants. Marco is known for his practical project execution approach, combined with a strong focus on technical analysis and energy efficiency.



PANELLISTS

Mike Monea

Michael (Mike) Monea is a Professional Engineer, Professional Geoscientist, and member of the Canadian Institute of Corporate Directors, known globally for his leadership in carbon capture and storage (CCS) technologies. As former President and CEO of the International CCS Knowledge Centre, he advanced CCS as a key solution for reducing greenhouse gas emissions. Previously, he led the development of the world's first commercial carbon capture plant at SaskPower. Monea has overseen significant R&D efforts, including large-scale test facilities, and promoted global CCS collaboration. His oil and gas experience, including work on enhanced oil recovery (EOR) and CO₂ storage, allows him to bridge CCS with energy applications. He has worked with Chinese institutions, advised international agencies, and is a respected speaker on CCS.



Milas Evangelista de Sousa

Milas Sousa is a business consultant specializing in biofuels and CCUS projects at Renovar Sustentabilidade and a consultant at FGV Energia. A geologist with a specialization in Petroleum Geology from Petrobras and a master's in "Environmental Analysis and Dynamics" from the University of Hull (UK), he has 30 years of experience at Petrobras. There, he served as Corporate Manager for Safety, Environment, and Health (SMS) in the Exploration & Production and International Business divisions. He also worked for six years at Petrobras Biocombustível (PBIO), where he was Director of Ethanol and Agricultural Supply, and was a member of the Board of Directors of Guarani S.A., Nova Fronteira Bioenergia S.A., and Bambuí Bioenergia S.A.



Nathalyia Kulichenko

Dr. Natalia Kulichenko is a Senior Energy Specialist at the World Bank, with expertise in sustainable energy and climate change mitigation. She plays a key role in advancing carbon capture, utilization, and storage (CCUS) technologies, particularly in developing countries like Mexico. Her work includes co-authoring major reports on CCUS deployment, regulatory frameworks, and financing strategies. In Mexico, she contributed to pilot studies on post-combustion capture, CO₂-enhanced oil recovery, and policy development for CCUS. Dr. Kulichenko emphasizes the need to align technological innovation with effective policy to drive clean energy transitions. Her efforts support global energy sustainability and the World Bank's mission to help countries reduce emissions while fostering economic development.



PANELLISTS

Nathália Weber

Nathália Weber is a Specialist in Geological Carbon Storage and CCS technologies, with a degree in Petroleum Engineering, a Master's in Energy from the University of São Paulo (USP) in Brazil, and an exchange program in the MSc in Petroleum Economics and Management at IFP School in France. She is currently pursuing a PhD in Energy and Fluid Mechanical Engineering at USP. She is the co-founder and Director of CCS Brasil Association, and also serves as Director at Manacá CCS and as a Researcher at the Research Centre for Greenhouse Gas Innovation (RCGI) at the University of São Paulo. Additionally, she is co-founder and board member of the Society for Low Carbon Technologies (SFLCT) and a guest Professor in the graduate program at COPPE/UFRJ and Executive Education Programs at Insper.



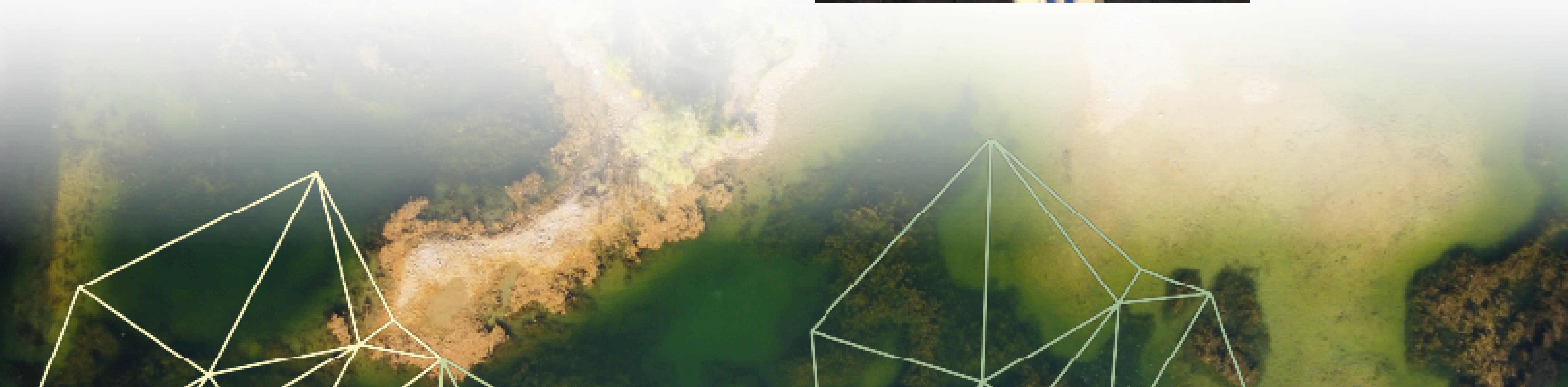
Néstor Quintero

Nestor Quintero is an expert in cement chemistry, materials, and Carbon Capture and Storage (CCS) at CEMEX. He began his career at CEMEX in 1998, leading Quality Assurance efforts in Mexico and securing cement quality certification for all regional products. In 2011, he joined CEMEX's Innovation Holding Group in Switzerland, where he focused on optimizing products and processes through research and innovation. Nestor contributed to multiple optimization initiatives in cement operations and due diligence processes globally. After returning to Mexico, he collaborated with the Global Operations, Technology & Energy team. Currently, as Global Head of Quality & CCUS Technologies, Nestor drives knowledge transfer, innovation, and the development of CEMEX's global CCS strategy.



Paul Zakkour

Paul Zakkour has extensive experience in designing policies, regulations, and MRV frameworks for integrating carbon storage technologies into EU and UN climate policy and carbon pricing mechanisms (2002-2012). Between 2019 and 2021, he led a World Bank study on policy, legal, and regulatory options for carbon capture and storage in Mexico. His recent work focuses on policy design for negative emissions, carbon removals, CO2 utilization, and enhanced sinks under the Paris Agreement. Paul has broad climate policy experience across Europe, Asia-Pacific, North America, the Middle East, and Africa, including carbon pricing, low-carbon project finance, and NDCs. He has been Consulting Director at Carbon Counts for over 17 years and was a Principal Consultant at ERM. Paul holds a PhD in environmental technology from Imperial College London.



PANELLISTS

Riccardo Savigliano

Riccardo Savigliano joined UNIDO in 2008 in the department of Montreal Protocol, and currently serves as Chief of Energy Systems and Industrial Decarbonization Unit. Among several assignments at UNIDO in the field of sustainable industrial development and environmental protection, Riccardo is proud to mention that he also served as UNIDO Rotational Gender Officer in 2018. Riccardo holds a PHD in Plant Pathology and Pest Management and conducted researches on economic impact of businesses and productive activities to local communities, including innovative models to identify and quantify externalities from regenerative businesses, sustainable land use and natural resources management.



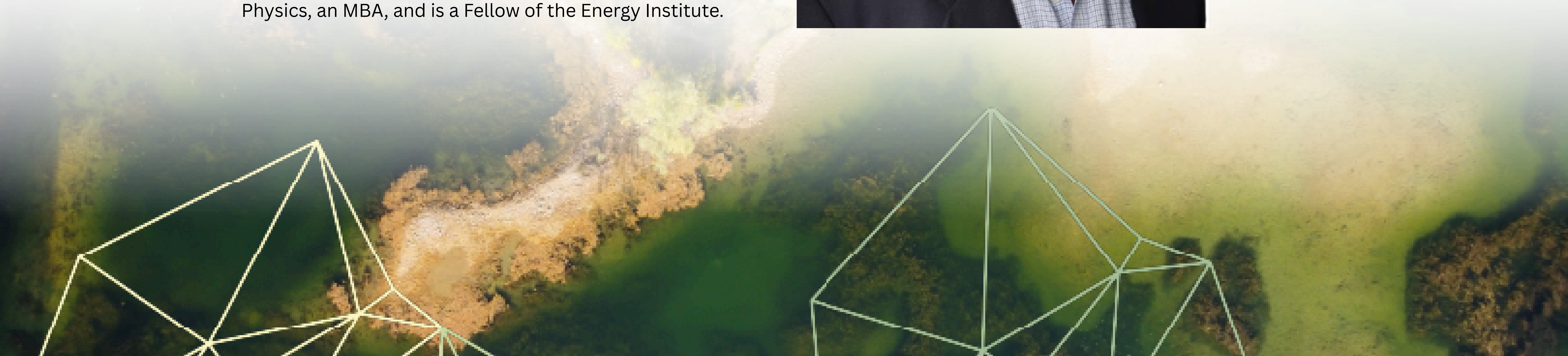
Silvia María Chávez

Silvia Chávez holds a PhD from the University of Calgary and is a specialist in enhanced oil recovery (EOR) processes. She currently works for Mexico's National Oil Company (PEMEX), where she leads thermal EOR operations in select oil reservoirs across the country. Her leadership was instrumental in the success of Mexico's first steam-flooding pilot test for an extra-heavy oil reservoir. She also played a key role in the development and execution of the country's first pilot test of in situ upgrading, which was applied in 2021. This innovative approach originated from her doctoral research under the guidance of Dr. Pedro Pereira and marked a significant step in improving heavy oil production efficiency.



Tim Dixon

Tim Dixon is the Director and General Manager of IEAGHG, an international research organization focused on carbon capture and storage (CCS). He leads IEAGHG in delivering CCS evidence to stakeholders and facilitates international knowledge sharing through the GHGT conference series and workshops. Tim has extensive experience representing CCS in UNFCCC and other international agreements since 2004. He serves as a Director for the International CCS Knowledge Centre (Canada) and holds honorary positions at the University of Texas and University of Edinburgh. Tim's previous roles include working for the UK government, AEA Technology, and the Global CCS Institute. He was the EU's Lead Negotiator for CCS adoption in the UNFCCC and has contributed to key CCS regulations. Tim holds a BSc in Applied Physics, an MBA, and is a Fellow of the Energy Institute.



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