Fit for the future of finance:

Fundamentals in Sustainable Finance

Implemented by:

Course overview

The transformation towards a sustainable future requires a financial system that is aligned with sustainable development, serving society within our planetary boundaries. As the financial sector, businesses and policymakers are increasingly integrating environmental and social (E&S) sustainability considerations into financial policies, processes and practices, the demand for professionals that combine interdisciplinary knowledge in finance and sustainability is growing as well.

This academic-based but practice-oriented introductory course to sustainable finance aims to enable students and professionals to build a solid understanding of the nexus between finance and sustainability as a basis for effectively identifying, assessing and managing sustainability-related risks, impacts and opportunities. They will gain a comprehensive overview of the drivers and trends in sustainable finance, major initiatives at the national and international level as well as key concepts, methodologies and tools to incorporate ESG matters into financial analysis and decision-making in lending and investment processes.

Thereby, the course intends to equip participants with the interdisciplinary technical knowledge, academic foundations and practice-oriented skills to bridge the gap between traditional concepts and innovative approaches and thinking in banking and investing as sustainable finance is quickly moving from the niche to the mainstream in business and finance.

Course design

The course design combines different teaching and learning methods, including:

- Lectures (3 hrs each, in-person or online), with presentation materials incl. supplementary notes and case study-based exercises
- Supplementary self-study (1.5-3hrs/lecture) to work on the course contents independently and in more depth. Study materials include compulsory and additional readings in form of textbook excerpts, academic articles, grey literature and market research, videos, podcasts, etc.

The course framework can be adapted by each institution according to its educational goals and needs – tailored to different levels (advanced undergraduate, graduate, postgraduate or executive level), different credit eligibility/certification requirements, and ranging from single introductory seminars to a full semester course.

Course framework

The course comprises five modules with 14 lectures:

Module 1: Introduction to sustainable finance (SF)
Lecture 1.1: Sustainability meets finance
Module 2: Sustainability, ESG and finance
Lecture 2.1: Introduction to ESG integration in financial decision-making
Lecture 2.2: Sustainability data, accounting & reporting
Lecture 2.3: SF policies & regulations
Module 3: Climate change and finance
Lecture 3.1: The state of the climate
Lecture 3.2: Climate transition risks & opportunities
Lecture 3.3: Physical risks & adaptation finance (1&2)
Module 4: SF financing and investing
Lecture 4.1: Responsible & sustainable banking
Lecture 4.2: Responsible & sustainable investing (1&2)
Lecture 4.3: Blended finance
Module 5: Key topics in focus
Lecture 5.1: Renewable energy finance
Lecture 5.2: Natural capital & finance

The course is the outcome of a pilot project launched by GIZ (German Agency for International Cooperation) under its Emerging Markets Sustainability Dialogues (EMSD), commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ). The development of the course is accomplished in cooperation with leading academics and practitioners from the public and private sector from around the world, and first implemented in partnership with universities in Mexico and China, with support from GIZ's programme Iniciativa Agenda 2030 in Mexico and EMSD China.

For more information, please contact: christine.majowski@giz.de

The lectures

Module 1: Introduction to Sustainable Finance

Lesson 1.1: Sustainability meets finance

The lecture gives an introduction to sustainable finance. It starts with a discussion of major sustainability challenges faced by societies worldwide and how they are being addressed at the international and local level. The lecture looks into the role of the financial sector in achieving a sustainable future, including key stakeholders and initiatives that drive the transformation towards a sustainable financial system. As such, this lecture presents basic terms, concepts and approaches while providing an outlook on key challenges, debates and trends that will be covered throughout the course.

Learning objectives:
Students will become familiar with:

- The global sustainable development challenge: Planetary boundaries and social foundations
- Key international agreements and their implications at the global and national level
- The role of business and finance for sustainability
- Basic terms and concepts in sustainable finance
- Its origins, drivers and trends
- Key stakeholders and initiatives
- Challenges to sustainable development and finance

Module 2: Sustainability, ESG and finance

Lesson 2.1: Introduction to ESG integration in financial decision making

The lecture starts with a detailed overview of major environmental, social and governance (ESG) factors

Learning objectives:

- Get familiar with ESG topics and its terminology

relevant for business and finance. It discusses the concept of double materiality, examining how ESG factors can impact companies and financial institutions, and how business activities and financial decisions impact environmental and social outcomes and can contribute to sustainable development.

- Understand the concept of double materiality
- Build an understanding of how ESG risks and opportunities can impact the financial sector
- Develop an understanding of the impact of finance on social and environmental outcomes, and the financial opportunities associated with it

Lesson 2.2: Sustainability data, accounting and reporting

This lecture aims to give an introduction and overview of a range of topics related to sustainability or ESG data, accounting and reporting. ESG data will be discussed as to what is relevant and how to translate it into meaningful metrics. Different data sources and providers will be discussed, as well as how to interpret scores and ratings. Accounting and reporting frameworks, principles and standards will be introduced and discussed in terms of how they differ and complement each other. Lastly, challenges and limitations of sustainability data and how to deal with them will be discussed in the context of sustainability taxonomies and greenwashing concerns.

Learning objectives:
- Understand the relevance of data
- Be able to identify what ESG data is relevant and how to translate such data into meaningful metrics
- Know where to find ESG data and what to consider for assessing quality and integrity of relevant data
- Gain an overview of different sustainability accounting and reporting frameworks, principles and standards, and understand how they differ and complement each other
- Understand data limitations and how to deal with them

Lesson 2.3: Sustainable finance policies and regulations

The lecture gives an introduction to policies and regulation central banks, financial regulators and supervisory authorities can take for building a sustainable financial system. It provides a detailed overview of both the theoretical rationale and practical policy instruments for addressing sustainability-related risk in the financial system and promoting the role of the financial sector to support sustainability goals. In particular, the lecture focuses on the role of central banks and supervisors in enhancing financial stability monitoring and prudential supervision schemes, including scenario-based stress testing, as well as monetary policy, in order to make financial systems more sustainable and resilient in a changing world.

Learning objectives:
- Gaining an overview of the arguments for, and variety of sustainable finance policies and regulations at the national and international level
- Understanding transmission channels of climate- and environment-related sources of financial risks for the economy and financial system
- Developing an understanding of *why* central banks and supervisors should address sustainability and climate and environment-related risks, and *how* this can be achieved
- Understanding how relevant policy tools and instruments available to central banks and supervisors can be calibrated to address climate change and environmental degradation
- Gaining an overview of financial policy instruments and initiatives to build a sustainable financial system

Module 3: Climate change and finance

Lesson 3.1: The state of the climate

The lecture gives an overview of the current state of the climate. Building on the role of greenhouse gas (GHG) emissions, the global carbon cycle, emission sources and sinks in causing global warming, the

Learning objectives:
Students will gain an understanding of:
- The basics of climate change and its terminology

lecture showcases the need for stronger climate change mitigation and adaptation action. It explores the IPCC Assessment Reports on climate change and international agreements, most notably the Paris Climate Agreement. The lecture concludes with an outlook on climate-related physical and transition risks and their implications for financial institutions.

- How climate change impacts environmental and socio-economic systems
- The concepts of climate change mitigation and adaptation and how they are addressed by the international community, foremost with the Paris Climate Agreement
- The interconnectedness of climate-related physical and transition risks and how they can translate into risks and opportunities for businesses and finance

Lesson 3.2: Climate change mitigation, transition risks and opportunities

The lecture explores climate change mitigation targets and pathways in light of country pledges and corresponding progress under the Paris Agreement. It briefly describes the basics of GHG accounting before focusing on climate-related transition scenarios and risks. Scenario analysis, its purpose, scope and use are discussed. The scenarios of the World Energy Outlook serve to illustrate the building blocks of mitigation measures for a 2°, 3° and 4° future and to take stock of global and local progress on each of the building blocks. The lecture discusses implications for different economic sectors under each scenario and provides an overview of approaches to the financial assessment of transition risks and opportunities. Additionally, a policy and technology projection is presented as an approach to inform financial analysis and valuation. Lastly, the lecture discusses the role of negative emissions in achieving carbon neutrality by the mid-century.

Learning objectives:
- Get an overview of global and local emissions reduction targets and progress
- Understand the basics of GHG accounting
- Understand transition risks and how scenario analysis can be used as exploratory tool to assess transition risks
- Become familiar with the World Energy Outlook's building blocks and global and local progress on mitigation strategies
- Discuss which policy responses and technological developments are likely to arise in the coming years
- Understand the concept of net zero and develop a critical understanding of the role of negative emission technologies

Lesson 3.3: Physical climate risks and adaptation finance (part 1 & 2)

The first part of the lecture provides a recap of physical climate risks and impacts. It discusses the climate risk framework for describing climate risk as function of hazards, exposure and vulnerability. It also provides a framework for assessing the impact chain from climate risks to financial risks. A brief overview of approaches to physical climate risk assessment is complemented with considerations of typical challenges. The lecture also provides an overview of major physical climate risks and impacts in Mexico.

Learning objectives (part 1):
- Get an overview of observed climate impacts
- Get to know the climate risk framework
- Understand the nature of climate change as source of financial risks
- Identify sector sensitivity to different climate hazards and potential interventions to increase adaptive capacity
- Learn the basics and components of physical climate risk analysis and supply chain impacts, as well as challenges of such analyses

Having learned what physical climate risks are and how they transfer into the economy and the financial sector, part 2 of this lecture explores some of the approaches currently used to undertake economic and financial analysis of physical climate risks

Learning objectives (part 2):
- Develop a thorough understanding of how to select and use different approaches currently available in the market to assess and quantify physical climate risks

and how this information can be used to manage physical risks more effectively and to take advantage of emerging opportunities.

- Develop critical thinking skills concerning the selection, application and limitations of tools and service
- Explore ways to apply different modelling techniques to quantify physical climate impacts
- Explore how the appraisal of physical climate risks can be used to inform investment opportunities

Module 4: Sustainable financing and investing

Lesson 4.1: Responsible and sustainable banking

The lecture explores drivers, trends and approaches in responsible and sustainable banking. Along the Principles for Responsible Banking, it discusses why and how banks can align their strategy, governance and corporate culture with sustainability goals, and how they can engage with clients, customers, and broader stakeholders on sustainability. A focus is placed on sustainable financial products and services for different types of clients, as well as environmental and social risk and impact analysis and management systems that banks increasingly incorporate into their standard policies, processes, and practices.

Learning objectives:
- Gain an understanding of responsible banking, and key drivers, trends and topics
- Learn about sustainable financial products and services and how they benefit clients, investees and society in a sustainable transition
- Learn about the components, processes and tools for sustainability-related risk and impact analysis and management, including innovative approaches in climate risk assessment
- Critically assess and learn from real case examples

Lesson 4.2: Responsible and sustainable investing

This *practitioner* part of the lecture covers principles and drivers of responsible investment. It covers different incorporation strategies and provides a conceptual approach for integrating ESG factors in investment analysis along four key steps: (i) identification of relevant ESG factors, (ii) materiality assessment, (iii) financial modelling, and (iv) engagement. The four-step approach is illustrated by various practice examples and an in-depth case study of a sustainable multi-asset income fund managed by a global asset management firm.

Learning objectives (part 1):
- Understand what responsible investment is, its drivers and different strategies
- Learn how to approach ESG integration in investment analysis, and how it works in practice:
- Get an overview of tools and techniques that can be used in integrated financial analysis and portfolio construction
- Learn about engagement strategies

The second part of the lecture assesses ESG integration in investment analysis from an *academic* perspective. It critically reviews Modern Portfolio Theory (MPT) and the Capital Asset Pricing Model, and compares fundamental/qualitative vs. MPT-based ESG factor analysis, tools and techniques. It covers aspects such as value driver modelling, and the limits of arbitrage. The lecture also discusses the difference between alpha and beta – including the impossibility of generating persistent alpha from security selection versus the systemic value of active

Learning objectives (part 2):
- Understand the conceptual approach of ESG integration in investment analysis, and how it works in practice
- Learn about tools and techniques for qualitative and quantitative integrated financial analysis
- Understand the relevance of active ownership and engagement with companies

ownership and engagement for improving the returns to beta.

Lesson 4.3: Blended finance

The lecture explores how scarce public development funds can be used to mobilize private capital for sustainable development. It covers key actors and concepts of blended finance and their relevance in tackling the financing gap for achieving the SDGs and climate targets. Different blended finance instruments and critical questions concerning additionality, leverage and impact are discussed. The second part gives an overview of the different stages of blended finance projects, illustrated by a detailed case study and exercise.

Learning objectives:
- Understand what blended finance is and how it c[...] enhance development cooperation to mobilize pr[...] vate capital for the SDGs and climate targets
- Gain an overview of different stakeholders and blended finance instruments
- Develop a critical understanding of the concepts and issues around additionality, leverage and impact
- Get an overview and discuss along a practical example how to design, monitor and evaluate a blended finance project.

Module 5: Key topics in focus

Lesson 5.1: Renewable energy finance

The lecture gives an introduction into renewable energy (RE) project finance, a central element of the RE project process. After presenting current trends in the RE investment market, it looks at different financing options for RE projects. It gives an overview of typical project finance corporate and contractual structures. It covers core elements of business planning and bankability assessment, including financial modelling concepts, risk assessment and due diligence processes. Cash flow modelling and loan limit calculations are discussed along two case studies for a solar PV and wind farm project, respectively.

Learning objectives:
Students will be able to:
- Explain the basics of the project finance approac[...] and cash flow modelling principles to renewable energy projects
- Identify major principles of financial risk assessment and project finance-compatible contractua[...] structures for renewable energy projects
- Apply the cash flow planning process and debt c[...] pacity calculation for RE projects using case-stud[...] based exercises

Lesson 5.2: Natural capital & finance

This lecture gives an introduction into natural capital, ecosystem services and biodiversity from a finance perspective. It examines the decline in ecological capital and its implications for society, business and finance, assessing the dependencies and impacts of economic and financial activities related to nature. Alongside an overview of international governance frameworks and required public policy measures for nature, the lecture explores the actions businesses and finance can take to mitigate their negative impacts on nature, reduce nature-related financial risks and harness business opportunities to the benefit of nature, the climate and society.

Learning objectives:
- Understand the concepts of natural capital, biod[...] versity and ecosystem services and how they un[...] derpin economic activity and human livelihoods
- Learn about the status of nature, key trends and drivers of the loss of nature
- Understand how declining natural capital gives rise to financial risk and opportunity
- Learn about the role of public and private financ[...] in halting the loss of nature
- Become familiar with approaches, methods and tools to incorporate natural capital into financial analysis, decision-making and products

The lecturers

Kristina Alnes is Senior Advisor in Climate Finance at CICERO Center for International Climate Research. Kristina's background is in management consulting, environmental project management and academic research. Prior to joining CICERO in 2017, Kristina held a position as a Senior Associate at the consultancy AccountAbility where she worked with financial institutions and Fortune 500 clients in the US, Europe and the Middle East to analyze environmental and social data, engage stakeholders and set strategic direction. She has a Master of Science in Sustainability Management from Columbia University and a Bachelor of Finance from McGill University.

➢ **Module 3: Climate change and finance**

Alexander Boensch is Energy Finance Specialist at the Green Banking Team of the Renewables Academy (RENAC). Before joining RENAC's Green Banking Team in 2016, Alexander has been working with RENAC as external consultant since 2009. Alexander has a degree as Financial Economist and held postgraduate positions in the banking and finance industry with a sector focus on energy. Since 2003, he has worked as Finance Consultant for renewable energy (RE) project developers, investors and public utilities, responsible for structured and corporate finance, risk and treasury management, procurement of capital, bank marketing and M&A activities. With 16 years of working experience in the European RE industry, Alexander was involved in RE projects with an installed capacity of more than 900MW and successfully raised capital of approx. EUR 1.7 billion. In addition to his work in RE finance consulting and training, Alexander gives academic courses on corporate finance, capital markets and RE economics at different academic institutions. He is also a member of the investment decision-making board of a well-established German investment company that exclusively funds RE assets.

➢ **Lecture 5.1: Renewable energy finance**

Satyajit Bose is Associate Professor of Professional Practice at the School of Professional Studies at Columbia University. Satyajit teaches sustainable investing, cost benefit analysis and mathematics, and serves as Associate Director of the Program in Sustainability Management. His research interests include the value of ESG information, carbon pricing, the link between portfolio investment and sustainable development in emerging markets and the optimal use of environmental performance metrics for long horizon investment choices. He is co-author (with Dong Guo and Anne Simpson) of The Financial Ecosystem: The Role of Finance in Achieving Sustainability, published by Palgrave Macmillan in 2019. Satyajit has extensive expertise in investment banking, asset management, financial restructuring and automated weather risk management. Among other positions, he was a mergers & acquisitions banker, directed quantitative trading strategies at a convertible arbitrage hedge fund managing $1.5 billion in assets and developed machine learning algorithms to optimize weather-based decision tools.

➢ **Lecture 4.2: Responsible and sustainable investing (part 2)**

Laura Canevari is a risk analyst and business development associate at Acclimatise, a leading international consulting firm specializing in climate change risk management and based in the UK. In her role as BD Associate, Laura supports the development and delivery of climate services for the financial sector, helping them align to the TCFD recommendations. Laura has ten years combined research and consulting experience working on climate change adaptation issues globally. Most recently, Laura helped developing and piloting a self-assessment tool to help Mexican banks identify gaps in their current governance and management practices, building on an international benchmark of best practices for environmental, climate and social governance (EC&S). She has also helped developing a tool for banks in Honduras for the identification and characterization of resilient investments in sectors that are highly exposed to climate change impacts. In addition, she designs and delivers capacity building workshops to build awareness across financial institutions (commercial banks in particular) on the opportunity and business case of integrating climate change considerations into their governance and risk management frameworks, and for investing in climate

resilient solutions. Laura holds a PhD from King´s College London and an MSc from Oxford University. She is also the CEO and Founder of ITACA Solutions, a new initiative helping to accelerate adaptation and resilience financing in the Caribbean Region.

> **Lecture 3.3: Physical climate risks and adaptation finance opportunities (part 2)**

Emiliano Detta works since 2016 for the German Development Bank KfW in Mexico City as their local Sustainable Energy Expert. He currently works in the implementation of innovative projects to finance renewable energy and energy efficiency projects in Mexico in collaboration with local development banks such as Bancomext, NAFIN and SHF. He previously worked at the IDB and in the private sector in different sustainable energy projects financed by the Climate Investment Funds (CIFs), Global Environmental Facility (GEF), Green Climate Fund (GCF) and the Mexican Science and Technology Council (CONACYT). He has supported sustainable energy projects in several other countries including: Chile, Costa Rica, Honduras, Nicaragua, Panama, Surinam, UK, Uruguay and several Caribbean countries. Emiliano is an industrial engineer from ITAM and holds a master's degree from the University of Cambridge in the UK.

> **Lecture 4.3: Blended finance for sustainability**

Simon Dikau is a postdoctoral Research Officer at the Grantham Research Institute on Climate Change and the Environment of the London School of Economics and Political Science (LSE). He is working on central banking and financial supervision in the context of climate change and sustainable finance, exploring the overarching question of how central banks and financial supervisors can respond to downside risks facing the financial sector. Simon holds a PhD in Economics from SOAS University of London on "Central Banking and Economic Development". His publications and broader academic research focus on the various aspects of central banking, sustainable development, finance and climate change. He holds an MSc in Development Studies from SOAS University of London and a BSc in Economics from the University of Bonn.

Nick Robins is Professor in Practice for Sustainable Finance at the LSE Grantham Research Institute on Climate Change and the Environment. The focus of his work is on how to mobilise finance for a just transition, the role of central banks and regulators in achieving sustainable development and how the financial system can support the restoration of nature. From 2014 to 2018, Nick was co-director of UN Environment's Inquiry into a Sustainable Finance System. As part of this, Nick led country activities in Brazil, the EU, India, Italy and the UK, as well as thematic work focused on investors, insurance and green banking. Before, he held positions as Head of the Climate Change Centre of Excellence at HSBC, and Head of Sustainable and Responsible Investment (SRI) funds at Henderson Global Investors. Nick has also worked at the International Institute for Environment and Development, the European Commission and the Business Council for Sustainable Development. Nick has a BA in History from Cambridge University and an MSc in International Relations from LSE.

> **Lecture 2.3: Sustainable finance policies and regulation**

Annelisa Grigg, M.A., M.Phil, has over 20 years of experience advising business, finance institutions and civil society on the risks and opportunities associated with the loss of nature. She combines a technical background in conservation biology with financial accounting knowledge. She started her career as a sustainability consultant with accounting firm KPMG, later working in leadership roles within environmental groups Fauna & Flora International and the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC). Annelisa now leads a consultancy, *Globalbalance*, which specialises in the integration of biodiversity into natural capital assessments and into business strategy and financial decision making. She is a biodiversity advisor to Aviva Investors, supports the Principles for Responsible Investment's work on biodiversity and recently worked with Jersey Finance to develop a sustainable finance roadmap for the island of Jersey, an international finance centre. Annelisa has an M.Phil. in Environment and Development and a B.A. in Zoology from Cambridge University.

> **Lecture 5.2: Natural capital and finance**

Prof. Andreas G. F. Hoepner, Ph.D., is a Financial Data Scientist working towards the vision of a conflict-free capitalism. While the vision is unlikely fully achievable, Andreas' view is that anyone can strive to make a regular contribution to reducing abusive conflicts of interests and thereby enhancing the fairness of our society and its financial system. Formally, Andreas is Full Professor of Operational Risk, Banking & Finance at the Michael Smurfit Graduate Business School and the Lochlann Quinn School of Business of University College Dublin (UCD) and serves on the schools' management team as Vice Principal for Equality, Diversity and Inclusion (EDI). Prof. Hoepner is serving on the European Union's Technical Expert Group (TEG) on Sustainable Finance as one of three independent members (i.e. appointed in personal capacity instead of representing a legal entity). In his TEG role, he co-invented 'EU Climate Transition Investing' by aligning investment strategies across asset classes with the IPCC's 1.5°C trajectory (with no or limited overshoot). In August 2019, he was furthermore commissioned by the EU's Joint Research Centre to draft a report scoping out further options for the development of the EU Ecolabel.

Fabiola Schneider is a full time PhD student at the UCD Michael Smurfit Business Graduate School in Dublin. Her thesis revolves around climate change as an operational risk factor on access to finance for fossil fuel enterprises. Further research interests of Fabiola include emission reporting and accounting, energy finance, particularly the fixed income market, and the influence of environmental, social and governance factors on corporate finance in general. She is involved in the joint academic and industry initiative www.ClimateDisclosure100.info which seeks to address the challenge of incomplete greenhouse gas emissions reporting by companies worldwide and was commissioned to assist in drafting a report scoping out further options for the development of the EU Ecolabel by the EU's Joint Research Centre. Fabiola has professional experience in corporate finance departments as well as project development in the renewable sector.

➢ **Lecture 2.2: Sustainability data, accounting and reporting**

Carmen Nuzzo is Head of Fixed Income at the Principles for Responsible Investment PRI), where she is responsible for the sovereign, sub-sovereign, securitized products and private debt workstreams, as well as the PRI's flagship ESG in Credit Risk and Ratings initiative. She works with investors, credit rating agencies, issuers, ESG information providers and other stakeholders to develop a better understanding of how ESG factors can impact debt instrument pricing. Prior to joining the PRI in 2017, Carmen was an Executive Director at Morgan Stanley focusing on Sustainable Economics. She started her career in 1993 as a macroeconomist at Salomon Brothers, subsequently working for Citigroup, with stints in the not-for-profit sector, including at ShareAction. Carmen holds a Laurea in 'Political Science' from La Sapienza University in Rome and a Ph.D. in 'Capital Markets and Business Finance' from the University of Bergamo.

Eduardo Ateorthua is Director of Latin America (ex-Brazil) at the Principles for Responsible Investment (PRI). He is an economist with a specialization in Geopolitics from the EAFIT University in Medellín, Colombia. He has a master's degree in Sustainable Development and Corporate Responsibility from the School of Industrial Organization (EOI), Madrid, Spain. Experience and special interest in the consolidation of sustainable development models in private organizations and the promotion of responsible and sustainable investment in Latin America. For 10 years, he was the Sustainability Manager at Deloitte and in 2016 led the creation of the Network of Sustainability Professionals in Colombia, an initiative that currently brings together more than 2,000 professionals who work on promoting sustainable development.

➢ **Lecture 4.2: Responsible and sustainable investing (part 1)**

Nina Roth is a Director in BMO Global Asset Management's Responsible Investment team. She joined the firm in 2019. Nina focuses on ESG analysis and engagement for financials and soft commodities, human and labour rights, as well as for ESG regulation more broadly. Most recently Nina worked at Germany's development agency (GIZ), engaging emerging markets financial institutions and their regulators on sustainable finance. Nina joined GIZ in 2016 from the Swiss bank UBS where she was responsible for environmental and social risk (ESR) management in the Asia Pacific region, based in Hong Kong. Previously Nina worked for UBS in Zurich and New York, as well as for Deutsche Bank in Frankfurt, where she established the bank's

ESR framework. In 2014, Nina founded the Roundtable on Sustainable Palm Oil's financial institutions task force. Nina holds a master's degree in political science (Free University Berlin, Germany).

> ➢ **Lecture 4.2: Responsible and sustainable investing (practitioner case study)**

Maria Eugenia Sosa Taborda is the Network Coordinator for Latin America and the Caribbean at the United Nations Environment Programme – Finance Initiative (UNEP FI). She has more than 15 years' experience with the dissemination and consolidation of corporate social responsibility strategy in large companies, sustainable finance and developing innovative projects with positive impacts. Her last position was at Itaú Unibanco as Sustainability Manager. She was in charge of Financial Education and Social, Entrepreneurship and Environmental Risks and Opportunities, working directly with different Business Units: Investments, Credit and Insurance. Maria Eugenia has graduated in business administration at PUCCAMP and is currently doing a master's at Universidade de São Paulo (USP) with a focus on social impact.

> ➢ **Lecture 4.1: Responsible and sustainable banking**

Gabriel Thoumi, CFA, FRM is Director of Financial Markets at Planet Tracker, Chair of the Board of Directors at 2 Degrees Investing Initiative U.S., and Lecturer on ESG integration at Johns Hopkins University. He also sits on regional sustainability commissions in the Washington D.C. area. Since starting his capital markets career 20 years ago, he has worked globally, leading many ESG integration initiatives for numerous firms and clients in over 30 countries while publishing and speaking widely. He has deep scientific knowledge and experience focused on integrating ESG data into financial models to determine pricing signals and asset allocation strategies. He has led many successful global investment research programs and engagement strategies and successfully launched new ESG financial products. He has an MBA and MSc from the University of Michigan and teaches and guest lectures frequently throughout the U.S.

> ➢ **Lecture 2.1: ESG integration in financial decision-making**