

e-Learning Catalogue

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hub101.earth hosts e-Learning series and modules by topic

Each e-Learning series contain modules – see following pages for details

Climate Change &
Mitigation 101

Carbon Markets &
Pricing 101

Nature & Biodiversity
101

Sustainable Finance
& ESG 101

Food & Agriculture
101

Water 101



Climate Change & Mitigation 101

What is climate change and its enormous impact, and what can we do about it?

1. The science behind climate change: [CCM101.A01]

- Fundamentals of climate science: feedbacks, the carbon cycle, detection, attribution, observed and future changes.

2. Impact and adaptation: [CCM101.B01]

- Climate risks: physical and economic impact of climate change.
- Climate justice: what is it and why it is important.
- What is adaptation and its challenges.

3. Mitigation: [CCM101.C01]

- What drives greenhouse gas (GHG) emissions and why?
- What is the carbon budget?
- What is the emissions gap?
- Role of mitigation by sector: electricity and heat, transport, manufacturing and construction, agriculture, industry, buildings, waste, land-use change and forestry, aviation and shipping etc.
- Energy transition and the role of technology.
- Potentials of nature-based solutions.
- Economics and financing of climate solutions.
- Role of governments: comparison and examples of climate policy instruments, e.g., the US Inflation Reduction Act (IRA).
- Role of private sector: corporate emission target setting and reporting.

3. Mitigation – continued:

- Cross disciplinary bodies and standard-setting.
 - GHG Protocol
 - TNFD
 - SBTi
 - CDP
 - GRI standards
- Behavioural change and public reach.

4. Global cooperation: [CCM101.D01]

- UN frameworks: from Kyoto to Paris, how has global agreements evolved.
- The Paris Agreement, UNFCCC and COP: how does it work and main processes?
- Nationally Determined Contributions (NDCs) and the Global Stock Take (GST) explained.
- Link between climate and the Sustainable Development Goals (SDGs).

5. Glossary and definitions.

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Carbon Markets & Pricing 101

What role can carbon markets and pricing play to reduce emissions and incentivise change?

1. Carbon markets and pricing overview:

- Introduction: do we need to put a price on carbon and why? [\[CMP101.A01\]](#)
 - What are the different pricing tools and how do they work?
 - Explicit versus implicit pricing
 - Carbon pricing versus other regulatory tools.
- Social Cost of Carbon (SCC) and its role in policy-making. [\[CMP101.A02\]](#)

2. Compliance carbon markets and pricing:

- Comparison of different compliance systems. [\[CMP101.B01\]](#)
 - What is an Emissions Trading System (ETS) and how does it work?
 - What are carbon taxes and how do they work?
 - Examples and trends from around the world.
- Global compliance schemes: EU ETS [\[CMP101.B02\]](#), China's national ETS [\[CMP101.B03\]](#), US regional carbon markets [\[CMP101.B04\]](#), Carbon taxes (South Africa, Indonesia, Singapore) [\[CMP101.B05\]](#)
- International and cross-border schemes: Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) [\[CMP101.B05\]](#), EU's Carbon Border Adjustment Mechanisms (CBAM) [\[CMP101.B06\]](#), IMO's proposed carbon levy [\[CMP101.B07\]](#), and carbon clubs [\[CMP101.B08\]](#).

3. The voluntary carbon market (VCM):

- Introduction to the VCM: what is it and how does it work? [\[CMP101.C01\]](#)
 - VCM structure & key entities, stakeholders and participants: who's who?
 - Diversity in VCM: a look through the different project types – nature and tech, reduction and removal, co-benefits and attributes etc.
 - A carbon credit's life journey: from production, to trading and end use
- A brief history of VCM and where is it headed. [\[CMP101.C02\]](#)
- Supply side perspective: project management, credit generation, best practices; role of ICVCM and understand the 10 Core Carbon Principles (CCPs) [\[CMP101.C03\]](#)
- Demand side perspective: what do buyers want, how do credits get used? Role of VCMI and understand the Claims Code of Practice (Claims Code) for companies. [\[CMP101.C04\]](#)

- Role of ICROA. [\[CMP101.C05\]](#)
- Role of Registries and Standards: how do they work? [\[CMP101.C06\]](#)
- Role of carbon credit rating agencies [\[CMP101.C07\]](#), exchanges [\[CMP101.C07\]](#) and financial instruments.
- Role of VVBs and how do they work? [\[CMP101.C08\]](#)
- Indigenous Peoples (IPs) and Local Communities (LCs) and carbon markets, related challenges and opportunities in financing and solutions, what is Free, Prior and Informed Consent (FPIC) etc. [\[CMP101.C10\]](#)
- Greenwashing allegations and what do they mean? [\[CMP101.C11\]](#)
- What is Beyond Value Chain Mitigation (BVCM)? [\[CMP101.C12\]](#)
- Lessons from the field: How to develop a project. [\[CMP101.C13\]](#)

Specific VCM schemes:

- UK Woodland Carbon Code [\[CMP101.C20\]](#) and Peatland Code [\[CMP101.C21\]](#).
- US Energy Transition Accelerator (ETA) [\[CMP101.C22\]](#)

VCM explainer by category:

- Forestry, land-use and nature-based: introduction to REDD+ and J-REDD+ [\[CMP101.D30\]](#), High Forest cover, Low Deforestation (HFLD) financing [\[CMP101.D31\]](#), Blue Carbon [\[CMP101.D32\]](#), Afforestation, Reforestation, Revegetation (ARR), Avoided Forest Conversion, Improved Forest Management (IFM), Soil Carbon, Urban Forestry, Agriculture
- Renewables and RECs [\[CMP101.D40\]](#): biogas, hydropower, solar, biomass/biochar, wind, geothermal.
- Household & Community [\[CMP101.D41\]](#), Chemical / Industrial [\[CMP101.D42\]](#), Energy Efficiency [\[CMP101.D43\]](#), Waste Disposal [\[CMP101.D44\]](#), Transport [\[CMP101.D45\]](#)
- Focus on Carbon Removals [\[CMP101.D50\]](#)

4. Article 6 and global carbon markets:

- What is Article 6 of the Paris Agreement and why is it important? [\[CMP101.D01\]](#)
 - Article 6.2: which countries have made deals and updates.
 - Article 6.4: mechanism description and development updates.
 - Linkages between compliance, VCM and Article 6 mechanisms.
- REDD+ and Article 6 [\[CMP101.D02\]](#)

5. Glossary and definitions.

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Nature & Biodiversity 101

The state of our natural world is in decline – how can we protect and restore nature and biodiversity?

1. Nature and biodiversity overview:

- Introduction: What is nature, natural capital, biodiversity and why are they important? State of our natural world and drivers of degradation. The Dasgupta Review explained. What is the biodiversity funding gap and how do we narrow it? [\[NBD101.A01\]](#)
- Valuing nature: Should we put a price on nature and biodiversity? What are ecosystem services and nature-based solutions? What is Payment for Ecosystem Services (PES)? [\[NBD101.A02\]](#)

2. Nature conservation and restoration explained: [\[NBD101.B01\]](#)

- What are the various models and philosophy for nature conservation and restoration and how do they compare? Different conservation organisational approaches.
- Role for nature conservation, restoration and expansion.
- Key conservation bodies and examples from around the world.
- Conservation and nature financing.

3. Role of UN, international agreements and government policies:

- Kunming-Montreal Global Biodiversity Framework (GBF): 30x30 targets etc. [\[NBD101.C01\]](#)
- UN High Seas Treaty. [\[NBD101.C02\]](#)
- UN Convention on the Conservation of Migratory Species of Wild Animals (CMS). [\[NBD101.C03\]](#)

4. Role of country-specific policies and schemes:

- Introduction: what can countries do about nature and biodiversity loss – the role for policies and government-backed schemes. [\[NBD101.D01\]](#)
- EU Deforestation Regulation [\[NBD101.D02\]](#); England's Biodiversity Net Gain [\[NBD101.D03\]](#); EU Nature Restoration Law [\[NBD101.D04\]](#); Australia's Nature Repair Market [\[NBD101.D05\]](#); Costa Rica's journey [\[NBD101.D06\]](#); Colombia's habitat bank legislation [\[NBD101.D07\]](#)

5. Role of companies and private sector:

- Introduction: what can corporations do about nature and biodiversity loss? Understanding supply chain impact on nature and related risks for companies and investors. [\[NBD101.E01\]](#)
- Taskforce on Nature-related Financial Disclosures (TNFD) explained. [\[NBD101.E02\]](#)
- Science-Based Targets Network (SBTN) explained. [\[NBD101.E03\]](#)
- Private sector action and interplay with greenwashing allegations. [\[NBD101.E04\]](#)

6. Role of nature and biodiversity markets:

- Introduction to biodiversity markets: [\[NBD101.F01\]](#)
 - What are biodiversity markets and how do they work?
 - How to define and measure biodiversity?
 - What is a biodiversity credit (biocredit)?
 - What are the proposed methodologies and processes?
 - What key bodies, stakeholders and participants in biodiversity markets.
 - What does the supply and demand look like in these markets?
 - Should biodiversity credits be used as offsets?
 - How do biodiversity markets interact with carbon markets?
 - How should these markets leverage learnings from the VCM?
 - Should regulation play a role?
- Case studies: Plan Vivo Nature [\[NBD101.F02\]](#), Verra Nature [\[NBD101.F03\]](#), TerraSOS [\[NBD101.F04\]](#)

7. Bioeconomy:

- Introduction [\[NBD101.G01\]](#)
- Case studies.

8. Glossary and definitions.

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Sustainable Finance & ESG 101

Can our financial systems work in favour of positive sustainability, environment and social outcomes?

1. Overview – ESG investing: [\[SFE101.A01\]](#)

- What does ESG mean?
- How do you measure ESG?
- How big is the ESG market?
- ESG investment range.

2. Sustainable Finance & ESG regulation and disclosure: [\[SFE101. B01\]](#)

- What are key regulations for the EU?
- What are key regulation for the US?
- What is ESG reporting?

3. ESG ‘investment products’: [\[SFE101. C01\]](#)

- What is green / sustainable debt?
- What are debt for nature swaps?
- What are nature-based investment funds?
- What are carbon offset futures?

4. Glossary and definitions.

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Food & Agriculture 101

What is the impact of the world's food systems on nature and climate, and how can we make it better?

1. Impact and links of agriculture and livestock on climate change, nature and the environment:
 - Emissions and environmental impacts,
 - Land conversion and deforestation,
 - Agricultural commodity supply chain issues,
 - Water usage.
2. Sustainable and climate-smart agriculture.
3. Soil carbon, carbon-farming and market-based financing.
4. Role of innovation and technology.
5. Role of governments and regulation.
6. Role of consumer choice and behaviour.
7. ...

8. Glossary and definitions.

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Water 101

There is no life without water, yet our freshwater resources and marine ecosystems are in trouble: what can we do about it?

- Freshwater:
 - Introduction: different freshwater systems – lakes, rivers, underground reservoirs and glaciers – the importance of our natural freshwater systems and the challenges facing them today: pollution, overuse and impact of climate change.
 - Conservation and restoration of different freshwater systems.
 - Water as part of natural infrastructure, supply security and management issues.
 - Top reasons for water and agriculture.
 - Man-made solutions to freshwater problems.
 - ...
- Oceans and seas:
 - Oceans and seas ecosystems, importance, challenges and dynamics.
 - ...

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Thank you!

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