

The Specialty Coffee Association (SCA) Coffee Sustainability Program Climate & Coffee Course Outline

Venue Requirements

As this is an online course, all students are expected to have access to a stable, high-speed internet connection in a distraction-free environment. Please avoid background noise (e.g., from a roastery, café, or other) when joining the course. Headsets are also recommended to ensure audio clarity. Students should further prevent outside interruptions, such as from pets or household activities.

Course Hours

This is a 16-hour course delivered in eight 2-hour live, online class sessions. The time to prepare for and take the exam is outside of this 16-hour window.

Course Preparation

Students are expected to treat each class session as a "live course" and should be prepared to take notes in the manner that is best for them. Students should arrive at least 5 minutes before the start of the first class session, and at least 2 minutes before the start of the remaining class sessions. Finally, students should prepare their coffee or take their bathroom breaks before the start of each class session. There will be a 5-minute break midway through each class.

Course Description

The Climate & Coffee course of the SCA Coffee Sustainability Program equips coffee professionals with the tools to understand and address climate challenges across the value stream. Through 16 hours of interactive learning, students explore how shifting weather patterns, water scarcity, deforestation, and biodiversity loss threaten coffee production and livelihoods. The course additionally helps students build a strong awareness of climate science, greenhouse gas (GHG) emissions, and the distinctions between climate adaptation and mitigation.

Specifically, students will learn how climate-smart agriculture (CSA) practices—such as water management, agroforestry, and climate-resilient crops—can strengthen farm resilience. They'll gain hands-on experience with carbon footprint measurement, life cycle assessments, and circular economy strategies that promote waste reduction and resource recovery. Finally, by leveraging case studies and real-world examples, the course will highlight the relationship between climate action and environmental legislation, including due diligence and sustainability reporting requirements. Overall, upon completing this course, students will:

- Understand the coffee sector's impact on the environment, as well as how broader environmental shifts impact the coffee sector
- Explore key considerations for increasing climate-resilience at the farm level and beyond

- Become equipped with the tools and knowledge to take meaningful climate action that is context-specific

Exam Format

Students will have 37 minutes to complete the exam, unless otherwise discussed between them and their trainer. The exam is available in English, Spanish, Chinese (Traditional and Simplified) and Korean. To pass the exam, students must answer 70% of the questions correctly. There will be 35 questions in total, which will be a mixture of true or false and multiple choice. Upon receiving a passing score, students will receive a Climate & Coffee certificate from SCA.

Topics Covered

Session 1: Climate Change & Climate-Smart Agriculture (2 hours)

- Recap of climate change concepts from Coffee Sustainability Foundation course
- Introduction to core climate change principles, including adaptation and mitigation
- Exploration of how climate change impacts coffee production and the environment overall, including a focus on negative feedback loops
- Additional environmental challenges across the coffee value stream
- The relevance of climate-smart agriculture (CSA) practices and other strategies

Session 2: Water & Forests (2 hours)

- Introduction to water resources and security and their impact on biodiversity
- Discussion on water management and watershed challenges in the coffee sector, and their impact on production
- Exploration of the role of agroforestry and biodiversity management in maintaining healthy ecosystems and forests
- Analysis of the interconnections between natural resources and coffee sustainability

Session 3: Agricultural Research and Development & Plant Breeding Innovation (2 hours)

- Introduction to innovative research in the coffee sector and its key actors
- Discussion on plant breeding for climate adaptation, and on traditional versus modern approaches
- Exploration of how these innovations contribute to resilient coffee systems
- Introduction to carbon footprinting in the coffee sector, and the basic approach to measurement

Session 4: Greenhouse Gas Protocol, Emission Scopes & Calculations (2 hours)

- Exploration of the Greenhouse Gas Protocol (GHGP) and its role in the coffee sector
- Understanding Scopes 1, 2, and 3 emissions in the coffee sector, and key contributing activities
- Discussion of common techniques for reducing emissions across scopes
- Introduction to step-by-step emissions calculation, and its related challenges

Session 5: Emissions Accounting (continued) & Life Cycle Assessment (2 hours)

- Deep dive into emissions accounting, including an activity whereby students assess the farm-level data needed to calculate a carbon footprint
- Review of the challenges when accurately attempting to measure emissions from coffee
- Student practice surrounding emissions calculations and conversion to CO₂ equivalents
- Exploration of life cycle assessment and how it differs from carbon accounting

Session 6: Carbon Sequestration & Carbon Markets (2 hours)

- Introduction to ecosystem services, such as agroforestry, and how they can be incentivized
- Discussion and defining carbon reduction, carbon insetting, and carbon offsetting
- Exploration of the best strategies for carbon reduction across the value chain
- Deep dive into carbon markets, how they function, and the challenges for smallholder farmers

Session 7: Circular Economy & Waste Reduction (2 hours)

- Defining carbon neutral versus net-zero, and exploration of how to share net-zero goals without greenwashing
- Examination of circular economy principles and the exploration of shift from linear to circular production models in coffee
- Discussion on waste reduction strategies and trade-offs for maximizing resource efficiency
- Introduction to climate justice and social dimensions of climate change

Session 8: Due Diligence & Reporting for Environmental Sustainability (2 hours)

- Review of environmental due diligence and exploration of its opportunities and challenges as related to sustainability reporting
- Examination of environmental due diligence laws and frameworks related to the coffee sector (including the European Union Deforestation Legislation)
- Discussion on greenwashing and transparency in sustainability claims
- Exploration of opportunities for and examples of sustainability reporting