

ICAO Seminar on Carbon Markets

ICAO HEADQUARTERS, 7 - 9 FEBRUARY 2018



Registration - Tuesday, 6 February 2018

14:00 – 17:00 On-site Registration

Day 1 - Wednesday, 7 February 2018

07:30 - 10:00 On-site Registration

09:00 - 09:40

OPENING CEREMONY AND INTRODUCTORY PRESENTATIONS

The Carbon Offsetting and Reduction Scheme for International Aviation (CORSA) complements a broader package of measures to achieve ICAO's global aspirational goal of carbon-neutral growth for international aviation from 2020 onwards. The CORSA fills the emissions gap by offsetting international aviation CO₂ emissions above the 2020 levels that are not addressed by other measures. Aeroplane operators will fulfil their CORSA offsetting requirements by purchasing and cancelling emissions units from carbon markets. Introductory presentations will highlight the objective of the seminar to enhance understanding of carbon markets and emissions units and to inform on ICAO's further work on the CORSA.

Moderator

Ms. Jane Hupe, Deputy Director Environment, ICAO

Opening remarks

Welcome address and objectives of the seminar

Mr. Boubacar Djibo, Director, Air Transport Bureau, ICAO

Presentations

- ICAO's work on the CORSA and its relation to carbon markets
Ms. Jane Hupe, Deputy Director Environment, ICAO
The CORSA is the first global market-based measure for any industry sector. This presentation will provide an overview of ICAO's work on the CORSA and its relation to carbon markets.
- General introduction – Understanding the carbon markets
Ms. Sophy Greenhalgh, Director, International Emissions Trading Association (IETA)
This presentation will provide an overview of carbon markets to facilitate general understanding of how emissions units are generated (supply), how and where emissions units can be purchased and cancelled (demand), and how the rules of supply and demand can affect the price.

09:40 - 11:00

PANEL DISCUSSION

SETTING THE SCENE - EXPECTATIONS FOR CARBON MARKETS

This panel is setting the scene for the seminar. Representatives from carbon markets and other stakeholders will discuss their roles in carbon markets and how they could support the CORSIA implementation, with a focus on the expected information to be shared from the seminar.

Moderator

Ms. Jane Hupe, Deputy Director Environment, ICAO

Panellists

- Mr. Michael Gill, Executive Director, Air Transport Action Group (ATAG), Director, Aviation Environment, International Air Transport Association (IATA)
- Ms. Sophy Greenhalgh, Director, International Emissions Trading Association (IETA)
- Ms. Constanze Haug, Head of the Secretariat, International Carbon Action Partnership (ICAP)
- Ms. Annie Petsonk, International Counsel, Environmental Defense Fund (EDF) for the International Coalition for Sustainable Aviation (ICSA)
- Ms. Sarah Moyer, Carbon Finance Specialist, World Bank Group
- Mr. Rene Velasquez, Head of Global Carbon, CBL Markets

11:00 - 11:30

Coffee Break - Sponsored by Bombardier

BOMBARDIER



Over the next days, the following sessions 1-5 will provide a series of presentations from representatives of emissions units programmes, mechanisms and projects, while not pre-empting any ICAO decisions on eligible emissions units under the CORSIA. Each presentation is assigned a slot of 15 minutes to share information on various aspects regarding their programme, mechanism or project. The presentations are followed by questions and answers.

11:30 – 12:30

SESSION 1:

MARKET MECHANISMS UNDER THE UNFCCC

Currently, there are two mechanisms under the UNFCCC Kyoto Protocol - Clean Development Mechanism (CDM) and Joint Implementation (JI). Emissions units from these mechanisms are used by States with a reduction commitment under the Kyoto Protocol. In addition, the Paris Agreement from the UNFCCC COP21 contains market-related provisions in Article 6, and guidance, rules, modalities and procedures are under development in the UNFCCC process. ICAO Assembly Resolution A39-3 decided that emissions units generated from mechanisms established under the UNFCCC and the Paris Agreement are eligible for use in the CORSIA, provided that they align with decisions by the ICAO Council. This session 1 will focus on the current and future market mechanisms under the UNFCCC and share information about various aspects and outlooks of the mechanisms.

Moderator

Ms. Jane Hupe, Deputy Director Environment, ICAO

Speaker

Mr. Perumal Arumugam, Team Lead, Sustainable Development Mechanisms Programme, United Nations Framework Convention on Climate Change (UNFCCC)

Presentations

- Clean Development Mechanism (CDM)
- Joint Implementation (JI)
- Developments in Article 6 of the Paris Agreement

12:30 - 14:00**Lunch**

14:00 - 15:20**SESSION 2:****PROGRAMMES AND PROJECTS IN COMPLIANCE MARKETS:
NATIONAL AND SUPRA-NATIONAL COMPLIANCE-RELATED PROGRAMMES**

In order to achieve environmental goals, several national or subnational governments have established a compliance market, i.e. a carbon market developed by a government decision. Governments establish and enforce rules for monitoring, reporting and verifying of emissions as well as emissions unit eligibility and issuances of emissions units. These emissions units are used for compliance with national or regional obligations. Some governments have established emissions trading schemes and allow offsets to be used to comply with the obligations in these schemes. The following sessions will describe existing compliance markets and presentations will report on the approach to use offsetting and emissions units within these compliance markets. Programmes and projects will inform about various aspects and specific characteristics of their carbon market. This session 2 will specifically focus on national and supra-national compliance markets.

Moderator

Mr. Tetsuya Tanaka, Chief, Climate Change Section, Environment, ICAO

Presentations

- China Certified Emission Reduction (CCER)
Ms. Tong Qing, Associate Professor, Tsinghua University, China
- The Joint Crediting Mechanism (JCM)
Mr. Naoki Torii, Ministry of Environment, Japan
- EU Emissions Trading System (EU ETS)
Mr. Peter Vis, Adviser, Decarbonisation of transport, DG Mobility & Transport, European Commission
- Korean Emissions Trading System (K-ETS)
Mr. Jong Ik Yoo, Director of Green Business Division, Korea Research Institute on Climate Change

15:20 - 15:50**Coffee Break - Sponsored by Climate Smart Group**

15:50 - 17:00

**SESSION 3:
PROGRAMMES AND PROJECTS IN COMPLIANCE MARKETS:
SUB-NATIONAL COMPLIANCE RELATED PROGRAMMES**

In continuation of session 2, this session will illustrate existing compliance markets and programmes and projects will inform about various aspects and specific characteristics of their carbon market. Session 3 will specifically focus on sub-national compliance markets. The compliance markets of California, Ontario and Quebec are linked among each other, therefore, this session also illustrates sub-national compliance markets that also use cooperation on a regional level. Presentations in this session will illustrate features of several carbon markets as well as their cooperation.

Moderator

Mr. Stylianos Pesmajoglou, Environment Officer, ICAO

Presentations

- Alberta Carbon Offset System
Mr. Rob Hamaliuk, Director – Emissions Inventory and Trading, Alberta Climate Change Office
- British Columbia regulatory scheme
Ms. Adria Fradley, Director, Industrial Reporting and Control, Climate Innovation and Solutions Branch, Province of British Columbia
- Québec Cap-and-Trade System, linked with California and Ontario
Mr. Pierre Bouchard, Senior Policy Advisor, Carbon Market Department, Québec Ministry of Sustainable Development, Environment and Fight against Climate Change

17:30 - 19:30 **ICAO Reception**

Day 2 - Thursday, 8 February 2018

08:00 - 09:30 **On-site Registration**

09:00 - 09:15 **Recap of Day 1**
Ms. Jane Hupe, Deputy Director Environment, ICAO

09:15 - 10:45 **SESSION 4:
PROGRAMMES AND PROJECTS IN VOLUNTARY MARKETS**
In contrast to compliance markets, there is another type of carbon markets run mostly by non-governmental entities. These carbon markets are referred to as voluntary markets. While generated emissions units from these markets can always be used for voluntary offsetting, not linked to any obligation under

compliance schemes, some emissions units may also be used under some governments' compliance schemes. The following sessions will describe existing voluntary markets. This session 4 will specifically focus on standards that ensure the fulfilment of certain criteria for emissions units in the voluntary market. Presentations in this session will illustrate features of several voluntary carbon markets and standards for emissions units.

Moderator

Mr. Tetsuya Tanaka, Chief, Climate Change Section, Environment, ICAO

Presentations

- State of the voluntary carbon markets
Ms. Kelley Hamrick, Senior Associate, Forest Trends' Ecosystem Marketplace
- Japan J-Credit Scheme
Mr. Takahiro Kirihara, Ministry of Economy, Trade and Industry, Japan
- Climate Action Reserve (CAR)
Mr. Max DuBuisson, Policy Director, Climate Action Reserve
- American Carbon Registry (ACR)
Mr. John Kadyszewski, Director, American Carbon Registry

10:45 - 11:15

Coffee Break - Sponsored by Bombardier

BOMBARDIER



11:15 - 12:30

(Continuation of session 4)

Moderator

Mr. Tetsuya Tanaka, Chief, Climate Change Section, Environment, ICAO

Presentations

- Gold Standard (GS)
Mr. Bernardo Lazo, Director of Partnerships and New Business Development, Gold Standard
- Verified Carbon Standard (VCS)
Mr. Sam Hoffer, Manager, VCS & CCB Programs, Verified Carbon Standard
- Climate, Community & Biodiversity Alliance (CCBA)
Ms. Joanna Durbin, Director, Climate, Community & Biodiversity Alliance

12:30 - 14:00

Lunch



14:00 - 15:15

**SESSION 5:
REDD+ AND FORESTRY-RELATED PROGRAMMES IN
VOLUNTARY MARKETS**

In continuation of session 4, this session will illustrate existing voluntary markets and programmes and projects will inform about various aspects and specific characteristics of their carbon

market. This session 5 will specifically focus on REDD+ and its representation in the voluntary markets. UN and International Organizations will share information on REDD+ activities.

Moderator

Mr. Stylianos Pesmajoglou, Environment Officer, ICAO

Presentations

- UK Woodland Carbon Code
Ms. Vicky West, Climate Change Analyst, Forestry Commission, UK
- Plan Vivo Foundation
Mr. Christopher Stephenson, Head of Operations, Plan Vivo Foundation

15:15 - 15:45

Coffee Break - Sponsored by Climate Smart Group



15:45 - 17:00

(Continuation of session 5)

Moderator

Mr. Stylianos Pesmajoglou, Environment Officer, ICAO

Presentations

- UN Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN REDD)
Mr. Mario Boccucci, Head of UN-REDD Programme Secretariat
- World Bank Forest Carbon Partnership Facility (FCPF)
Mr. Simon Whitehouse, Fund Manager, Forest Carbon Partnership Facility (FCPF), World Bank Group
- Forest Stewardship Council (FSC)
Mr. Chris Henschel, Programme Manager for Ecosystem Services, FSC International

Day 3 – Friday, 9 February 2018

08:30 - 09:30

On-site Registration

08:30 - 09:00

Morning Coffee



09:00 - 09:15

Recap of Day 2

Ms. Jane Hupe, Deputy Director Environment, ICAO

09:15 - 11:00

Panel discussion

Verification

Verification is an essential part within carbon markets and the CORSIA. Specifically in the CORSIA, verification relates to the amount of emissions that determine the offsetting requirements, the purchase of emissions units from eligible programmes, mechanisms and projects, and the cancellation of eligible emissions units that are only used once. In this final panel, carbon market stakeholders related to verification, accreditation, and standardization will discuss this important aspect to facilitate the understanding.

Moderator

Ms. Jane Hupe, Deputy Director Environment, ICAO

Presentation

- Verification in the CORSIA
Mr. Urs Ziegler, Head Environmental Affairs Section, Federal Office of Civil Aviation, Switzerland and CAEP-GMTF co-Rapporteur

Panelists

- Mr. Jose Luis Hernandez, CSA Group Canada, International Organization for Standardization (ISO)
- Ms. Chikako Makino, Japan Accreditation Board (JAB), International Accreditation Forum (IAF)
- Ms. Hélène Manzoni, Lead EU ETS Verifier, Verifavia
- Mr. Thibaut Millet, Partner, Climate Change & Sustainability Services, Ernst & Young s.r.l./S.E.N.C.R.L.
- Ms. Jessica Verhagen, VP Strategy & Business Development, Ecosphere+

11:00 - 11:30

WRAP-UP, NEXT STEPS AND CLOSING REMARKS

This session summarizes key highlights and lessons learned from the information presented during this seminar, with possible next steps for the implementation of the CORSIA.

Speaker

Ms. Jane Hupe, Deputy Director Environment, ICAO

BOMBARDIER

BRONZE
SPONSOR

With operations in Canada, Mexico, Morocco, United Kingdom and United States, Bombardier is a leader in designing and manufacturing the most fuel-efficient aircraft featuring the lowest noise and emissions in their respective categories in the commercial and business/general aviation segments.

Every new Bombardier aircraft proceeds through a comprehensive product innovation life cycle, a process that ensures innovation at every stage to meet and exceed operator expectations. In September 2016, Bombardier captured the first-ever Environmental Product Declaration (EPD) in civil aviation for the pioneering C Series 100 airliner.

Mr. Leo Knaapen
Chief, Industry Affairs
Bombardier
leo.knaapen@aero.bombardier.com

www.bombardier.com



BRONZE
SPONSOR

Climate Smart Group is your one-stop carbon market development and consulting service. If you're a government, Climate Smart Group has the capacity and experience to help you develop a regulatory framework from which to manage your CORSIA obligations. If you're an airline, we can help you develop and implement an Emissions Monitoring Plan to obtain and create your own credits.

What sets us apart from other carbon brokers and developers is our unique and complete suite of services:

- Carbon credit development and procurement
- Regulatory framework development and implementation
- Emission monitoring plans development and implementation
- Our proprietary MRV software system

Mr. Alastair Handley
President
Climate Smart Group
alastair@climatesmartgroup.com

www.carboncreditsolutions.ca www.climatesmartgroup.com

URBAN OFFSETS



Urban Offsets helps corporations and higher education institutions invest carbon offsets in the places and relationships that matter to them. This transforms carbon offsets into assets that help fight climate change, strengthen strategic partnerships, and create climate resilient cities.

Using a Sustainability Portfolio approach, Urban Offsets evaluates and grades carbon offsets and bundles them with community development programs that sustainably engage nonprofit partners in each city.

urbanoffsets.co

Mr. Shawn Gagné
Urban Offsets, Inc.
shawn@urbanoffsets.co