

## 6th ICCT Workshop on Marine Black Carbon Emissions

September 18-19, 2019

Paasitorni Conference Center, Juho Rissanen Conference Room (1 ½ floor)

Paasivuorenkatu 5 A, FIN-00530, Helsinki, Finland

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### Agenda

**Workshop Goal:** Identify appropriate black carbon control policies and discuss potential standardized sampling, conditioning, and measurement protocols, including a traceable reference method.

**Output:** A workshop summary document to inform ongoing efforts at the International Maritime Organization to regulate or otherwise directly control black carbon emissions from international shipping.

#### Day 1

Time	Activity	Details
8:30-9:00	<b>Registration, coffee/tea and light breakfast</b>	
9:00-9:15	<b>Welcome</b> Anita Mäkinen, Finnish Transport and Communication Agency, Traficom, Finland and Dan Rutherford, ICCT	
9:15-9:35	<b>Review of agenda and workshop goals</b> Dan Rutherford, ICCT	
9:35-10:00	<b>Taking stock: IMO's progress on Black Carbon</b> Bryan Comer, ICCT	Brief review of the progress to date
10:00-10:30	<b>BC after Diesel Particulate Filters</b> Daniel Peitz, HUG Engineering	BC after wall-flow DPFs; experience and outlook for potential IMO regs
10:30-10:45	<b>Coffee/tea break</b>	
10:45-11:15	<b>BC after Electrostatic Precipitators</b> Munekatsu Furugen, Furugen & Makino Lab, Japan	BC after ESP-C
11:15-11:45	<b>BC after various emissions control technologies</b> Jana Moldanova, IVL	BC after various emission control technologies including scrubbers and alternative fuels
11:45-12:00	<b>Group Photo</b>	
12:00-1:00	<b>Lunch</b> (provided)	
1:00-1:30	<b>Potential BC Control Policy</b> Kåre Press-Kristensen, DEC & Clean Arctic Alliance	Banning HFO in the Arctic and impacts on BC
1:30-2:00	<b>BC from shipping in the Arctic – Work at the science-policy interface of the Arctic Council</b> Kaarle Kupiainen, Finnish Ministry of Environment	BC work at the science-policy interface of the Arctic Council
2:00-2:30	<b>Enhancing BC Regulations with New Digital Technology</b> Thomas Brewer, MIT	How new digital technologies can enhance BC regulations
2:30-3:05	<b>BC sampling, conditioning and measurement</b> Monica Tutuianu, AVL	
3:05-3:20	<b>Coffee/tea Break</b>	

3:20-3:55	<b>BC Measurement Correlations</b> Ralf Oldenburg & Peter Lauer, EUROMOT/MAN	Correlation among measurement methods
3:55-4:30	<b>Traceable BC Reference Method</b> Hilkka Timonen, Finnish Meteorological Institute	SI traceability to BC measurements
4:30-5:05	<b>Standardized Marine BC Measurement Protocol</b> Stéphanie Gagné, NRC-Canada	Idea for a standardized marine BC measurement protocol & relating it to control policy approaches
5:05-5:20	<b>Day 1 Closing remarks</b> Dan Rutherford, ICCT and Anita Mäkinen, Traficom	Closing remarks; preview of Day 2 agenda; logistics for dinner
5:20	<b>Adjourn for the day</b>	
7:00	<b>Group Dinner</b> (complimentary) Meripaviljonki, Säästöpankinranta 3, 00530 Helsinki	Join your colleagues for dinner.

## Day 2

9:00-9:30	<b>Coffee/tea and light breakfast</b>	
9:30-9:45	<b>Recap of Day 1</b> Dan Rutherford, ICCT	Brief recap of Day 1
9:45-10:15	<b>Discussion 1: Brainstorming policy measures to reduce BC emissions from ships</b> Bryan Comer and Dan Rutherford, ICCT, Facilitators	Generate a list of potential policy measures to reduce BC for further discussion; identify which policies require BC measurement to ensure compliance
10:15-11:15	<b>Discussion 2: Criteria for appropriate BC control policies</b> Bryan Comer and Dan Rutherford, ICCT, Facilitators	Identify criteria for appropriate BC control policies
11:15-11:30	<b>Coffee/tea break</b>	
11:30-12:00	<b>Discussion 3, part 1: Crosswalk control policies against criteria</b> Bryan Comer and Dan Rutherford, ICCT, Facilitators	Begin evaluating control policies against each criterion
12:00-1:00	<b>Lunch</b> (Provided)	
1:00-2:00	<b>Discussion 3: part 2: Crosswalk control policies against criteria</b> Bryan Comer and Dan Rutherford, ICCT, Facilitators	Finish evaluating control policies against each criterion
2:00-2:15	<b>Coffee/tea break</b>	
2:15-3:40	<b>Discussion 4: Relating potential standardized measurement protocols and reference methods to appropriate control policies</b>	For policies that require BC to be measured to ensure compliance, what does that imply for a measurement protocol and reference method?
3:40-4:00	<b>Coffee/tea break</b>	Facilitators summarize workshop outcomes and outstanding issues
4:00-4:30	<b>Summary of workshop outcomes and outstanding issues</b> Dan Rutherford, ICCT	Agree on key workshop outcomes and outstanding issues
4:30-4:45	<b>Closing remarks</b> Dan Rutherford, ICCT and Anita Mäkinen, Traficom	
4:45	<b>Adjourn</b>	
5:00+	<b>Happy Hour</b> Juttutupa Pub, Säästöpankinranta 3, 00530 Helsinki	Join us for complimentary drinks and snacks.