Freight Matters:

*SmartWay and Global Green Freight Action*

Buddy Polovick, US EPA
Cristiano Façanha, ICCT
Blair Chikasuye, HP

Sept 21, 2016
Webinar Housekeeping

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SmartWay Freight Matters
Webinar Panelists

Buddy Polovick
U.S. EPA SmartWay Transport Partnership

Cristiano Façanha
International Council on Clean Transportation

Blair Chikasuye
Hewlett Packard
Today’s Webinar

- Global Drivers for Freight Sustainability
- SmartWay in North America
- Global Collaboration
- CCAC & Global Green Freight Action Plan
- HP Industry Leadership & Call to Action
- What can Private Sector do?
Land & Ocean Temperature Percentiles Jul 2016
NOAA’s National Centers for Environmental Information
Data Source: GHCN–M version 3.3.0 & ERSST version 4.0.0

https://www.ncdc.noaa.gov/sites/default/files/July-2016-Global-Temp-Perceniles-Map.gif
Selected Significant Climate Anomalies and Events
July 2016

GLOBAL AVERAGE TEMPERATURE
July 2016 average global land and ocean temperature was the highest for July since records began in 1880.

ARCTIC SEA ICE EXTENT
July 2015 sea ice extent was 16.9 percent below the 1981–2010 average—the third smallest July sea ice extent since satellite records began in 1979.

ALASKA
Above-average temperatures continued to affect Alaska during July. This was the fourth warmest July since statewide records began in 1925. Unusual warmth during the first seven months of the year contributed to the warmest Jan-Jul period on record.

CONTIGUOUS UNITED STATES
Above-average precipitation was widespread across the Midwest. Parts of Kentucky observed record rainfall and devastating floods.

NORTH AMERICA
Warmer- to much-warmer-than-average temperatures across much of North America contributed to its highest July temperature departure since 2012 and the 5th highest since continental records began in 1910.

AFRICA
Warmer- to much-warmer-than-average conditions prevailed across much of Africa during July 2016. This was Africa’s seventh warmest July since continental records began in 1910.

SOUTH AMERICA
Much warmer-than-average conditions across the north and near-average conditions across the south resulted in the eighth highest July temperature departure since continental records began in 1910.

ARGENTINA
Precipitation across Argentina was mixed, with much of northern and southern parts experiencing drier-than-average conditions. Meanwhile, parts of central Argentina had wetter-than-average conditions, with some locations receiving over twice their monthly normal precipitation.

EUROPE
Much of northern and central Europe had above-average precipitation during July 2016, while southern parts had drier-than-average conditions.

ASIA
Asia had its second warmest July on record, behind 2016.

KINGDOM OF BAHRAIN
July 2016 mean temperature tied with 2012 as the highest July temperature since records began in 1902.

HONG KONG
Unusually warm conditions engulfed Hong Kong during July 2016, tying with 2014 as the highest July temperature for Hong Kong in the 117-year record.

AUSTRALIA
Precipitation totals across Australia were above average. The national average precipitation during July 2016 was 61% above average and the 14th highest for July in the 117-year record.

ANTARCTIC SEA ICE EXTENT
July 2016 sea ice extent was 0.2 percent above the 1981–2010 average—the smallest July extent since 2011 and the 19th smallest July sea ice extent on record.

NEW ZEALAND
New Zealand had its tenth highest July temperature departure from average since 1906.

Please Note: Material provided in this map was compiled from NOAA’s State of the Climate Reports. For more information please visit: https://www.ncdc.noaa.gov/sotc
Global Carbon Dioxide Emissions by Region, 1990–2012

Emissions (million metric tons)

Year


North America

Asia

Europe

Africa

Latin America and the Caribbean

Canada

Australia and Oceania

https://www.epa.gov/climate-indicators/global-greenhouse-gas-emissions
Global Freight Growth

Global freight volumes and CO₂ emissions by corridor

- North Atlantic route
  - +344%, +263%, +191%
- Intra-North America
- Mediterranean and Caspian Sea
- Intra-Europe
- Intra-Asia
- Intra-Africa
- Indian Ocean route
- North Pacific route
- South Pacific route
- South Atlantic route

Freight volume in billion tonne-km
CO₂ Emissions in million tonnes

International Transport Forum 2015
Green Freight Program Like SmartWay
Address Key Challenges

- **Environmental Sustainability**
  - Drive carbon and other emissions reductions
  - Drive demand for cleaner, greener freight services
  - Help ensure more sustainable freight sector

- **Economic Performance**
  - Verified technologies and efficiency strategies reduce fuel costs
  - Preferred transport providers gain competitive advantage
  - Positions business to respond to “green procurement” directives

- **Social Responsibility**
  - Strengthens national energy security
  - Helps protect public health
  - Strengthens a vital economic sector
SmartWay North America

- SmartWay expanded to Canada in 2012
  - Natural Resources Canada administers program
  - Seamless partnership experience for US/Can Partners

EPA collaboration with SEMARNAT in Mexico since 2006 to pilot *Transporte Limpio*
  - 1st generation SmartWay tools and methods

- EPA, NRCan, Environment Canada workshops (2014-15) with SEMARNAT to explore expanding SmartWay in Mexico

- President Obama, Prime Minister Trudeau and President Nieto issued Joint Action Statement at North American Leaders' Summit, June 2016
  - Agreed to expand SmartWay to Mexico as part of commitment to enhance clean energy and transportation

- Multiphase plan underway to pilot SmartWay tools and demonstrate methodology for firms with operation in Mexico
SmartWay Global Collaboration

SmartWay leading the way for a decade
- Sharing program design and methodology with other countries
- Sharing best practices and lessons learned
  - Guangzhou and Guangdong China SmartWay pilots 2009
  - Consultation for program development in EU, Asia, Africa
  - Program Design and Implementation Training 2015
  - Technology Verification Training (new!)

China
- Support and capacity building for China Green Freight Initiative under bi-lateral US/China Climate Change Working Group

Global
- EPA co-founded Climate and Clean Air Coalition in 2012 to advance reduction of Short Lived Climate Pollutants (SCLPs)
- Multilateral, multipollutant, multisector
- Heavy Duty Diesel Initiative includes Green Freight Initiative
Global Green Freight Action Plan
Reducing the climate and health impacts of goods transport

globalgreenfreight.org
Because diesel engines are a key target for emissions control, there are key initiatives tackling the reduction of diesel black carbon:

- Soot-Free Urban Bus Project
- Global Fuel Sulfur Strategy
- Green Freight Project
Over 50 organizations and countries pledged their support for the Global Green Freight Action Plan

Map showing countries and organizations that pledged support.
Global Green Freight Action Plan calls on governments, private sector, civil society, and other actors to work in concert to:

1. Align and enhance existing green freight programs
2. Develop and support new green freight programs
3. Incorporate black carbon reductions into green freight programs
Key Milestones – Our Vision

2015
Global emission reduction target translated to the freight and logistics sector;

2017
Global framework for logistics emissions accounting methodologies (including CO₂, black carbon, and other emissions)

2019
Major multinational shippers and carriers incorporate scope 3 freight data in CDP and GRI reporting

2020
High quality global multimodal freight supply chain data and emissions factors shared through global reporting database/mechanism; Global Green Freight Technology Verification program in place; Major shippers and carriers include black carbon in sustainability goals; Regional level programs in all regions (available for any country to join)

2022
Green freight financing programs established to accelerate fleet turnover and retrofits in all regions

2025
Green freight programs that follow best practices in all major markets; Top 100 global shippers in carriers are members of all major programs

2030
All countries members of regional program; Green freight programs demonstrate significant emissions reductions from freight transport.
Green Freight Programs and Initiatives

Modal and regional programs

US and Canada

National programs

Mexico, Netherlands, Germany, Belgium, Italy, France, UK, UK Belgium, India, China, Korea, Japan, Australia

Other initiatives

CAC, EcoTransIT, NTM, FRET, consignmen_carbon.org, CARBON DISCLOSURE PROJECT, UNCRD, GLEC, ADB, giz, IDB, European Federation for Transport and Environment (EFT), Smart Freight Centre
CCAC Green Freight Resources

- Regional workshops in Asia, Latin America, Europe, and Africa
- Technical support in target countries
- Network of 110 CCAC partners (50 governments and 60 non-state partners)

- Green freight training guides
- Freight assessments
- Global framework for logistics emissions methodology
Thank you!

Cristiano Facanha
International Council on Clean Transportation
cristiano@theicct.org
HP Logistics Sustainability

Blair Chikasuye
September 21, 2016
“The betterment of our society is not a job to be left to a few. It is a responsibility to be shared by all.”

- Dave Packard
HP’s Footprint and Green House Gas Reduction Goals

Every 60 Seconds HP ships...

- **100** PCs
- **68** Printers
- **885** Consumables

Supply chain 41%
- Greenhouse gas emissions in our supply chain result mainly from the raw materials used in, and manufacture of, our products.
- Materials extraction through manufacturing 16,000,000
- Capital goods 400,000
- Upstream energy production 350,000
- Transport 1,500,000

Operations 6%
- Greenhouse gas emissions from our operations result mainly from the energy used by our facilities around the world.
- Facilities 1,321,200
- Transportation fleet 110,300
- Commercial air travel 200,000
- Employee commuting 120,000

Products and solutions 53%
- Emissions from the energy our products and solutions consume after sale, while used by customers.
- Product use 24,000,000
- Product end of service De minimis
- Buildings leased to others De minimis
- Investments De minimis

Supply chain
- Achieved goal to reduce the GHG emissions intensity of first-tier manufacturing and product transportation suppliers by **↓20%** by 2020, compared to 2010
- This industry-first goal was achieved six years early.

Operations
- Achieved goal to reduce Scope 1 and Scope 2 GHG emissions from operations by **↓20%** by 2020, compared to 2010

Products and solutions
- Reduced GHG emissions intensity in product portfolio* (including PCs, printers, and servers) by **↓26%** through 2015, compared to 2010

*Excludes personal computers (PCs) and printer inkjet cartridges.
HP Logistics Sustainability

Cost Savings → CO2 Reductions
Network Enhancement Programs Drive CO2 Reductions
- Weight / Distance / Mode of Transport CO2 Factor

Logistics CO2 Reduction Programs
Increase the efficiency of our product transportation
- Minimize size/weight of shipments
- Decrease distance products travel - consolidate shipments
- Shift towards environmentally friendly transport modes (Air to Ocean, Truck to Rail, etc.)
- Redesign product packaging to optimize product transportation

Environmental Criteria
Utilize environmental factors in the LSP selection process
- Cost savings
- Timely delivery
- Claims and Security
- CO2 Footprint
- Delivery performance

Industry GHG Transportation Standards
Industry Association partnerships to develop GHG methodologies

Global Logistics Emissions Council Framework
GLEC Framework - CO2 Calculations using existing methodologies
We’re all in this together...

- Partnerships, Collaboration, Associations
- Put Competition aside

Help Spare the Air or Be Square.
What can Private Sector do?

1. **Register in existing programs like SmartWay**
   - Identify other countries where existing programs support freight operations

2. **Engage in program development pilots in other countries**
   - Look at markets where you are sourcing freight
   - Focus on areas with biggest freight footprint
   - Connect with EPA and CCAC to identify where you can join roundtables

3. **Champion Freight Sustainability**
   - Integrate freight efficiency into business plans and operations
   - Drive carbon benchmarking and reporting, including scope 3 freight operations
   - Identify opportunities to include black carbon in sustainability efforts
   - Leverage influence to align Green Freight efforts to create common methods

4. **Join CCAC as a private sector actor**
   - Identify project areas to engage, share best practices and voice support
   - Work with NGO’s to link and align existing efforts
For more information:

www.epa.gov/smartway
smartway_transport@epa.gov

SmartWay Helpline
1-734-214-4767

Global Green Freight Website
http://www.globalgreenfreight.org