



Freight Matters:

SmartWay and Global Green Freight Action

Buddy Polovick, US EPA

Cristiano Façanha, ICCT

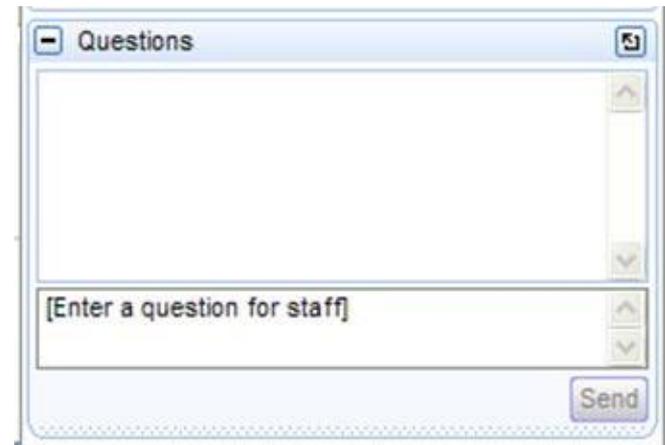
Blair Chikasuye, HP

Sept 21, 2016



Webinar Housekeeping

- Submit a question via the Questions pane on your GoTo control panel. →
- After the presentation, as time permits, our EPA presenter will answer questions submitted via the Q&A box.
- Please complete the survey at the end of today's webinar. Your feedback is important to us!



Webinar Housekeeping

The presentation slides will be available at:

<http://www.epa.gov/smartway/webinars.htm>

Note: Today's webinar is being recorded.

SmartWay home page (www.epa.gov/smartway)



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SmartWay

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SmartWay Takes Off!

Air carriers and forwarders can now become SmartWay Air Carrier Partners.

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SmartWay Latest News

August 26, 2016: SmartWay releases Featured Partner Profiles for North Central Texas Council of Governments and Walmart.

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- [How SmartWay Advances Sustainable Transportation Supply Chains](#)
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Upcoming Webinars & Events

- Freight Matters Webinar: [SmartWay Global Green Freight Action](#) September 21, 2016

[More SmartWay webinars & events](#)

Global Collaboration & SmartWay



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- **Upcoming Webinars:** To participate in an upcoming SmartWay webinar, *you must pre-register*. Click the registration link below the webinar description to access webinar participation instructions.
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Upcoming Webinars

Past Webinar Resources

SmartWay Webinar Schedule

Webinar Title and Description

Registration Instructions

All times are Eastern Time Zone

2016 SmartWay Affiliate Challenge Recognition Webinar

Join U.S. EPA SmartWay as we announce and recognize our 2016 Affiliate Challenge Honorees! These top performing Affiliate organizations conducted exceptional outreach and educational activities of both the SmartWay program and sustainable freight transportation and are critical to the continued success of the program. Honorees will share their success stories.

April 21, 2016, 2:00 PM – 3:00 PM (ET)

Register at:

<https://attendee.gotowebinar.com/register/6777613247755991810>

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This webinar is free, but please register promptly because registration may be closed to new attendees after 12:00 noon on the day of the webinar. After registering you will receive a confirmation email containing information about joining the webinar.



SmartWay Freight Matters Webinar Panelists



Buddy Polovick
U.S. EPA SmartWay
Transport Partnership



Cristiano Façanha
International Council
on Clean
Transportation



Blair Chikasuye
Hewlett Packard

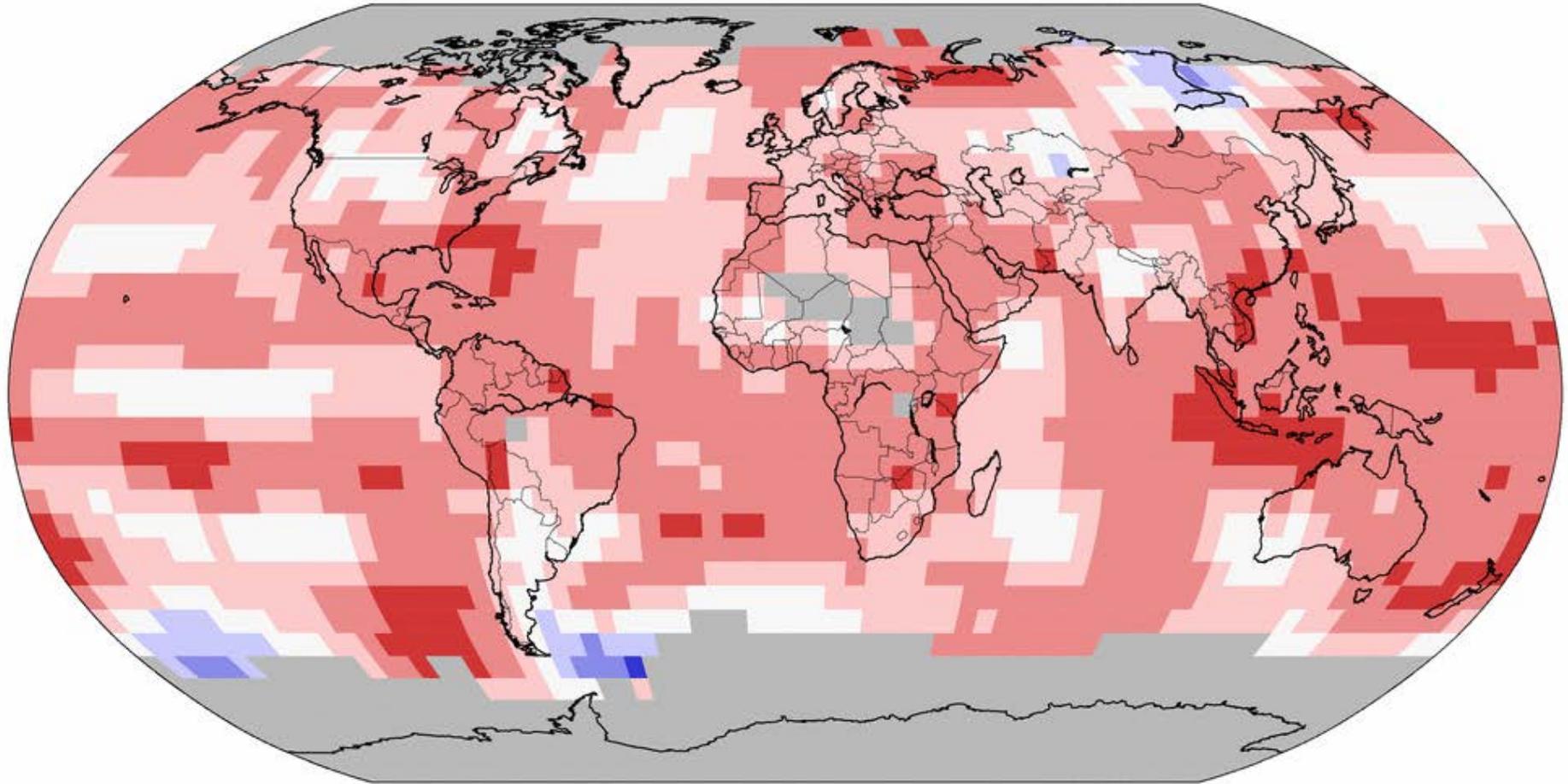
Today's Webinar

- 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




**Record
Coldest**


**Much
Cooler than
Average**


**Cooler than
Average**


**Near
Average**


**Warmer than
Average**


**Much
Warmer than
Average**


**Record
Warmest**



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 2016 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.

ASIA

Asia had its second warmest July on record, behind 2010.

EUROPE

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

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.

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.

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.

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 since records began.

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.

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.

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.

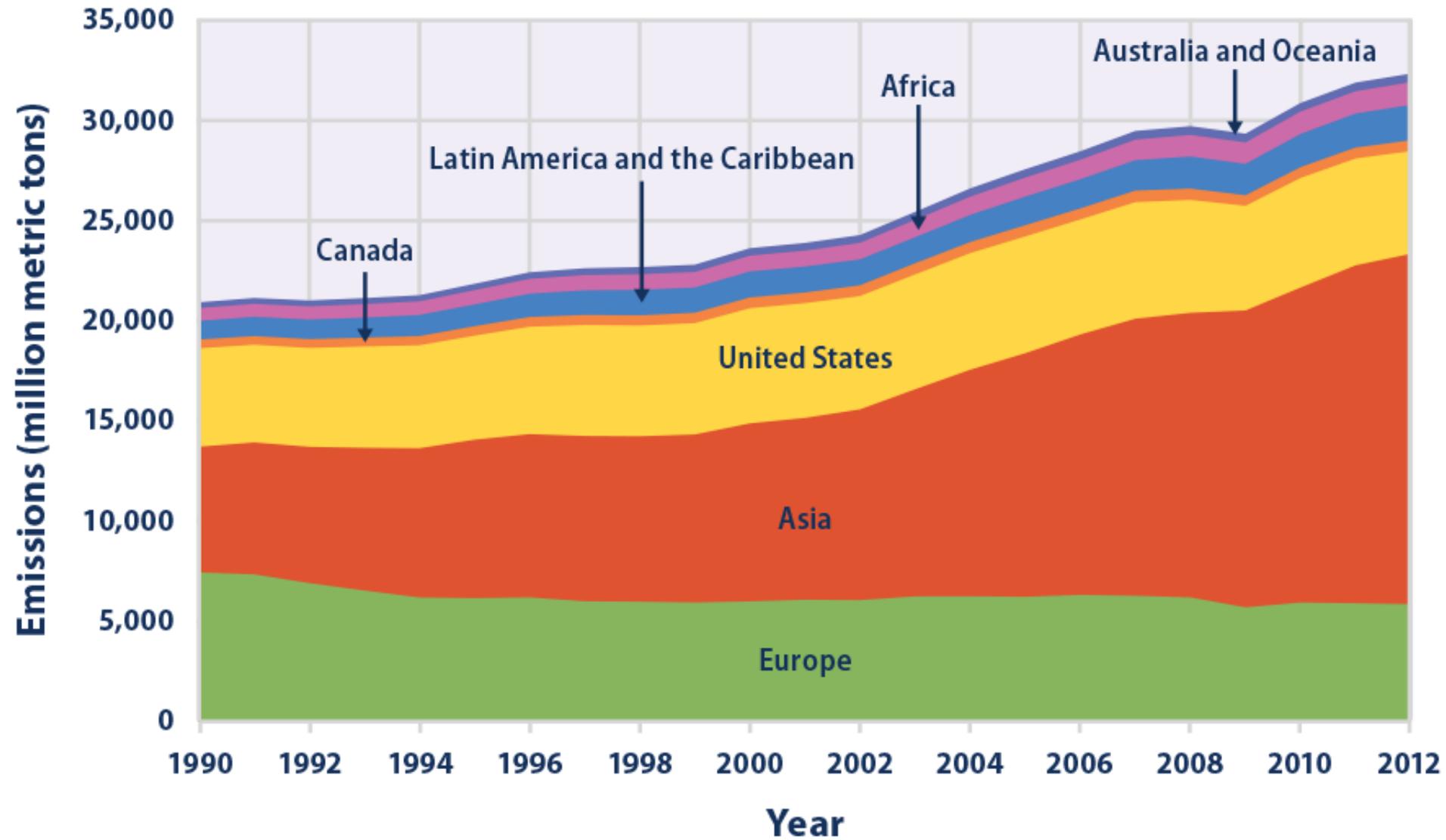
NEW ZEALAND

New Zealand had its tenth highest July temperature departure from average since 1909.



Please Note: Material provided in this map was compiled from NOAA's State of the Climate Reports. For more information please visit: <http://www.ncdc.noaa.gov/sotc>

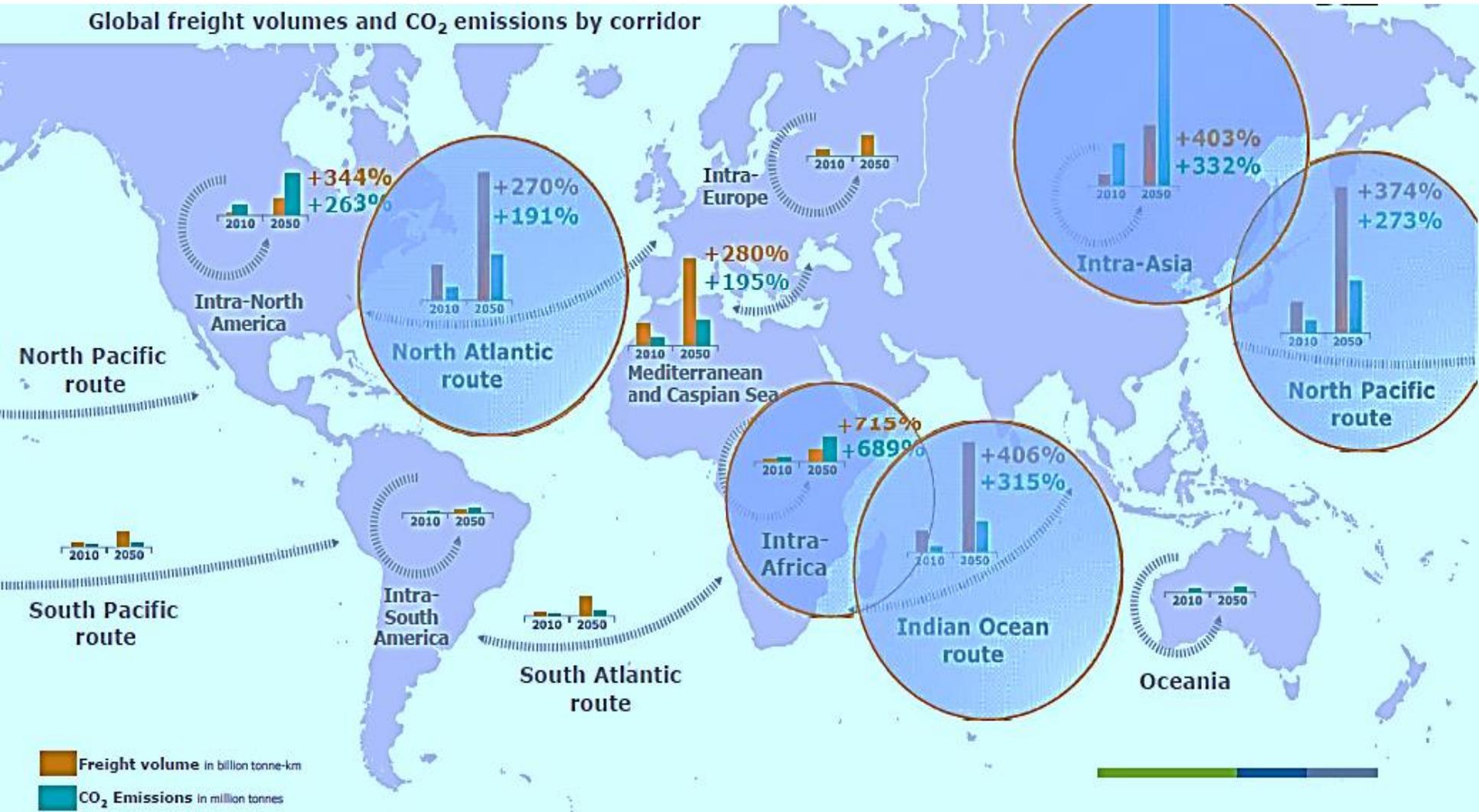
Global Carbon Dioxide Emissions by Region, 1990–2012



<https://www.epa.gov/climate-indicators/global-greenhouse-gas-emissions>

Global Freight Growth

Global freight volumes and CO₂ emissions by corridor



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





CLIMATE & CLEAN AIR COALITION

TO REDUCE SHORT-LIVED
CLIMATE POLLUTANTS

Global Green Freight Action Plan

Reducing the climate and health impacts of
goods transport



globalgreenfreight.org

Climate and Clean Air Coalition



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

GREEN FREIGHT PROJECT

SPONSORS



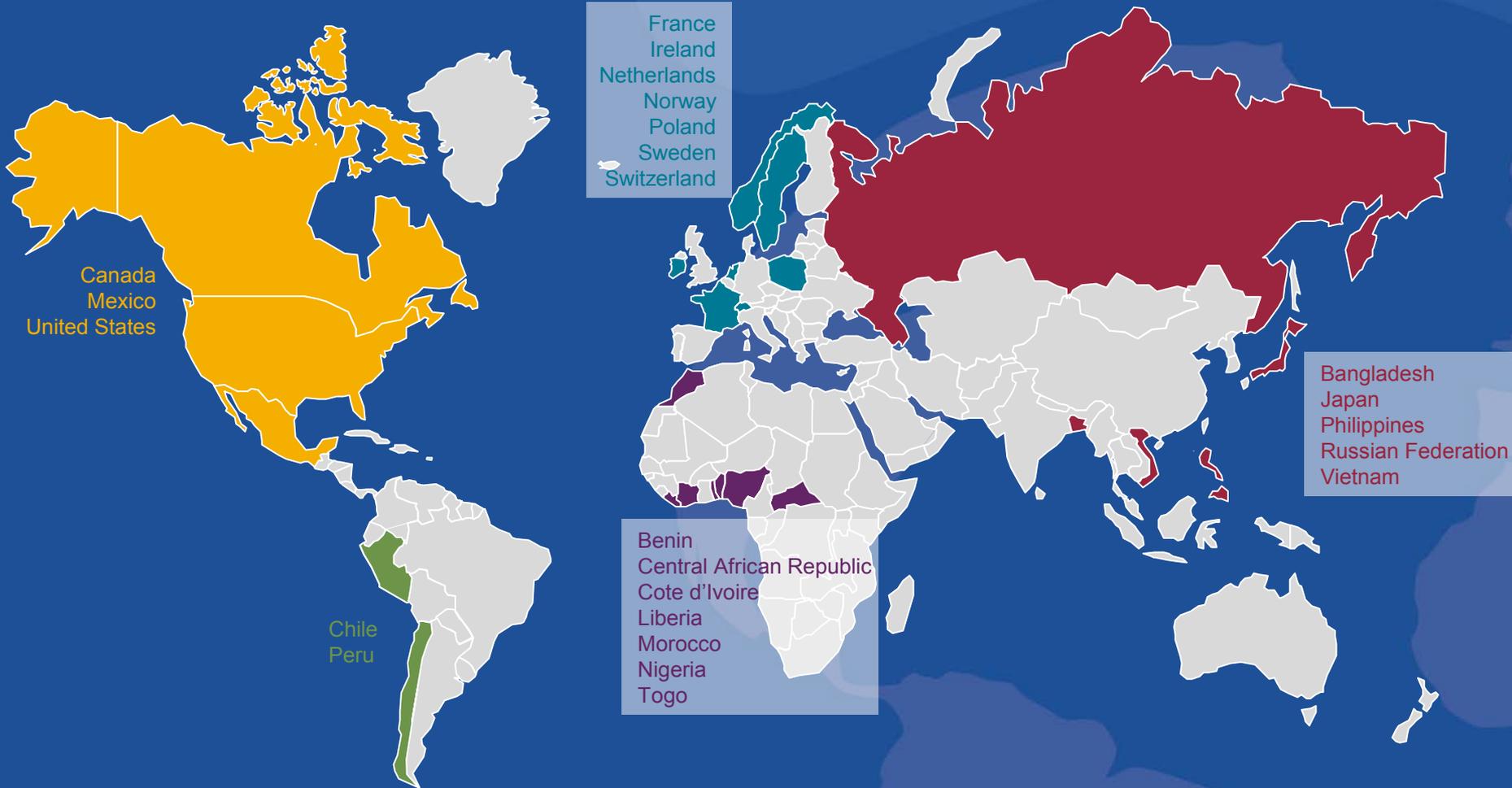
**CLIMATE &
CLEAN AIR
COALITION**
TO REDUCE SHORT-LIVED
CLIMATE POLLUTANTS



COLLABORATORS



Over 50 organizations and countries pledged their support for the Global Green Freight Action Plan



NON-STATES

BSR*
 California Air Resources Board**
 Centre for Clean Air Policy
 CEID Colombia
 Centro de Derechos Humanos y Ambiente
 Centro Mario Molina Chile, CIMA
 Centro de Investigación en Mecatrónica Automotriz of Tecnológico de Monterrey
 Clean Air Asia**

9. Clean Cargo Working Group**
 10. CNT Brasil*
 11. Deutsche Post DHL**
 12. ECO Stars Fleet Recognition Scheme
 13. FIA Foundation**
 14. French Shippers Council*
 15. Global Food Cold Chain Council*
 16. Green Freight Europe

17. Hewlett Packard**
 18. IKEA
 19. Institute for Governance and Sustainable Development**
 20. International Council on Clean Transportation**
 21. Institute for Global Environmental Strategies
 22. International Solid Waste Association
 23. Lean and Green, Molina Center for Strategic Studies in Energy and the Environment
 24. Natural Resources Defense Council

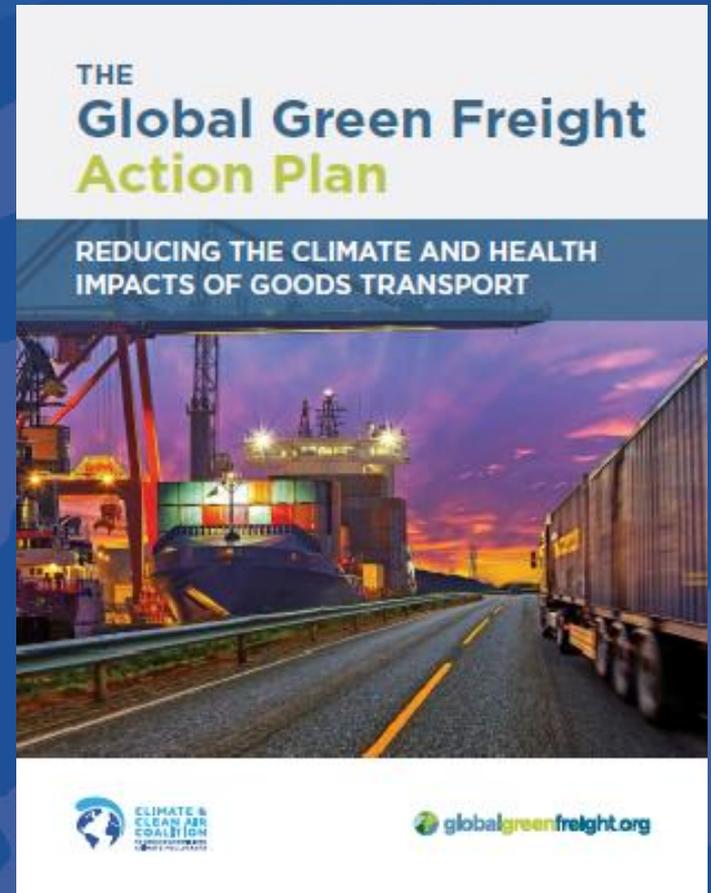
25. Partnership on Sustainable
 26. Low Carbon Transport
 27. Smart Freight Centre**
 28. Swiss Foundation for Technical Cooperation
 29. United Nations Environment Programme
 30. World Bank
 31. World Meteorological Organization
 32. Volvo



Global Green Freight Action Plan

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;

2019

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



2017

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

2022

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

2030

All countries members of regional program; Green freight programs demonstrate significant emissions reductions from freight transport.

2016

Globally recognized best practices established for green freight programs (public, private, civil society agreement)

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)

2025

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



2018

Established tools and best practices for black carbon in green freight programs



Green Freight Programs and Initiatives

Modal and regional programs

- clean CARGO Sustainable Transportation
- Clean Shipping Index
- IATA Air Cargo Carbon Footprint
- Air Freight Carbon Initiative
- SmartWay (US and Canada)
- GREEN FREIGHT EUROPE
- GREEN FREIGHT ASIA

National programs

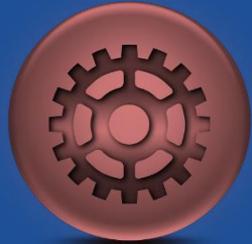
- Mexico: Transporte Limpio
- Netherlands, Germany, Belgium, Italy: LEAN and GREEN
- France: Objectif CO₂
- UK: LCRS
- UK, Belgium: European Commission logo
- India: GREEN FREIGHT INDIA
- China: CGFI (China Green Freight Initiative)
- Korea: Green Freight Initiative logo
- Japan: Green Logistics Partnership
- Australia: eco station

Other initiatives

- CCAC (Climate Change Action Council)
- EcoTransit
- NTM (Network of Transport Modes)
- FRET (Freight Research and Education Trust)
- consignment carbon.org
- CARBON DISCLOSURE PROJECT
- UNCRD (United Nations Centre for Road and Air Transport Development)
- GLEC (Global Logistics Emission Council)
- CARBON WAR ROOM
- ADB (Asian Development Bank)
- giz (German Aerospace Establishment)
- CLEAN AIR ASIA
- IDB (Inter-American Development Bank)
- T&E (Transport and Environment)
- icct... (International Council on Clean Transportation)
- Smart Freight Centre



CCAC Green Freight Resources



globalgreenfreight.org

@GREEN_FREIGHT



- 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!

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[@CCACoalition](https://www.facebook.com/ccacoalition) | [facebook.com/ccacoalition](https://www.facebook.com/ccacoalition)
www.ccacoalition.org

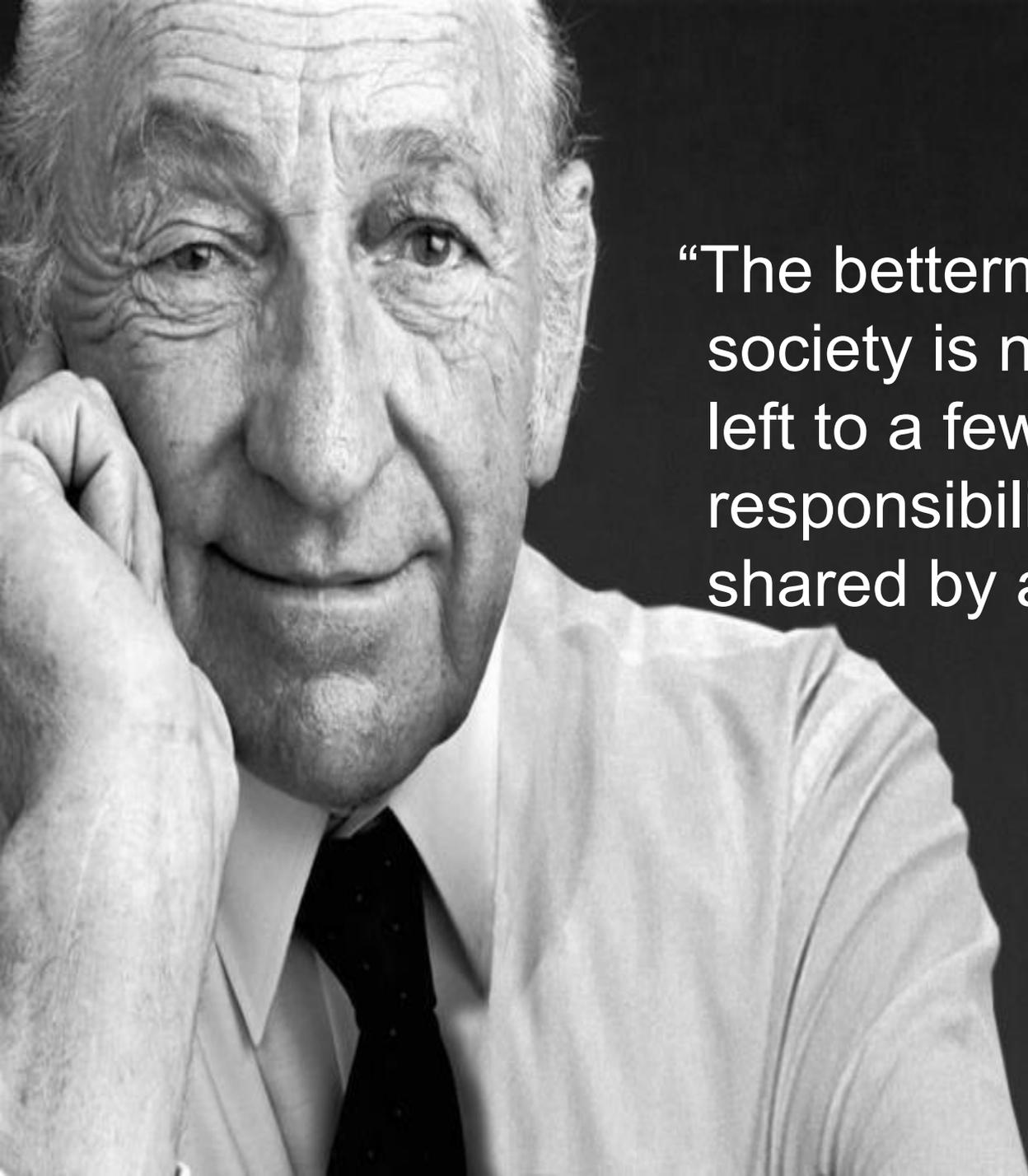




keep reinventing

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

Carbon footprint, 2015* (Hewlett-Packard Company)

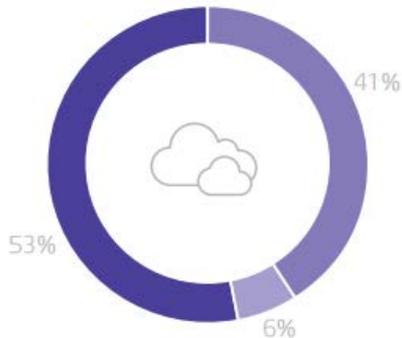
45,432,100 tonnes CO₂e

↓11%

decrease in carbon footprint compared to 2014

↓12%

decrease in water footprint compared to 2014



Supply chain

Achieved goal to reduce the GHG emissions intensity of first-tier manufacturing and product transportation suppliers by

↓20%

by 2020, compared to 2010¹

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

This goal was achieved five years early.

Products and solutions

Reduced GHG emissions intensity in product portfolio* (including PCs, printers, and servers) by

↓26%

through 2015, compared to 2010⁵

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

16,600,000

Capital goods 400,000

Upstream energy production 300,000

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 110,900

Commercial air travel 200,000

Employee commuting 900,000

Products and solutions 53%

Emissions from the energy our products and solutions consume after sale, while used by customers.

Product use 24,100,000

Product end of service De minimis

Buildings leased to others De minimis

Investments De minimis

HP Logistics Sustainability

Cost Savings → CO2 Reductions

Network Enhancement Programs Drive CO2 Reductions

- Weight / Distance / Mode of Transport CO2 Factor

Logistics CO2 Reduction Programs

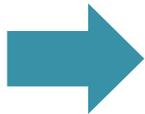
Increase the efficiency of our product transportation

- 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



Total
Cost
of
Business

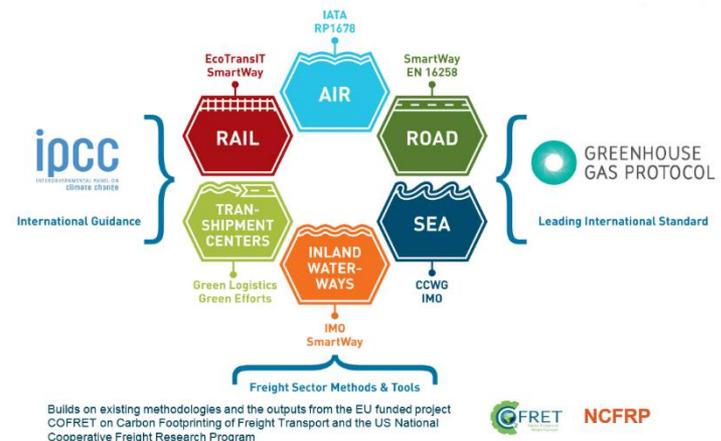
Industry GHG Transportation Standards

Industry Association partnerships to develop GHG methodologies



Global Logistics Emissions Council Framework

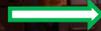
GLEC Framework - CO2 Calculations using existing methodologies



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>