The Sustainable Public Procurement programme of the 10-Year Framework of programmes on Sustainable Consumption and Production

"Promoting Ozone and Climate friendly refrigerants and air conditioning (R/AC) technologies through Sustainable Public Procurement"

UNEP

Webinar, 30th July, 2015

Webinar Agenda

Time	Topic	Panelist
3 pm	**Welcome and Introduction** **Presentation of the concept of sustainable public procurement and the 10YFP SPP programme**	• Overview of the GoToWebinar functionalities, Ms. Irina Uzun, UNEP, SPP programme • Mr. Farid Yaker, UNEP, 10YFP SPP Programme Officer
3:10 pm	**Outcomes of Seoul procurement workshop and conclusions of Mongolia case study**	• Mr. Atul Bagai, Senior Regional Coordinator, Compliance Assistance Programme (OzonAction Programme), UNEP, Regional Office for Asia and the Pacific
3:30 pm	**U.S. initiatives to reduce HFC emissions including through national procurement**	• Ms. Drusilla Hufford, Director, Stratospheric Protection Division, Office of Atmospheric Programs, Office of Air and Radiation, U.S. Environmental Protection Agency
3:50 pm	**Discussions & Closing**	

The Sustainable Public Procurement programme of the 10-Year Framework of programmes on Sustainable Consumption and Production

Presentation of the concept of sustainable public procurement and the 10YFP SPP programme

Farid Yaker, Programme Officer, UNEP
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What is SPP?

What is Sustainable Public Procurement?

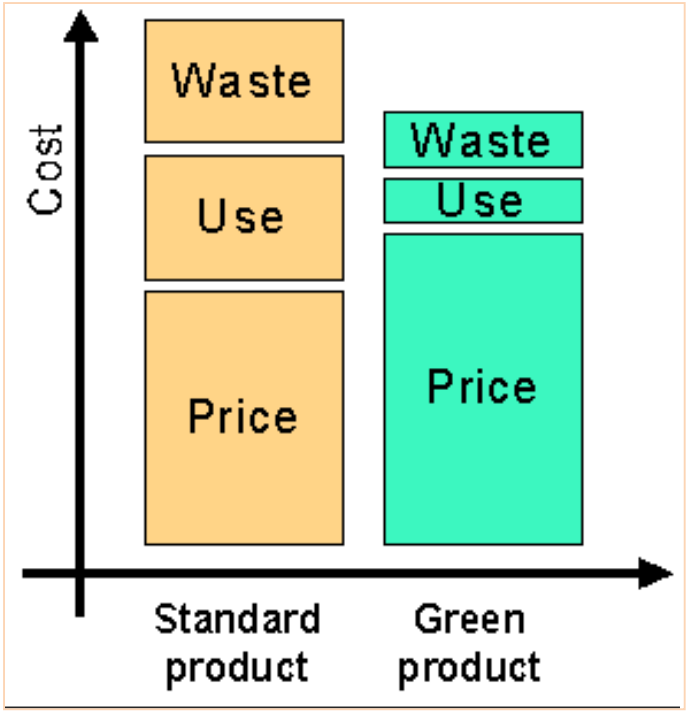
"Sustainable Procurement is a process whereby organizations meet their needs for goods, services, works and utilities in a way that achieves **value for money on a whole life basis** in terms of generating benefits not only to the organization, but also to society and the economy, whilst minimizing damage to the environment."

Procuring the Future – the report of the UK Sustainable Procurement Task Force, June 2006. This definition has been adopted by the Swiss-led Marrakech Task Force on Sustainable Public Procurement.

For more information visit
http://www.unep.fr/scp/procurement/whatisspp/

Life Cycle costing

The higher initial price of the greener product is more than compensated by the much lower usage and disposal costs.



Real value for money

Not just **acquisition cost** but **life cycle costing**:

- Costs incurred by the **organization** over the **whole life of the good** (**usage and maintenance costs, disposal costs**) - potential savings

- Costs incurred by **society** as a whole, including negative externalities (CO_2 emissions, impacts on health, on the ozone layer) or positive externalities (increased know how, technologies, etc.) over the entire life cycle.

- Higher value for greener goods – more money paid for conventional goods. E.g. we need to factor in carbon costs, health costs, etc.

The 10-Year Framework of Programmes

The 10YFP has been adopted at the Rio+20 Conference. It is a global framework of action to enhance international cooperation to accelerate the shift towards SCP patterns in both developed and developing countries.

It supports capacity building and provides technical and financial assistance to developing countries for this shift.

The 6 programmes of the 10YFP are:

- Consumer information
- Sustainable lifestyles and education
- **Sustainable public procurement**
- Sustainable buildings and construction
- Sustainable tourism, including ecotourism
- Sustainable food systems

More information here: http://www.unep.org/10yfp/

From the Marrakech Task Force to the 10YFP

Launch of the Swiss-led Marrakech Task Force on SPP

2005 to 2011

SPP Initiative

Rio +20, 18 June 2012

The Sustainable Public Procurement Initiative (SPPI) officially becomes the 10YFP SPP Programme

New York, 1 April 2014

SDGs and Post-2015

The 10YFP SPP Programme

Objectives

1. **Build the case for SPP**: improve the knowledge on SPP and its effectiveness as a tool to promote greener economies and sustainable development

2. Support **the implementation of SPP on the ground** through increased collaboration and improved coordination between SPP stakeholders

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Global Action for Sustainable Consumption and Production

10YFP

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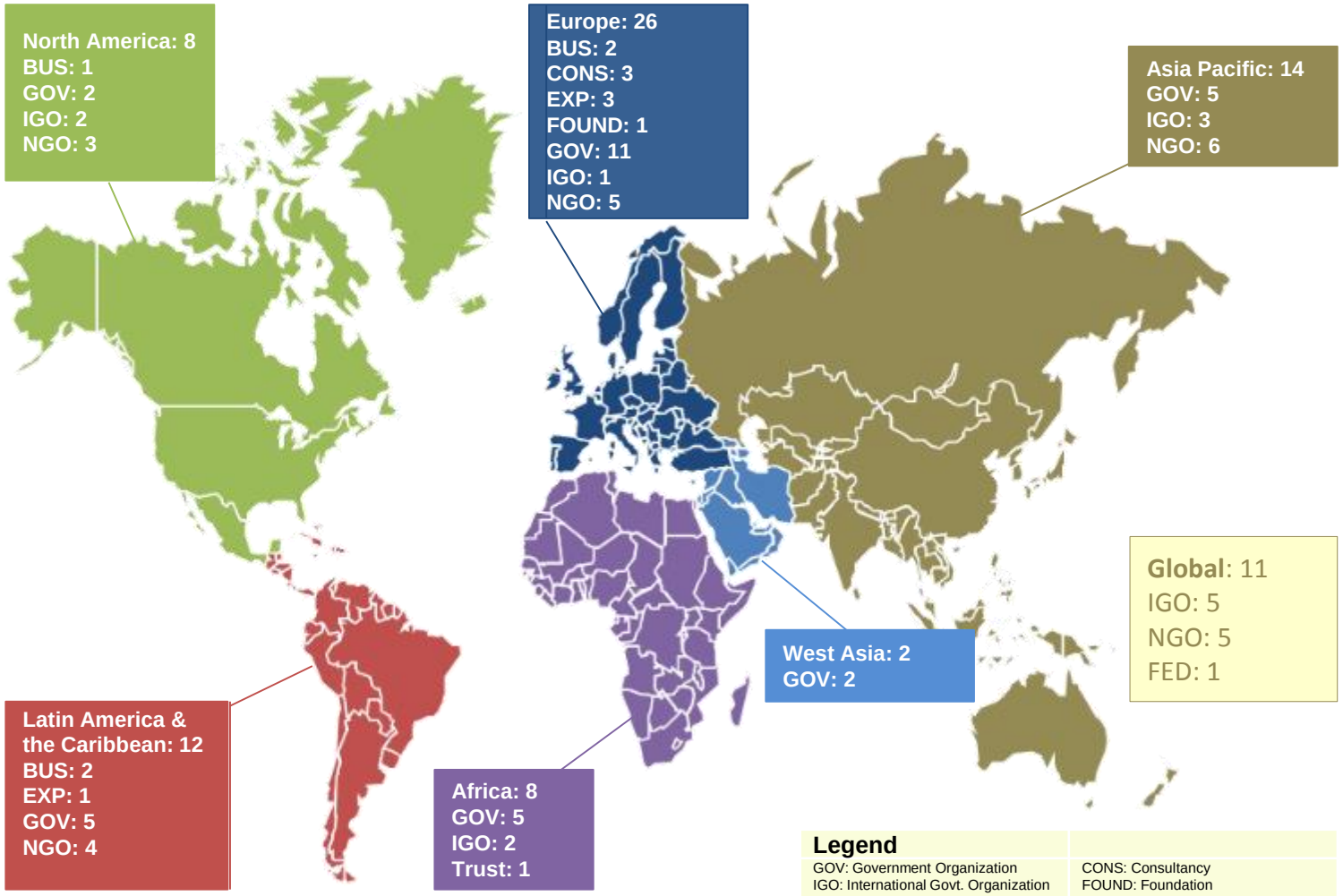
KEITI
Korea Environmental Industry & Technology Institute

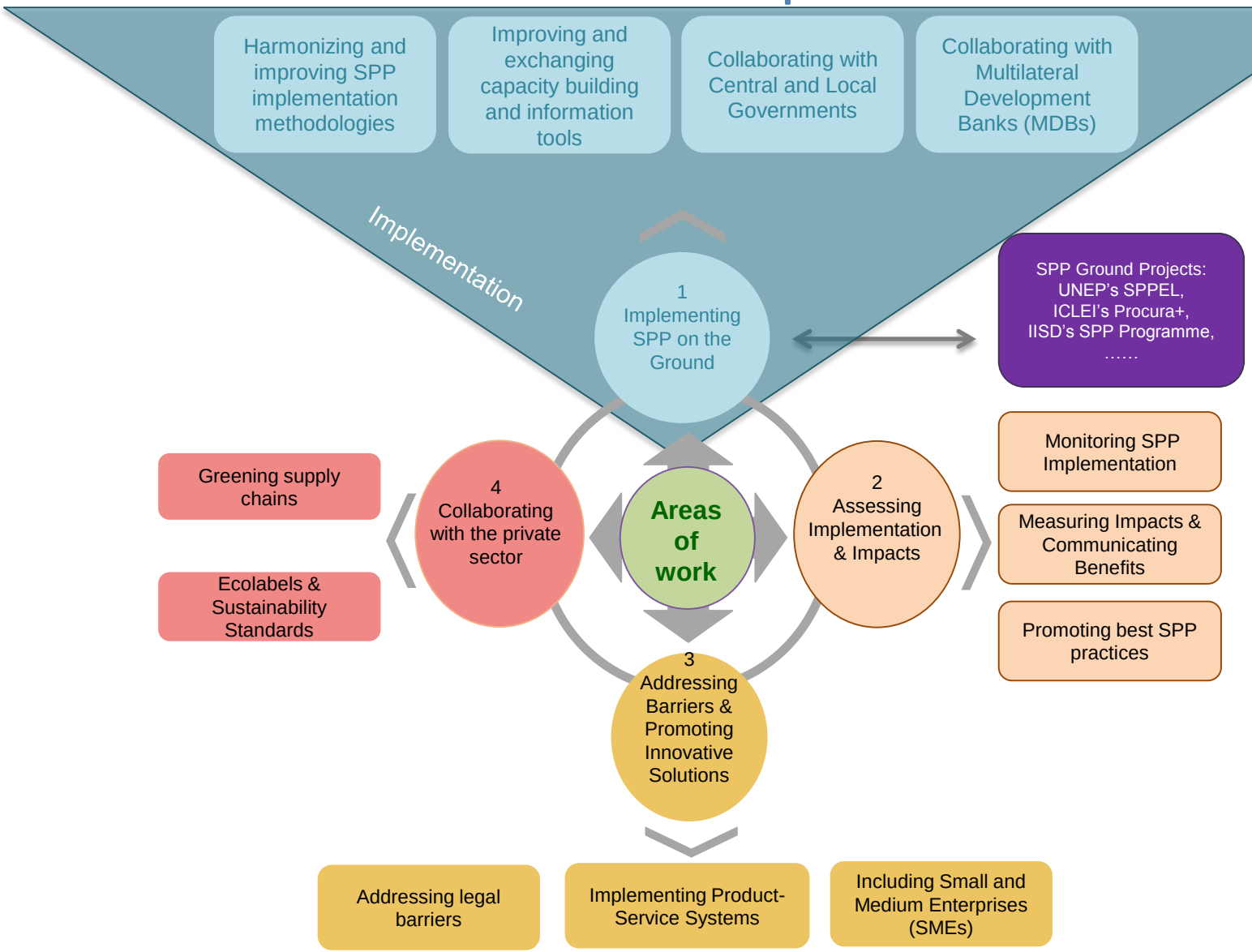
ICLEI
Local Governments for Sustainability

Distribution of 10YFP SPP programme partners around the world

81 AS OF JUNE 2015



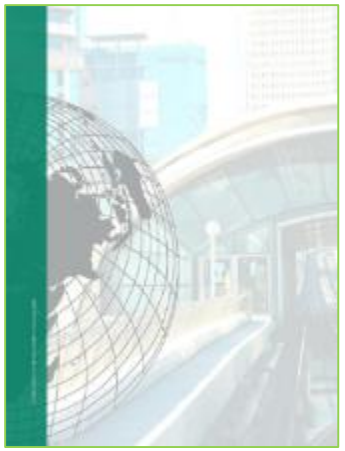
SPP biennial Work plan 2013-2015



SPP programme outputs

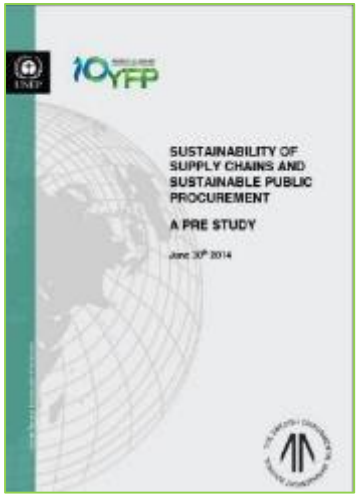
Using PSS to enhance SPP – technical report, 2015

SPP Principles, 2015



Upcoming in 2015:

- Measuring & communicating benefits of SPP
- Monitoring SPP Implementation



Pre-study on the sustainability of supply chains, 2014

SPP: A Global review 2013

Outcomes of Seoul procurement workshop and conclusions of Mongolia case study

"Promoting Ozone and Climate friendly refrigerants and air conditioning (R/AC) technologies through Sustainable Public Procurement"
Webinar: Thursday 30 July 2015

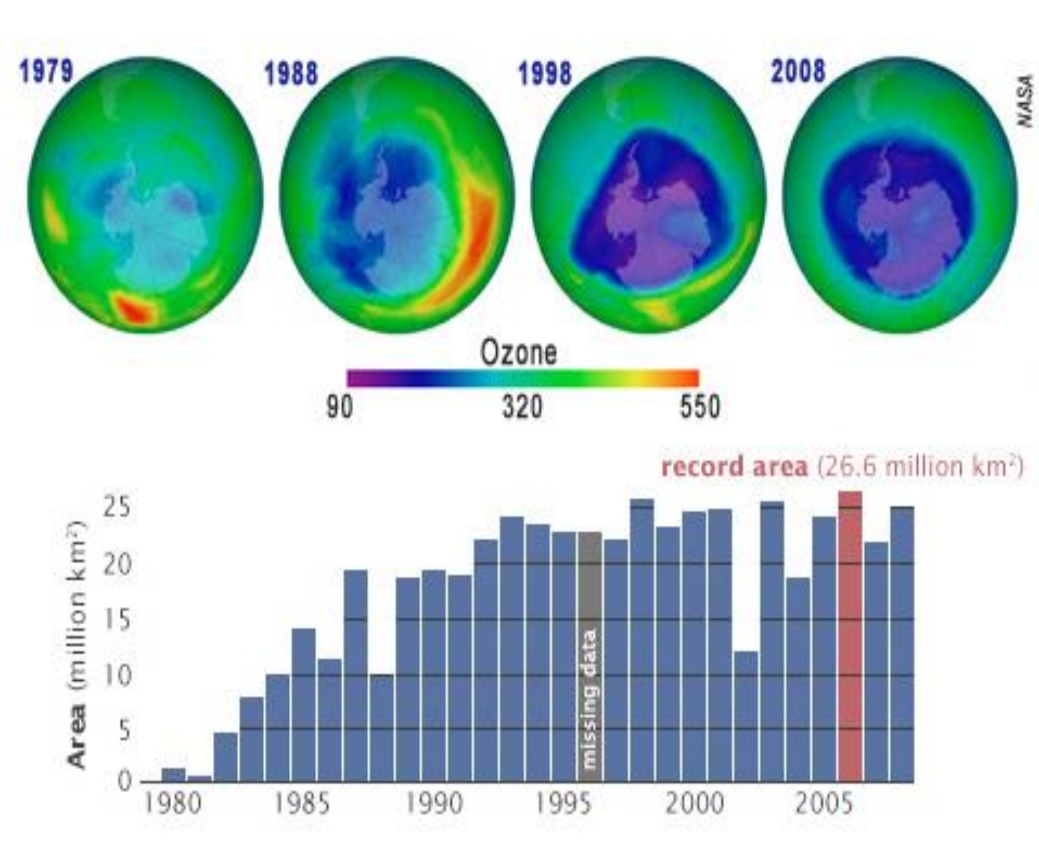
Atul Bagai
UNEP CAP ROAP

Outline

- Montreal Protocol and HFCs
- Green Public Procurement : Linking Ozone and Climate friendly technologies
- UNEP-USEPA partnership project
- Outcomes of the Seoul Procurement Workshop
- Mongolia Case Study : SPP translated into reality for products using Ozone Depleting Substances.

Montreal Protocol : Successfully Phasing out ODS and Protecting the Ozone Layer

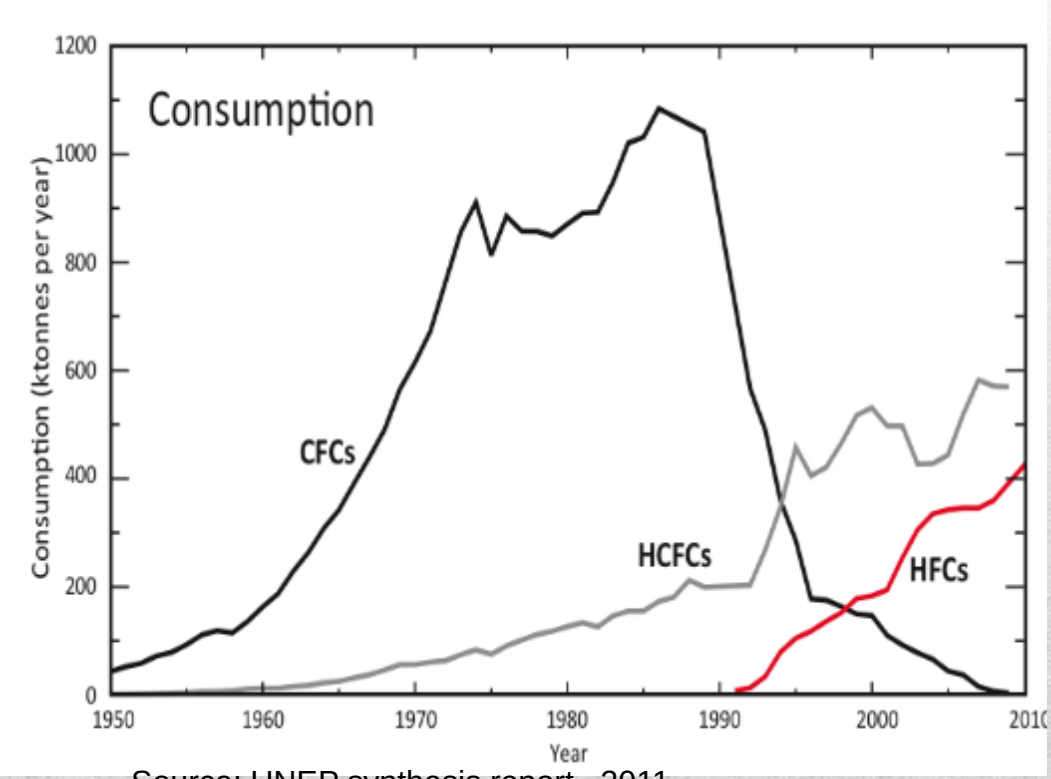
- Significant decrease in ODS emissions and ODS build up in atmosphere.
- Continued depletion of Ozone layer and expansion of Ozone hole reported to be ceased
- Only Multilateral Environment Agreement to be universally ratified .



Source : Worldbank and NASA

Montreal Protocol : Contribution to Climate Protection

ODS also have Global Warming Potential



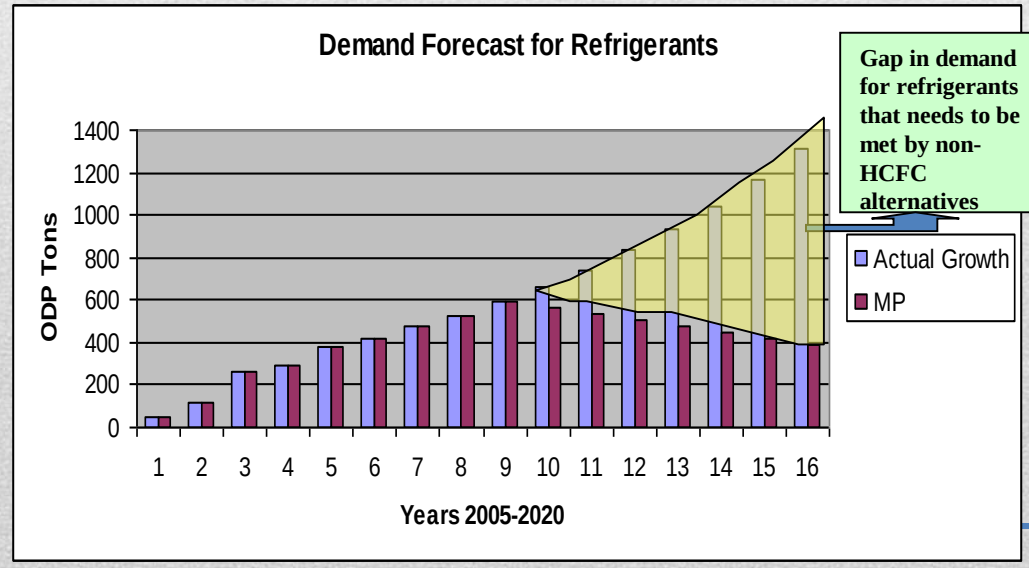
Source: UNEP synthesis report , 2011

MP achieved twin goals of ozone protection and GHG mitigation of **8 Giga Tons of CO2-eq/ year , which is 5 times greater than the 1st commitment period (2008-2012) of Kyoto Protocol** target as a result of CFC phase-out

Similar opportunity in HCFC phase-out.

Phasing out HCFCs : Compliance begins in 2015 !

HCFC Phase-out Schedule	Original	Actual
Baseline	2015	Average 2009-2010
Freeze	2016	2013
10% Reduction	-	2015
35% Reduction	-	2020
67.5% Reduction	-	2025
97.5% Reduction	-	2030
100% Reduction	2040	2040



- CFC phase out complete in 2010.
- MOP accepted to accelerate HCFC phase-out by 2030. 10% reduction from 2013 freeze targets began in 2015
- **Growth of HFCs as a result of HCFC phase-out has climate implications and RAC is the Key Sector .**
- **Uncontrolled HFC emissions growth will take a share of 7-19 % of CO_2 emissions in 2050 based on IPCC reports.**
- **Therefore , Uncontrolled HFC growth is expected to offset climate benefits achieved by MP and further impact the climate system.**

Policies to promote Ozone and Climate friendly alternatives

- Integrated Standards and Labeling Approach / Eco-Labeling (addressing R/AC System Energy Efficiency , ODP and GWP of refrigerants)
- Replacing conventional R/AC systems with Climate Friendly and Energy Efficient alternatives through Utility Driven Programs.
- Promoting Ozone and Climate friendly alternatives technologies to HCFCs through Green Procurement policies in the Public Sector.
- Financial incentives for adopting ozone and climate friendly technologies.

UNEP-USEPA partnership to Enhancing Institutional Capacity for HCFC Phase-out linked to Energy Efficiency and Climate benefits in Asia Pacific

USEPA has a grant partnership with UNEP of 500,000 USD to enhance awareness and build capacity for Non ODS , low GWP and energy efficient technologies in Asia Pacific. (Project Period up-to April 2016)

UNEP-USEPA Grant Project Outputs

1. **Ozone2Climate Technology Roadshows and Industry Roundtables.**
   - November 2013 in Manila , Philippines
   - February 2014 in New Delhi , India
   - March 2015 in Goyang City , Republic of Korea

2. **Training and Capacity Building Workshop for National Stakeholders (National Ozone Officers , Energy Officers , Standards Officers and Procurement Officers) on Zero ODP , Low GWP and Energy Efficient RAC systems.**
   - "Standards Symposium" May 2013 , Gold Coast , Australia
   - " Energy Efficiency Workshop" September 2013 , Yinchuan , China
   - "Green Procurement Workshop" March 2015, Goyang City , Republic of Korea

3. **Publication and Research Papers.**
   - Handbook on Ozone and Climate Linkages of Montreal Protocol
   - Tech-sheets/Factsheets and Case Studies
   - Vision 2030 : Ozone and Climate Friendly transition in Buildings in Asia
   - Scoping Study :Ozone and Climate Friendly Public Procurement Practices in Asia Pacific

O2C

Companies	O2C Products and Technologies	Hall & Stall No. at ACREX 2014
ARKEMA	Forane Range (R-1234yf)	Hall No. 11 Stall No. 11 & 47
BIRLA AIRCON	Hydrocarbon based Glasstop Chest Freezers and Water Cooler	Hall No. 12 Stall No. 38
DAIKIN	R-32 based Air Conditioners	Hall No. 11 Stall No. 81
Danfoss	Components for R-32 and Hydrocarbon based compressors	Hall No. 11 Stall No. 11.1
DUPONT	Opteon Range (DR-2,DR-5 and DR-91)	Hall No. 12 A, 11 & 7C Stall No. 73, 11.1& C7B
Godrej	R-600a based Refrigerators and R-290 based Air Conditioners	Hall No. 11 Stall No. 11.17A
Honeywell	Solstice Range (R-1234yf ,R-1234ze and other HFO blends)	Hall No. 8

O2C Technology Roadshow

EPA

Workshop on Promoting Public Procurement of Climate-Friendly Alternatives to HFCs in Asia Pacific , organized under the UNEP-USEPA grant partnership
13 March 2015 , Republic of Korea

Workshop Objective :

Foster a dialogue between public procurers and ozone agencies in Asia Pacific and to build capacity to integrate alternatives to high-GWP HFCs into public procurement activities .

Workshop Approach :

- Overviews of ozone and procurement policies as well as current developments in procurement policy.
- Interactive panel sessions allowed the audience to engage with presenters on procurement policy developments in Asia-Pacific, as well as on the barriers to procurement of alternatives to high-GWP HFCs.
- Survey Questionnaire answered by the Ozone and Procurement Officers to understand the baseline of ozone and climate friendly procurement in public sector.
- Group work sessions allowed Ozone and Procurement Officers to work together to develop strategies for strengthening institutional linkages and promoting alternatives to high-GWP HGCs in public procurement.

Workshop on Promoting Public Procurement of Climate-Friendly Alternatives to HFCs in Asia Pacific
13 March 2015 , Republic of Korea

- Participants in this workshop included National Ozone Officers (NOOs) and National Procurement Officers (NPOs) from the SA/SEAP region; government representatives; environmental organizations; international organizations such as European Commission , EIA and KEITI .

- Procurement officers from 16 countries :Afghanistan ,Bangladesh, Bhutan , China , Fiji, India , Indonesia , ROK , Lao PDR , Malaysia , Maldives ,Mongolia , Nepal , Samoa , Philippines , Sri Lanka and Thailand

- Ozone officers from 22 countries :Afghanistan ,Bhutan ,Brunei, Cambodia, China ,Iran , Indonesia , ROK , Lao PDR , Malaysia, Maldives,, Mongolia , Myanmar , Nepal ,Pakistan, Samoa , Philippines , Singapore, Sri Lanka , Thailand , Timor Leste and Vietnam.

- Implementing agencies UNDP , UNIDO , World Bank and GIZ also participated in the workshop

National Ozone Representatives	**29**
National Procurement Representatives	**18**
International Organizations (including UNEP)	**13**
Government Representatives	**3**
Total Number of Participants	**63**

O2C procurement survey key finding for Asia Pacific

- ODS and HFC are being used in Public Sector (Buildings and Vehicles) in the region.
- Most countries do not have specific tracking system for ODS emissions in their countries. The countries rely on the ODS import controls and regulation and IPIC platform for ODS trade.
- Most Ozone and Procurement officers , do not have much information on the HFC/GHG emissions and believe that this information maybe reported through the UNFCCC protocol.
- Most of the countries do not have SPP/GPP and the change in procurement procedures/guidelines of the government would require the convincing the Finance divisions for modification of financial evaluation criteria's from least cost to life cycle cost approach.
- There is a need to strengthen the Ozone and Procurement Agencies institutional linkages. Promotion of policy tools such as Life Cycle Assessment , Eco Labeling / S&L and Standardized Green Rate Contracts are key interventions for promoting O2C technologies.

Major Recommendations of the ROK Procurement Workshop

- Need to gather political will to promote green procurement, especially in Ministry of Commerce/Finance.
- From a regulatory perspective the group was of the opinion their countries would need to revise the national procurement standard/manual to include preference for procurement of ozone and climate-friendly products.
- There is need to encourage Eco-labeling for low GWP, energy efficient technologies, and this would facilitate the public sector to identify and procure green products easily.
- Need for list of green products should be set for facilitating green procurement through the procurement office (in case of rate contracts). Such initiative will help agencies to move voluntarily towards zero ODP and low GWP products.
- The group recommended the need to create incentives for low-GWP products (tax-free, tax rebate, trade-in) to reduce costs of low GWP products and accelerate commercial uptake.
- There is a need to establish a network and strengthening the capacities of procurement officers and ozone officers
- Promote Green Building Index (GBI) Scheme on voluntarily basis. One of the score criteria of GBI can be to use non ODS air conditioning systems which is also climate friendly.

Ozone and Climate Friendly Public Procurement : Mongolia Case Study

First initiative on HFC –focused procurement policy development in Mongolia

- This idea initiated by NOU after participation of Energy Efficiency capacity building workshop organized in Yinchuan , China in September 2013 under the USEP-UNEP grant partnership. Mongolia NOU wanted to promote the use of non-ODS alternatives in public works and procurement.

- NOA sent a formal letter of to the Government Procurement agency of Mongolia and "New Ulaanbaatar International Airport Construction" Project that recommended to avoid HCFC and HCFC blends in relation with the implementation of the HCFC phase out plan for Mongolia for the construction of new International Airport which was part of the biggest public procurement in March 2014.

- 15 following Ministries were also given a similar letter in August 2014

  - Ministry of Foreign Affairs, Finance, Justice, Construction and Urban Development, Health, Energy, Economic Development, Population Development and Social Protection, Labor, Mining, Defense, Education and Science, Roads and Transportation, Culture, Sports and Tourism, Industry and Agriculture with signature of Minister of MEGD

Ozone and Climate Friendly Public Procurement : Mongolia Case Study

Substantive aspects of the advisory letter to Procurement Agency and ministries :

- Understanding of ODS and climate change
- Briefing of HCFCs and blends of HCFC use in various applications .
- Brief of HCFC phase out schedule of Mongolia and the HPMP activities.
- The letter recommended that ODS's are not purchased under all the tenders and establishment projects on buildings, production and servicing sectors, medical equipment's, food storage cabinets and XPS foam board production within the public procurement. In addition, it is recommended not to include the HCFC bases substances on the Technical Statement Specification of the tenders.
- In addition , the letter also recommended the use of energy efficienct , zero/low GWP alternatives to HCFCs.

The initiative supported ''***Ozone and Climate friendly Public Procurement Guide"*** by CAP ROAP and shared with other network countries.

Ozone and Climate Friendly Public Procurement - Mongolia Case Study : Putting SPP Into Practice.

- The Mongolia case study showcases that SPP/GPP policies can be translated into reality for products using ODS through coordinated efforts and sensitization.
- The Mongolia case also shows that ODS and Low GWP alternatives can be target products for successful SPP in short time-period.
- The phasing out of HCFCs under the Montreal Protocol for Mongolia gives the regulatory backing for moving to SPP for products using HCFCs.
- HCFC alternatives that are climate friendly and energy efficient are promoted under the Mongolia case study , thus leap-frogging towards long term sustainable alternatives and removing barriers for such alternatives.

U.S. Initiatives to Reduce HFC Emissions: National Procurement

Drusilla Hufford, Director
Stratospheric Protection Division
Office of Atmospheric Programs, Office of Air & Radiation
U.S. Environmental Protection Agency

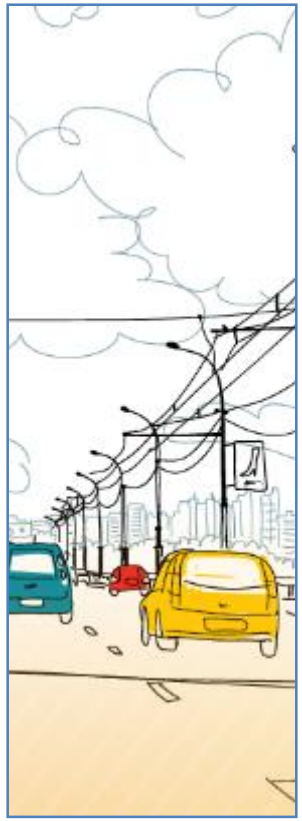
UNEP Sustainable Public Procurement Programme Webinar
30 July 2015

Outline

1. Overview of U.S. Federal Sector
2. ODS & HFC Use in the Federal Sector
3. U.S. Framework for Procurement
4. U.S. Climate Action Plan and HFCs
5. Leading by Example
6. Conclusion

Overview of U.S. Federal Sector

- U.S. Federal government is a large purchaser of goods and services
  - **Fleet inventory (owned/leased)**: >635,000 vehicles[1]
  - **Buildings (owned/leased)**: >353,000 buildings[2]
  - **Spending on supplies & equipment**: nearly $191 billion each year
    - $222 million on refrigeration & AC[3]
- In 2010, Federal agencies reported HFC emissions of nearly 2.2 $MMTCO_2e$[4]



[1]U.S. General Services Administration (GSA) 2013. Index of Data, Federal Fleet Report for FY 2013.
[2]U.S. GSA 2013. FY 2013 Federal Real Property Profile (FRPP) Summary Data Set.
[3]Federal Procurement Data System 2007. Federal Procurement Report FY 2007.
[4]Data.gov. 2011. FY2010 Federal Government Greenhouse Gas Inventory by Agency.

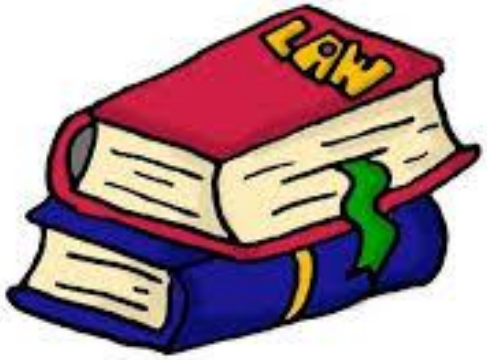
ODS & HFC Use in the U.S. Public Sector

- Motor vehicle AC
- Building, room AC
- Large retail/commercial scale food cooling
- Refrigerators, freezers, dehumidifiers, vending machines, water coolers
- Building insulation foam
- Aerosol products
- Fire suppression systems
- Cleaning solvents for electronics, aircraft, optical equipment
- Specialized national security or high-value aerospace applications

U.S. Framework for Procurement

Environmental Regulations

Procurement Regulation



Presidential Orders

Clean Air Act Regulations

- Title VI: Stratospheric Ozone Protection
  - Sec. 604 Phase-out of production and consumption of class I substances
  - Sec. 605 Phase-out of production and consumption of class II substances
  - Sec. 608 National recycling and emission reduction program
  - Sec. 609 Servicing of motor vehicle air conditioners
  - Sec. 611 Labeling
  - Sec. 612 Safe alternatives policy
  - Sec. 613 Federal procurement

Presidential Actions

- Climate Action Plan (June 2013): *Provide federal leadership by purchasing cleaner alternatives to HFCs whenever feasible and by transitioning to equipment using safe, more sustainable alternatives*
- Executive Order 13693 - *Planning for Federal Sustainability in the Next Decade* (signed 19 March 2015)
  - *Federal actions to reduce direct GHG emissions by at least 40% by 2025*
  - *purchase sustainable products and services identified by EPA programs including alternatives to ODS and high-GWP HFCs, where feasible, as identified by SNAP*

Federal Acquisition Regulation (FAR)

- Covers requirements for all U.S. government purchases for supplies and services
- For ODS, agencies are required to:
  - Give preference to the procurement of alternative chemicals, products, and manufacturing processes that reduce overall risks to human health and the environment by lessening the depletion of stratospheric ozone
  - Substitute safer alternatives as identified by EPA's SNAP Program, to the maximum extent practicable
- For high-GWP HFCs, similar requirements as for ODS in proposed regulation (published 11 May 2015)

Section 612: Significant New Alternatives Policy (SNAP) Program

- **SNAP** evaluates and lists substitutes that reduce overall risk to human health & environment in industrial sectors
  - Aerosols, Foams, Refrigeration and A/C, Solvents, Fire Suppression, Adhesives, Coatings & Inks, etc.
- 400+ substitutes reviewed considering:
  - Ozone-depleting potential
  - Global warming potential
  - Flammability
  - Toxicity
  - Local air quality
  - Ecosystem effects
  - Occupational & consumer health/safety

Availability of Climate-Friendly Alternatives in the U.S.

Applications	SNAP-listed, Commercially Available	Additional SNAP-listed	Under SNAP Review
Motor Vehicle AC	HFO-1234yf	CO_2, HFC-152a	AC6 (or other HFO/HFC blends), R-441A
Refrigerators, Freezers, and Coolers	*Refrigerants*: Hydrocarbons, CO2 *Foams*: Hydrocarbons, HFO-1233zd(E)	*Refrigerants:* CO2, R-450A *Foam*: HFO-1336mzz(Z), Methyl formate, Methylal	
Vending Machines	Hydrocarbons, CO_2		HFO/ HFC blends
Ice Makers	-	R-450A	Hydrocarbons
Room/Window AC	-	Propane, R-441A, HFC-32	
Industrial Chillers	Ammonia	HFOs, HFO/HFC blends	

SNAP Action Update

- Issued two acceptability notices **adding more** alternatives
  - Published October 21, 2014
  - Signed July 2, 2015
- Issued new rule adding 5 low-GWP flammable refrigerants with use conditions that adopt safety standards
  - Published April 10, 2015
- Signed Status Change Rule limiting use of certain HFCs
  - Signed July 2, 2015

Leading by Example: U.S. Department of Defense (DoD)

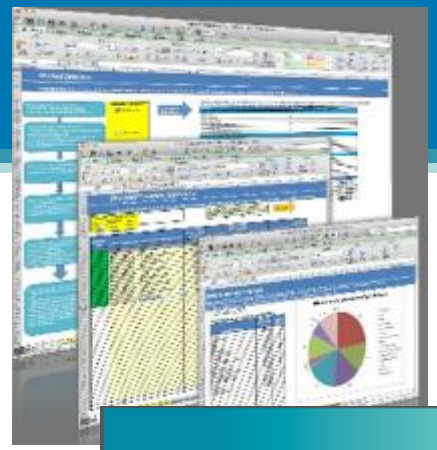
- Oldest & Largest Government Agency
  - 31 DoD Components (3 Military Departments + 28 others)
- Physical Plant
  - 523 Active Installations
  - 5,000+ Locations
  - 300,658+ Buildings (owned & leased)
  - 27.7 Million Acres+
  - 197,000+ Vehicles (non-tactical)
- Operations
  - Every Time Zone
  - Every Climate
  - 450,000+ Personnel Overseas and Afloat

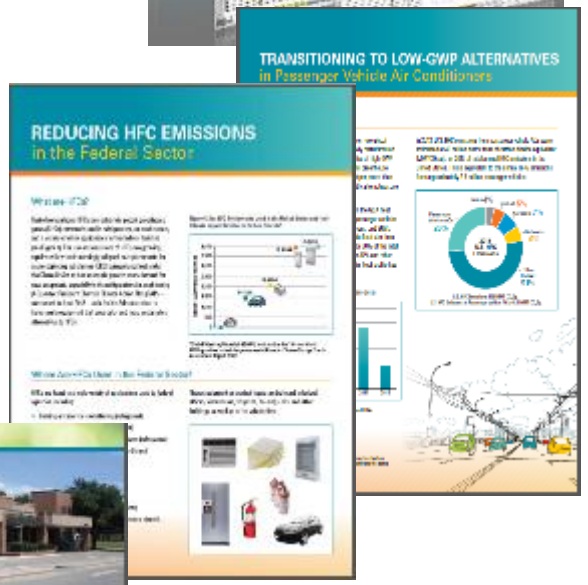
DoD Refrigerant Transition

- Where Possible, Transitioned Directly From ODS to Low-GWP Alternatives
- Attempt To Minimize Climate Impact When Using HFCs
  - Revise Policies & Procedures
  - Redesign Equipment
- Absorption Chillers at CHP (Co-gen) Sites
- Reduced HFC Refrigerant Charge Size
  - Existing Shipboard Refrigeration (100+ lbs) → Modular Refrigeration Unit (13 lbs)
- CO_2 Motor Vehicle Air-Conditioning
  - Army RDT&E on Tactical Vehicles
  - German Auto Manufacturers Working to Bring to Full Technical Maturity
- Alternative Refrigerants At DoD Commissaries
  - R-407A
  - Transcritical CO_2
  - CO_2/Ammonia Cascade

Support Materials Under Development

- Federal HFC emissions accounting tool
- Fact sheets
  - General: HFCs used by Federal agencies
  - Sector-specific: HFC uses & alternatives
- Case studies
  - Commercial refrigeration system at Lackland Air Force Base Commissary (San Antonio, TX)
- Revamping EPA's SNAP website
  - Enhanced user friendliness for Federal consumers to learn about acceptable alternatives





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

SNAP
SIGNIFICANT · NEW · ALTERNATIVES · POLICY

A Leadership Opportunity

- ODS experience shows transition to climate-friendly alternatives will happen at different pace for different sectors
- Procurement initiative presents opportunity to:
  - Build on existing ODS regulatory framework
  - Demonstrate national commitment to reducing emissions of high-GWP HFCs
  - Help drive technology innovation
  - Improve practices by government and vendors so as to avoid emissions

Additional information

- http://www.epa.gov/oar/caa/title6.html
- http://www.epa.gov/ozone/snap/index.html
- http://www.acquisition.gov/far/current/html/Subpart%2023_8.html
- https://www.whitehouse.gov/the-press-office/2014/09/16/fact-sheet-obama-administration-partners-private-sector-new-commitments
- http://www.gsa.gov/portal/category/102491
- https://catalog.data.gov/dataset/federal-greenhouse-gas-inventories-and-performance

Thank you!

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The 10YFP Sustainable Public Procurement programme