United Nations Development Programme

Considerations on Carbon Finance and Ozone Depleting Substances

Monday 30 March 2009

Side Event
57th Meeting, Executive Committee
Multilateral Fund for the Implementation of the Montreal Protocol

UNDP's Strength in This Field

Montreal Protocol Unit

GEF Unit
Climate Change

Portfolio of climate change mitigation and adaptation projects

MDG Carbon Facility

Technical assistance and commercialization of CDM projects

UN REDD

Avoided deforestation pilots and support to international dialogue

Combining and Sequencing Environmental Finance

Additional platforms include: Territorial CC Approach, Poverty & Environment Facility, UNDP/MDB Partnerships, Programmatic Adaptation Approaches, & others

Today's UNDP Team

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I. Introduction

The Regulatory Framework

	Montreal Protocol	Kyoto Protocol

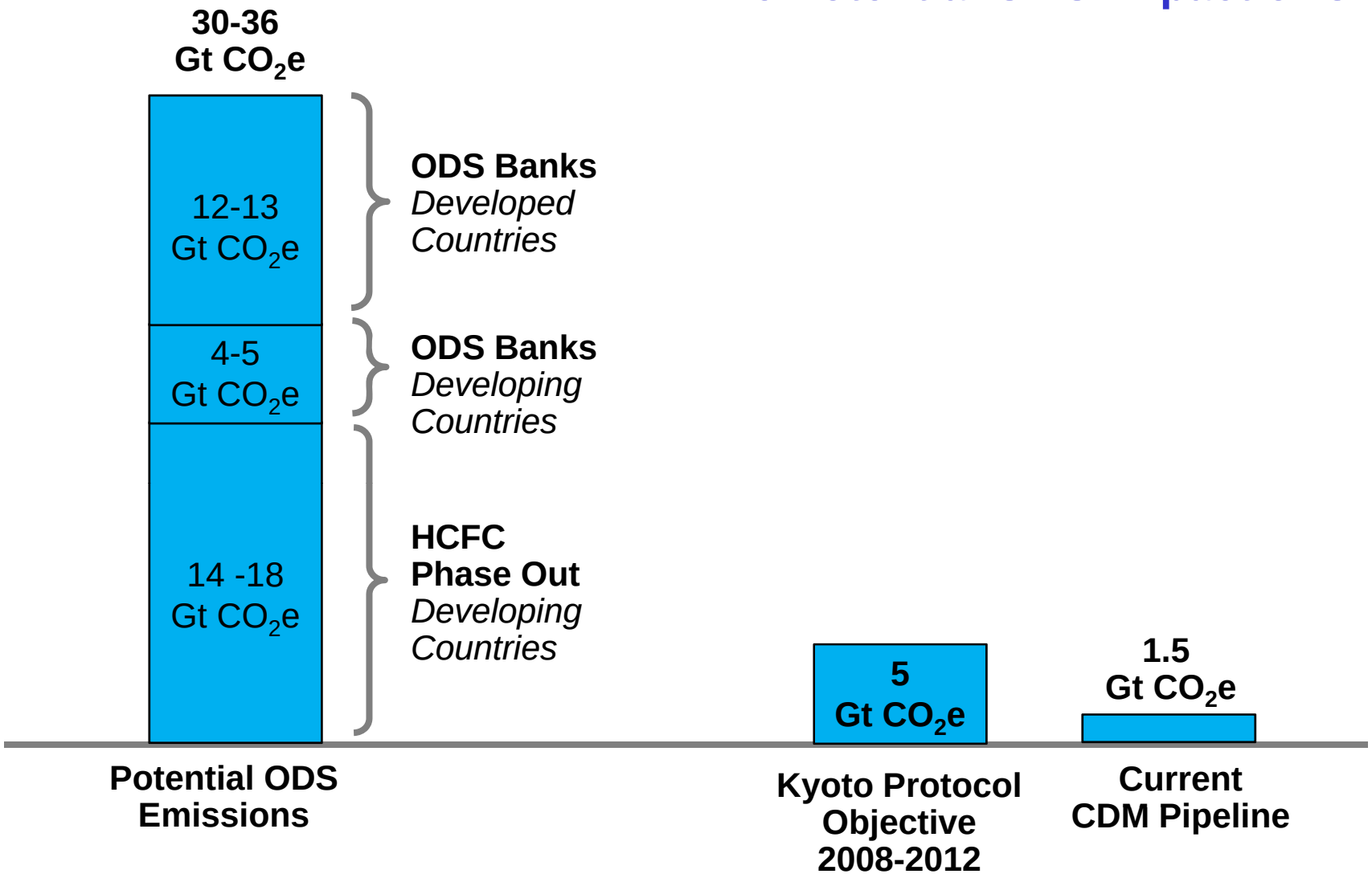
Chemicals Covered	• Addresses ODSs	• Addresses GHGs
		  • Covers 6 GHGs
		  • Includes *HFCs*
		  • Excludes MP chemicals
		  • No *CFCs*, *HCFCs*

Objectives	• *Consumption & Production*	• *Emissions*

Significant potential GHG emissions from ODS policy decisions in two key areas:

1. HCFC Phase Out
2. Existing ODS Banks

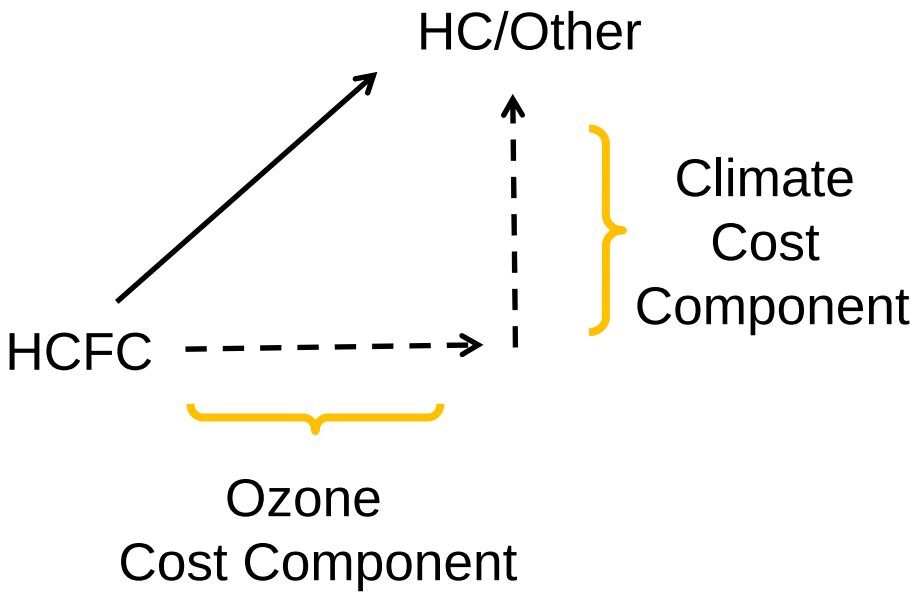
The Potential GHG Impact of ODSs



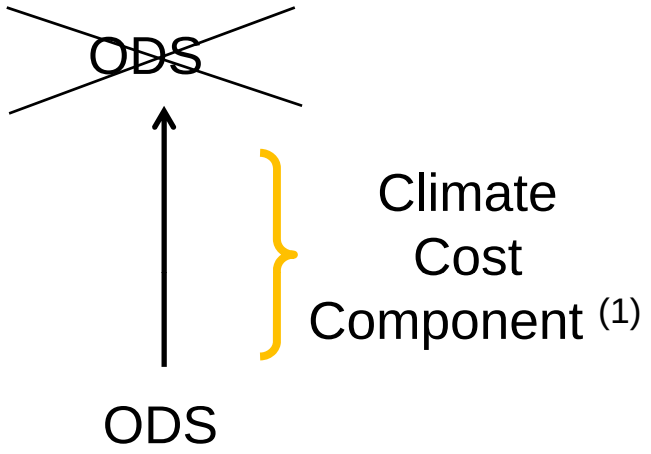
Sources. *ODS estimates: TEAP report to decision XVIII-12 ; Kyoto: UNDP estimates; CDM: UNEP Riso March 2009*

The Climate Cost Component

HCFC Phase Out



ODS Banks



(1) *Banked ODS already considered as emitted in ozone terms*

Potential Funding Mechanisms

	HCFC Phase Out	ODS Banks
MLF (Ozone)	• Current funding primarily for ozone cost component • $490m available in current triennial replenishment	• No current legal mandate • Pilot projects being rolled out
GEF (Energy Efficiency)	• Current limited funding for climate cost component if there are energy efficiency gains	• No current legal mandate
Carbon Finance (GHGs)	• Possible funding source for *entire* climate cost component, for both HCFC Phase Out and ODS banks • Matches metric (GHG) with objective (GHG mitigation) • Large possible size. • For example: Annual $7.4bn CDM market in 2007 (1)	

(1) *Source: World Bank. State of the Carbon Markets 2008*

II. Carbon Finance

Climate Change Market Mechanisms

Current and Near Term up to 2012 | **Med. Term 2013-2020** | **Long Term 2020 +**

Compliance Schemes

International Efforts

- Kyoto Protocol (*2008 to 2012)*
  - EU Emission Trading Scheme (*Caps*)
  - Clean Development Mechanism (*Offsets*)

National Efforts

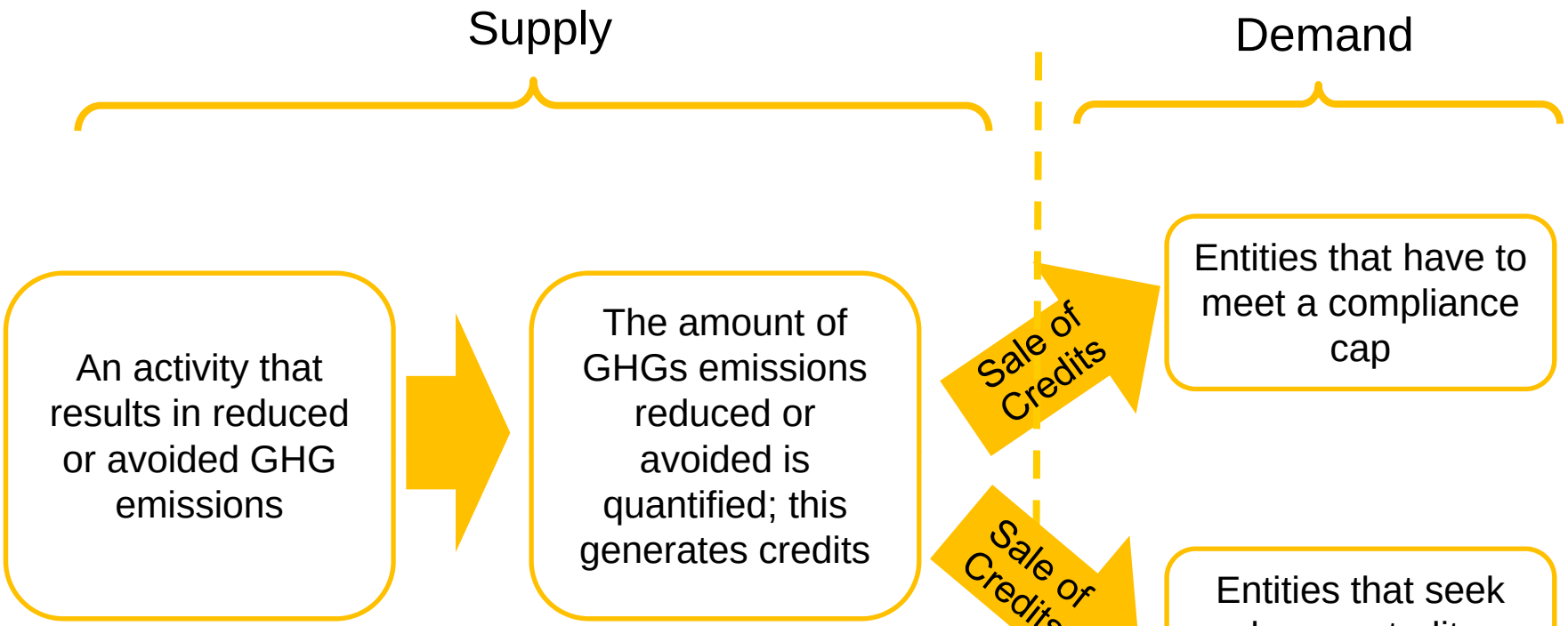
- US Federal (*Caps*)
- Australia (*Caps*)

Voluntary Schemes

Fragmented market

Overall objective of these market mechanisms:
Putting a price on carbon and cost-effective GHG mitigation

Carbon Finance - How it Works



Through the receipt of proceeds from the sale of credits, carbon finance finances and incentivizes GHG mitigation activities

Supply Considerations: *Regulatory Framework*

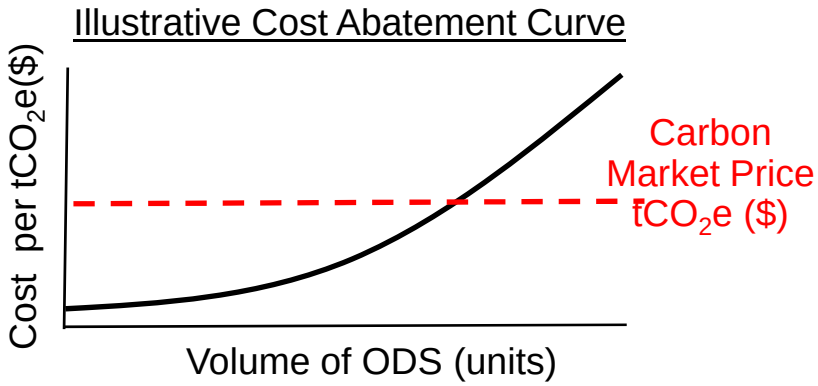
Establishing a central regulatory framework can ensure a robust supply of valued credits

Framework components for carbon finance and ODS:

1. Methodologies
- Ensure quantification of credits is standardized and accurate

2. Registry/Data Collection
- Tracks ODS levels and use of credits

3. *Possible* redistributive mechanism
- Device to maximize management along the cost abatement curve
- Rationale is practicalities of bundling projects and time-limits
- Risk is wider market price distortion



Demand Considerations: *Voluntary Markets*

Market Overview

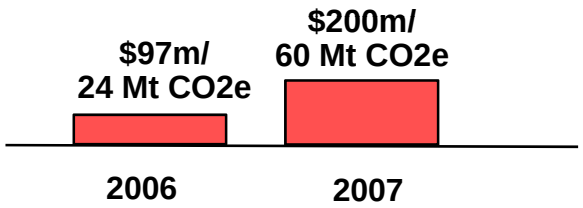
Overview

Key Quality: Unregulated

Buyers: Companies, consumers governments (bragging rights, carbon neutrality)

Credit Prices: Lower
Vary due to quality

Mkt. Size(1)



Current ODS

- A few actors aware of ODS opportunity
- Some work to date on ODS methodologies

Considerations for ODS

- In near term, an innovative market that can allow for proof of concept
- Over medium/long term:
  - Reputational concerns
  - Small capacity to absorb ODS credit supply
  - Lower voluntary prices may limit ODS opportunities due to cost
  - Less robust market

Suitability

Near Term	Viable
Medium Term	Possible
Long Term	Low

(1) Sources: State of the Voluntary Markets 2008, Ecosystem Market Place

Demand Considerations: *Compliance Markets*

Market Overview

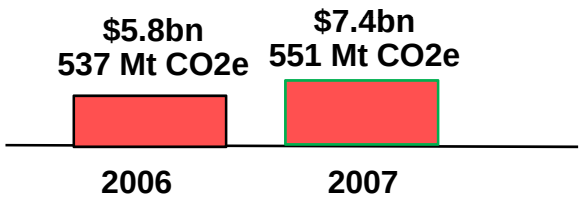
Overview

Key Quality: Regulated
Caps: KP, EU ETS
Offsets: CDM

Buyers: Capped companies, Capped governments

Credit Prices: Higher

CDM Size(1)



Current ODS

- HCFC and CFC excluded
- Some emerging methodologies in CDM for HFCs and appliance energy efficiency

(1) Sources: State of the Carbon Markets 2008, World Bank

Considerations for ODS

- In long term, if appropriate linkages and caps are in place, this can be a well-suited solution
- In near/medium term:
  - Concerns regarding immediate capacity to absorb ODS credit supply
  - ODS credit supply could be unanticipated, disrupting ongoing CDM investment decisions

Suitability

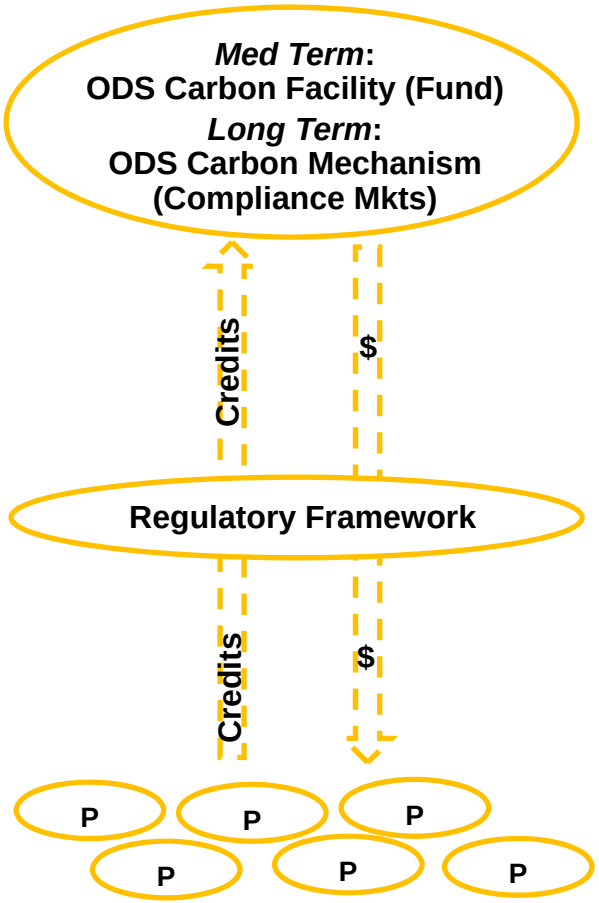
Near Term	Low
Medium Term	Ambitious
Long Term	High

Demand Considerations: *An ODS Carbon Facility/Mechanism*

Considerations

- An ODS Carbon Facility/Mechanism could address two key challenges:
  - Linking to sufficient demand
  - Ensuring regulatory robustness
- **In medium term**: an *ODS Carbon Facility*
  - Could take the form of a fund supported voluntarily by government sponsors
    - Donation, with retirement of credits (bragging rights)
    - Investment in future credits value, either for monetization or compliance purposes
  - An interim step: gathering data, establishing regulations, and signaling to the market its future inclusion
- **In long term:** an *ODS Carbon Mechanism*
  - Links into international compliance markets. Ensures demand
    - Equitable treatment of GHGs
    - Costs internalized into global economy

Possible Model



Summary - Possible Carbon Finance Timeline

	Near Term To 2012	Med. Term 2013-2020	Long Term 2020 +
Model	• Voluntary markets (where appropriate)	• ODS Carbon Facility, supported voluntarily by government sponsors	• ODS Carbon Mechanism, links to compliance markets
Rationale	• Initial proof of concept • Develop methodologies, registries and test initial demand	• Establishes regulatory procedures • Gathers data, for use in future baselines (caps) • Signals to markets possible inclusion in next international agreement	• Ensures demand • Most cost-effective, fully integrated approach

Summary - Key Messages

- ODS projects have the potential to deliver savings in excess of 30 $GtCO_2e$
- Carbon finance offers a number of opportunities for the funding of the climate components of such projects
  - Parallels can be drawn with ongoing developments with REDD
- The Montreal Protocol bodies have the knowledge and capability to create an appropriate framework including methodology validation and the provision of a registry
- Any access to the carbon market needs to be approached carefully to build market credibility and manage risk
- Credits could be accrued while the reputation of an ODS Carbon Facility is established using support from sponsors
- The ultimate objective could be inclusion in an integrated carbon market in the post-2020 period

Q&A

Annex

HCFC Phase Out - Overview

The Issue

- MP currently mandates phase-out of HCFC at constrained cost [Decision XIX/6]
- Potential to lead to decisions that have negative impacts on climate
- Timing is urgent, as first step of phase-out already mandated (2013) and some technology decisions will be unavoidably negative to climate because of limited choices

Potential GHG Emissions

- Global warming potentials (GWPs) are important but energy efficiency also a factor
  - HCFC 22: 1,700
  - HCFC 141b: 630
  - HFC 134a: 1,300
  - HFC 23: 14,800
- Potential GHG emissions
  - Developing countries total: 14-18 Gt CO2e

Steps to Avoid Emissions

- Industrial transformation activities are driving growth
- Need to provide incentives for substitution of HCFC with technologies beneficial to climate

Sources: ODS GHG estimates: TEAP report to decision XVIII-12

ODS Banks - Overview

The Issue

- Existing ODS found in stockpiles, discards products and equipment
  - Mainly CFCs from phase-out
  - Going forward, HCFCs
- MP is *production and consumption* protocol. Does not address existing banks of ODSs

Potential GHG Emissions

- Global warming potential (GWP)
  - CFCs: 4,680 -10,720 GWP
  - HCFCs: 76 - 2,270 GWP
- Potential GHG emissions from ODS Banks:
  - Global Total: up to 16-18 Gt CO2e
    - Developed countries: 12-13 Gt CO2e
    - Developing countries: 4-5 Gt CO2e
- 60-65% potentially reachable

Steps to Avoid Emissions

- Waste management activities
- Incentive to pay for cost of ODS recovery, collection, transport and destruction

Sources: ODS GHG estimates: TEAP report to decision XVIII-12