

The World Bank: Measuring and Reducing Our Carbon Footprint

Presented by
the Corporate Environmental and
Social Responsibility Group

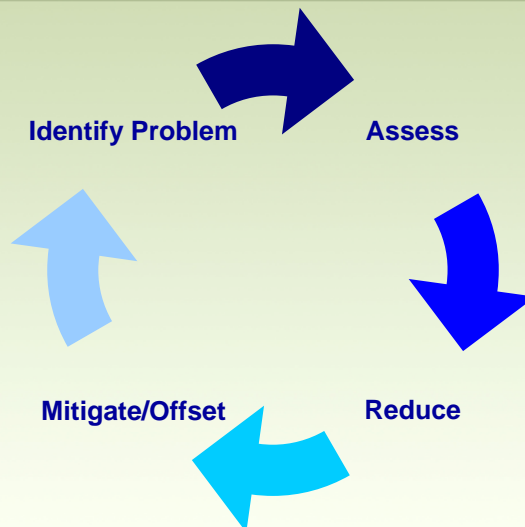
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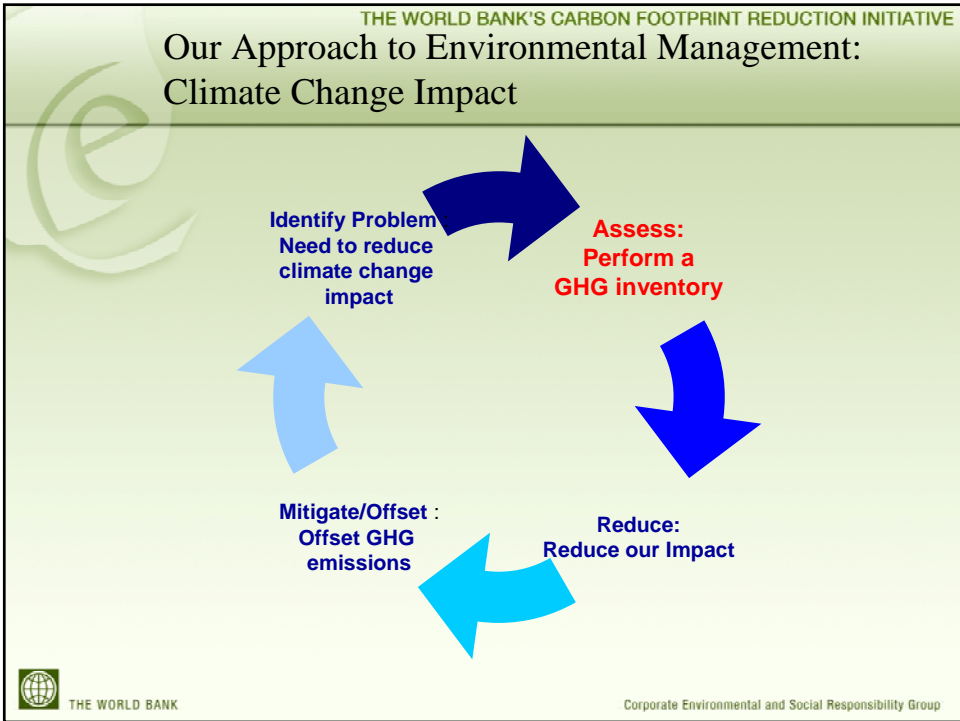
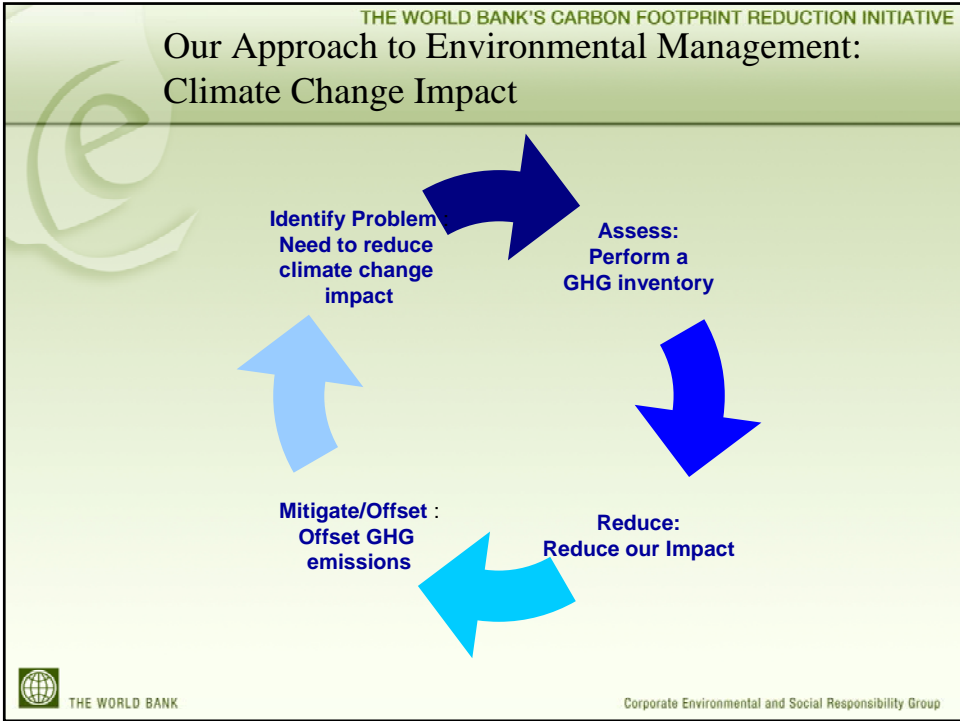
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Our Approach to Environmental Management



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Inventory: The Tools

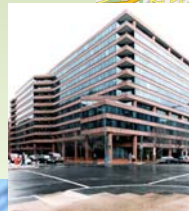
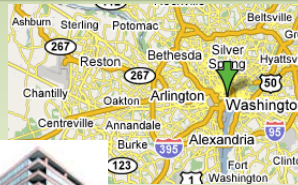
GHG Protocol: Corporate Accounting & Reporting Standard

- Accounting tool to help companies and organizations identify, calculate and report GHG emissions
- Partnership between WRI and World Business Council on Sustainable Development to tackle climate change
- Sets the standard for accurate, complete, consistent, relevant, and transparent accounting and reporting of emissions
- Provides guidance on GHG principles, business goals, inventory design, managing inventory quality, accounting of GHG reductions, setting targets, and verification of GHGs.
- Draw boundaries and define inventory based on scopes



Inventory: The Process

- Identify the system
- Draw system boundaries
- Identify assets and property
- Gather and check data
- Use the emission factors
- Calculate and check the results



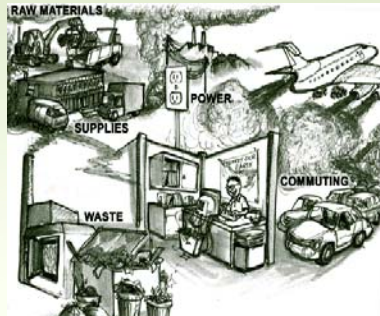
Inventory: Our Sources

Scope 1: Directly produced emissions from operating our buildings, equipment, vehicles

Scope 2: Indirect emissions from purchased electricity, steam, or heat

Scope 3: Indirect emissions from outsourced activities, business travel.

Typical Office GHG Emissions

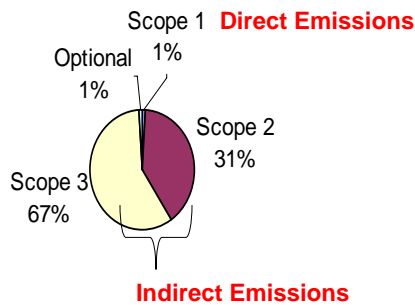


From WRI's "Working 9 to 5 on Climate Change: An Office Guide"



Inventory: The Results

World Bank 2006 Emissions



Inventory: The Results

Scope 1 - Direct Emissions	
Stationary Combustion Sources	1,368
Mobile Combustion Sources	23
Refrigeration / AC Equip. Use	0
Total Scope 1	1,391
Scope 2 - Indirect Emissions	
Purchased and Used Electricity	43,728
Purchased and Used Steam	0
Purchased and Used Hot Water	0
Purchased and Used Chilled Water	0
Total Scope 2	43,728
Scope 3 - Indirect Emissions	
Business Travel	47,787
Meetings Hotel Usage, Transport, Travel	17,610
Total Scope 3	65,397
Optional reporting emissions	
Total - CFC	967
Total - HCFC	102,7967
Total Optional Emissions	1,070
Total Emissions	111,586



Inventory: Our Partnerships

WRI

- Guidance on initial inventory (FY05)

US EPA's Climate Leaders Program

- Inventory includes six major gases CO₂, CH₄, N₂O, HFCs, PFCs, SF₆
- Develop corporate GHG inventory management plan
- Annually report inventory data, and document progress towards goal
- Set a GHG reductions goal: 7% by 2011

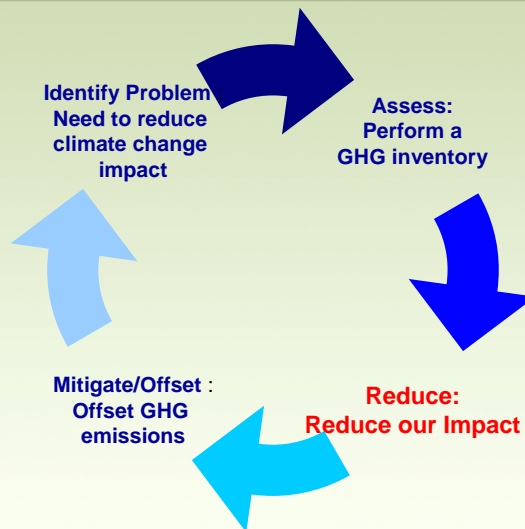


Inventory: The Challenges

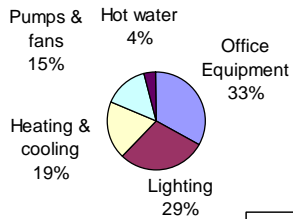
- Data collection
 - Requires contacting individuals for each responsibility – this is not embedded in any other centralized data management system
- Data availability
 - Found that recordkeeping was inconsistent and some data not available, i.e., fuel records for vehicles
 - Inconsistent reporting types: Fiscal year and calendar year
- Data quality
 - Utility data and meter data do not always match
 - Accuracy is determined by the transcriber of data
- Going Forward
 - Collecting data in small country offices



Our Approach to Environmental Management: Climate Change Impact

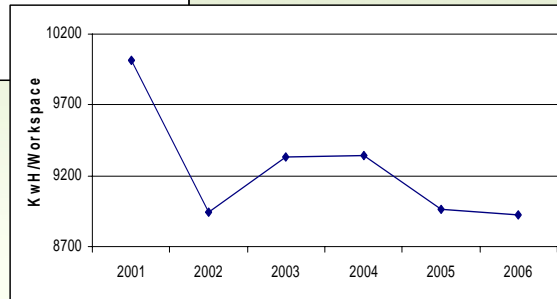


Reducing Our Impact: Scope 1 & 2



Lighting and office equipment are about 1/3 of our DC buildings electricity demand

Energy conservation efforts have resulted in reduced energy demands overall, fiscal 2001 to 2006



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Reducing our Climate Impact

- Procedural/Operational changes
 - Change building lighting and cooling/heating hours
 - Reconfigure office space to maximize efficiency
- Equipment Changes
 - Replace lighting
 - Installed occupancy sensors to reduce energy consumption
 - Replace elevator with energy efficient ones
 - Replace loading dock doors



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Reducing Our Impact: Scope 3

- Business travel is part of the World Bank's business
- Some options we promote:
 - Have more on-site meetings
 - Increased use of teleconferencing
 - More staff located full-time in field offices
- We are working with our travel office to gather better data about the extent of our travel beyond HQ



Reducing our Impact: Costs

- Example: Occupancy sensors
 - Just by eliminating unnecessary office lighting, the World Bank will save 6,278,000 kilowatt hours each year—which equates to nearly \$750,000 a year at the current cost of electricity.
 - 1 year payback expected
- No cost:
 - Changing building HVAC and lighting operation time (reducing from 7 PM to 6:30 PM)
 - Not running lighting and HVAC in buildings on weekends except on demand
 - Changing building temperature set points

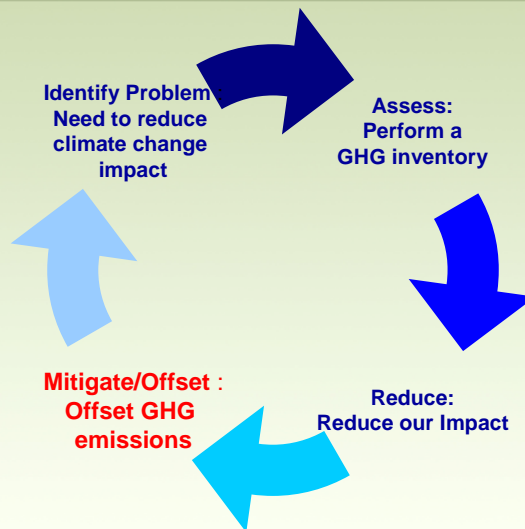


Reducing Our Impact: Challenges

- Fiscal year budgeting limits capital projects
- Hard to account for savings in some projects, i.e., green buildings
- Need to have payback period set realistically
- Accounting doesn't include environmental impacts/benefits
- Our business demands certain activities – have to work up the supply chain to make the impact



Our Approach to Environmental Management: Climate Change Impact



Offsetting our Impact: Brief history

- 2002:** selected units began calculating and offsetting operational travel-related emissions
- 2003:** began purchasing renewable energy certificates (RECs)
- 2004 – 2005:** increased purchase of RECs to 100% by 2005
- 2006:** Offset 100% of our Washington, DC based emissions and key meetings
- 2007:** Expanding our inventory to include selected country offices



Offsetting our impact: Going Carbon Neutral

- On World Environment Day, 2006, the World Bank Group announced that we are carbon neutral.
- Scope included our US operations:
 - Travel
 - Meetings
 - Buildings
 - Local transportation
- Offset 100% of electricity purchases with renewable energy certificates (RECs) from wind energy.
- Offset remaining emissions from air travel, ground travel, meeting travel, etc with investment in verified emission reduction credits (VERs) for afforestation.



Offsetting our impact: Renewable Energy Certificates

- RECs or green tags, purchased from Maryland-based company, WindCurrent
- Allows the World Bank to support renewable energy production
- Once energy leaves generator, it goes into the grid or “power pool” and is mixed together
- RECs reflect environmental benefit of renewable energy entering “power pool”, displacing power from fossil fuel sources



Offsetting our Impact: Costs

- Renewable Energy Certificates:
 - 85,000 Megawatt Hours
 - Total cost: about \$90,000
- Verified Emission Reductions:
 - 54,000 tonnes
 - Total cost: \$135,000



Offsetting our Impact: Challenges

- Identifying suitable projects that meet our needs
- Price
- Procurement Policy
- Accounting Policy
- Getting buy-in of key individuals and units throughout organization
- Coordinating among multiple agencies (WB, IFC, GEF)



Going Forward

- Identify new low-hanging fruit
- Identify longer-term projects (i.e. chiller replacement)
- Develop an environmental management system
- Look into standard reporting that other MDBs can use as well that goes beyond GRI
- Benchmark against other similar organizations



Resources

Top 6 Greenhouse gases

1. CO2 Carbon Dioxide
2. CH4 Methane
3. N2O Nitrous Oxide
4. HFCs Hydro fluorocarbons
5. PFCs Perfluorocarbons
6. SF6 Sulfur

EPA Climate Leaders Program guide

http://www.epa.gov/climateleaders/docs/cl_programguide_508.pdf

World Resources Institute

www.wri.org

Safe Climate for Business

www.safeclimate.net

WindCurrent

<http://www.windcurrent.com/index.html>



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Get Started!

WRI *Working 9 to 5 on Climate Change*

- Ways offices contribute to climate change
- Seven steps to measure office's carbon emissions
- Suggestions on how to reduce emissions

How to measure your office's carbon footprint

1. Secure Organizational Support
2. Carbon inventory
3. Gather data
4. Calculate your emissions
5. Establish a reduction target
6. Reduce your carbon emissions
7. Report you Carbon inventory

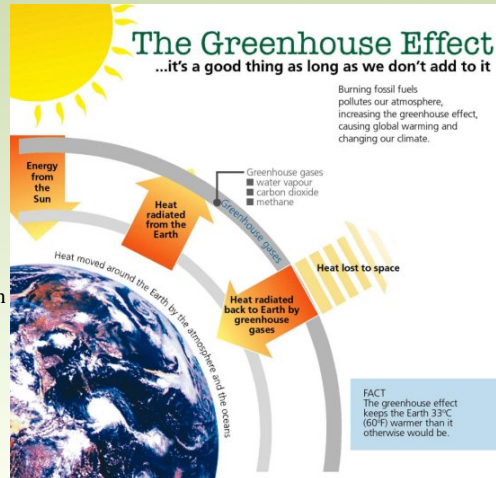


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Climate Change: The Cause

- Climate change is the gradual change in the global temperature caused by the accumulation of greenhouse gases (GHGs).
- GHGs act as a blanket that warms the earth, although temperatures rise, some regions become colder
- According to the IPCC 4th Assessment:
 - “Global greenhouse gas (GHG) emissions have grown since pre-industrial times, with an increase of 70% between 1970 and 2004
 - Since pre-industrial times, increasing emissions of GHGs due to human activities have led to a marked increase in atmospheric GHG concentrations



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Climate Change: The effects

Key points - projections for climate change globally:

- Global average temperatures are predicted to rise by between 1.4C and 5.8C by 2100
- Maximum and minimum temperatures are expected to rise
- More hot days over land areas and fewer cold days and frost
- More intense precipitation events



Art by Antoine Verdeaux-Gonzalez, Age 12



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