Carbon Disclosure Forum 2010

Developing a carbon reduction strategy for your business

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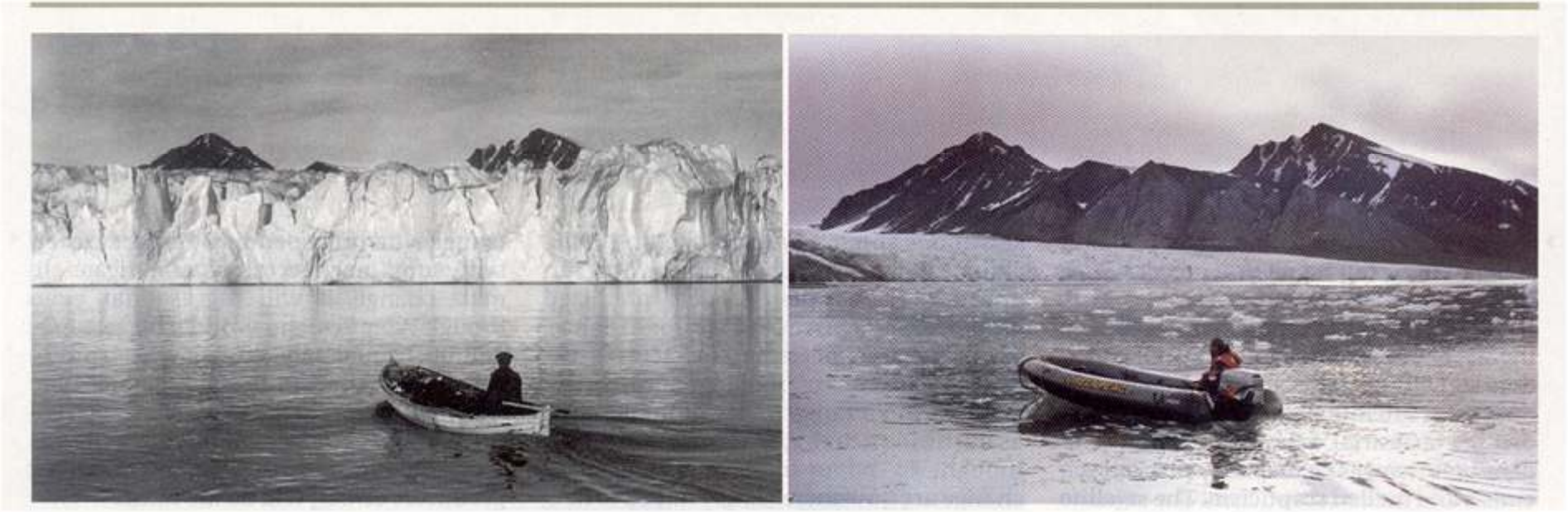
Outline

- Climate Change – introduction and impacts
- Corporate carbon management
- Carbon footprints
- Greenhouse gas emissions inventory
- Standards and guidelines
- Corporate carbon accounting
- Best practices

The Blomstrandbreen glacier, Norway 1918 and 2002



The Greenhouse Effect

The National Academy of Sciences, USA

Ranking of country emissions

Country	Total emissions in 2005	Per capita emissions in 2005
USA	2	7
EU	3	39
China	1	72
Russian Federation	4	18
Singapore	72	32
Indonesia	12	101
Malaysia	37	67
Quatar	75	1
United Arab Emirates	36	2
Canada	9	8
Australia	17	5

World Resources Institute: Climate Analysis Indicators Tool

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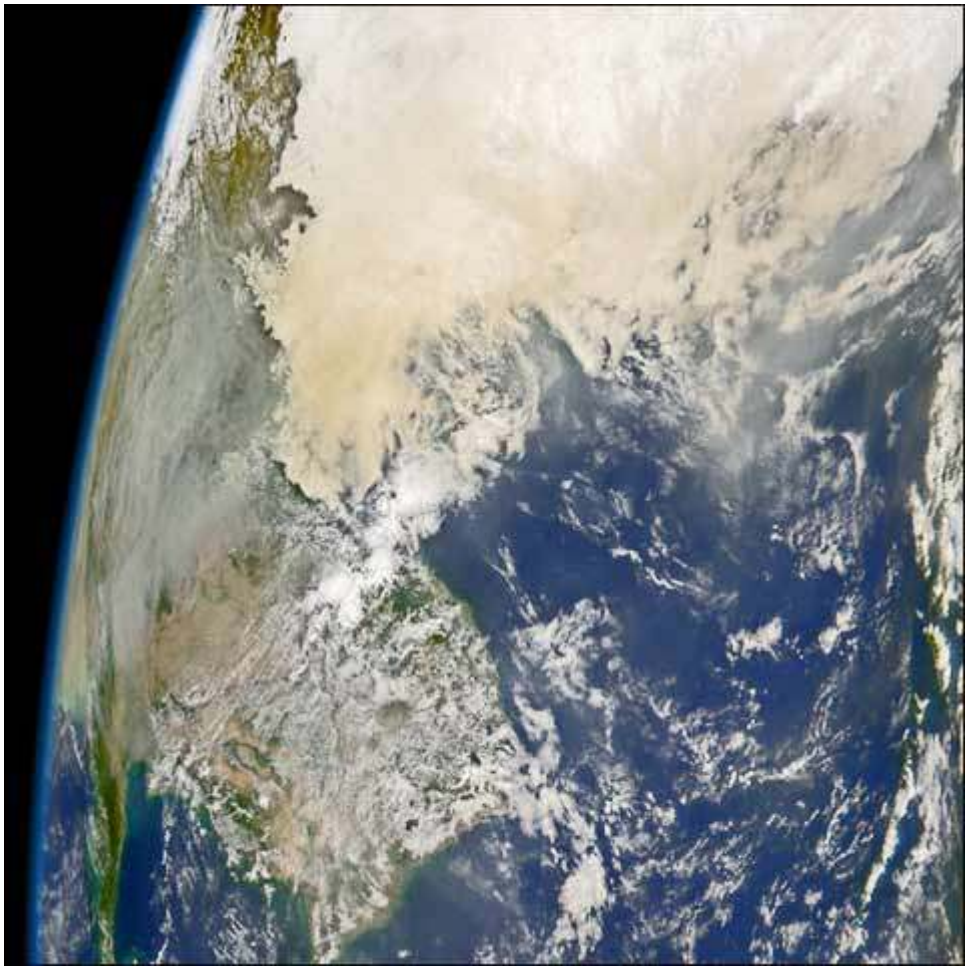
Impacts in Asia

- By the 2050s, freshwater availability, in particularly in large river basins, is projected to decrease
- Coastal areas will be at greatest risk due to increased flooding from the sea and, in some megadeltas, flooding from the rivers
- Climate change is projected to compound the pressures on natural resources and the environment associated with rapid urbanisation, industrialisation and economic development.
- Endemic morbidity and mortality due to diarrhoeal disease primarily associated with floods and droughts are expected to rise

Need to reduce GHG emissions



In order to stabilize the climate global emissions need to peak in the next decade and decline to roughly 80% by the year 2050

Baer and Mastrandrea, 2006

Climate change mitigation and adaptation

- Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report:
  - Warming of the climate system is unequivocal and physical trends in the climate are projected to intensify into the future
  - Societies can respond to climate change by adapting to its impacts and by reducing GHG emissions (mitigation), thereby reducing the rate and magnitude of change.
- Climate change mitigation:
  - Reducing, delaying or avoiding climate change impacts
- Climate change adaptation:
  - Complementary strategy to mitigation for effectively managing climate change risks

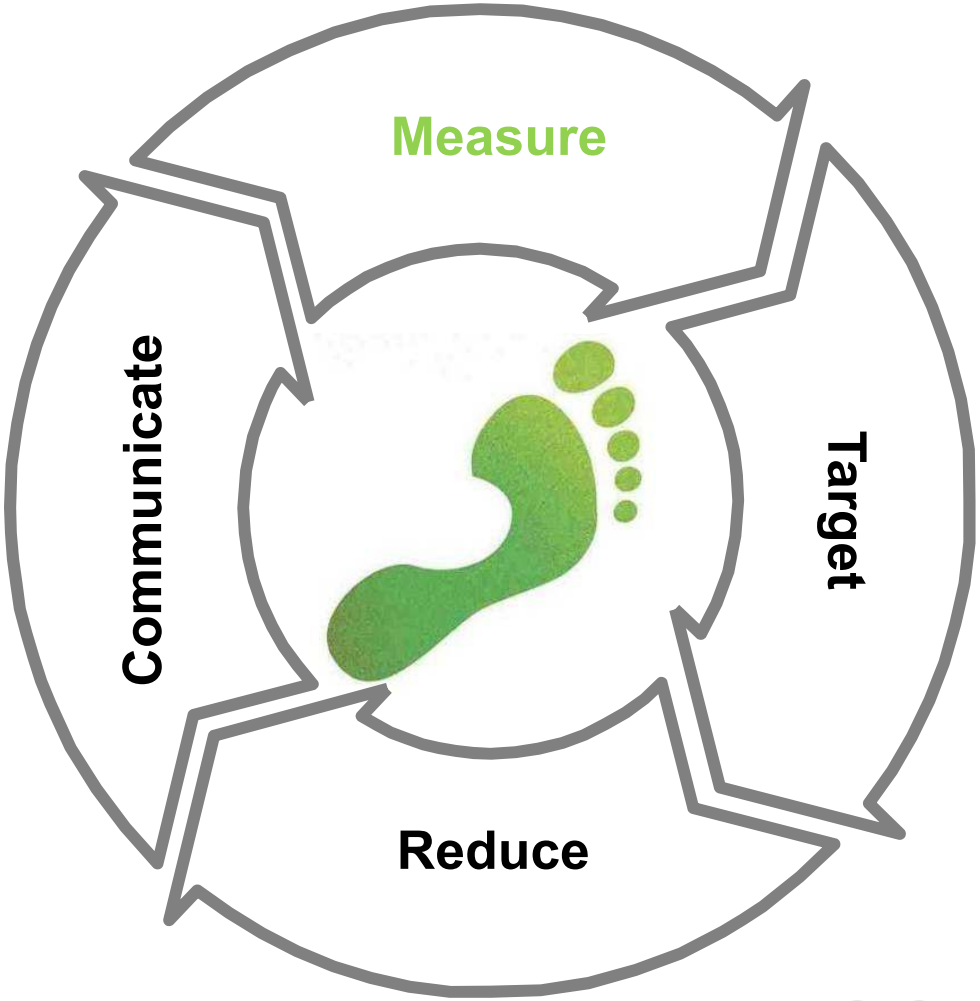
Corporate Carbon Management

Measure GHG emissions using internationally acknowledged guidelines (greenhouse gas emissions inventories)

Target GHG emissions reductions: set a reduction target

Reduce GHG emissions: implement reduction plan

Communicate: report emissions and emissions reduction plan and engage with stakeholders and peers to exchange best practices

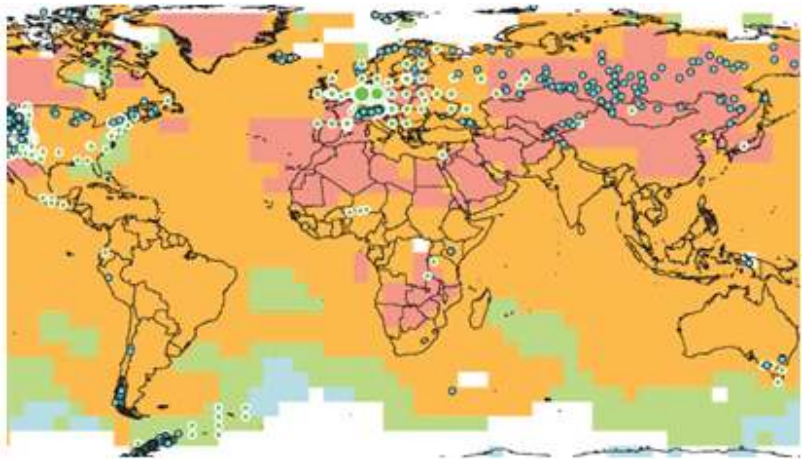


What is a carbon footprint?

- Total amount of greenhouse gas (GHG) emissions for which an individual or organisation is responsible
- Six major GHGs:
  - carbon dioxide (CO_2) – burning of coal, oil, etc.
  - methane (CH_4) and nitrous oxide (N_20) - farming, land use change
  - hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6) – industrial gases

What is a GHG emissions inventory?

- An accounting of the amount of greenhouse gases emitted to or removed from the atmosphere over a specific period of time
- The first step in building a carbon management plan providing the fundamental information in order to set a carbon reduction target
- Provides information on the activities that cause emissions



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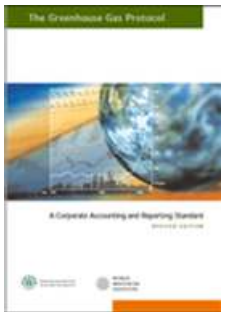
Benefits of GHG inventories

- Being proactive now will reduce your company's long term costs and risks
  - National policies, stakeholder pressure, heightened scrutiny by the insurance industry and shareholders
- A well-designed and maintained corporate GHG inventory can serve several business goals, including:
  - Improved understanding of your company's emissions profile
  - Resource efficiency
  - Transparency and engagement: public reporting and participation in voluntary GHG programmes (WWW Climate Savers, CCBF, CDP etc)
  - Profits: participating in GHG markets (UK Emissions Trading Scheme, EUETS, CCAR)

International Standards: The GHG Protocol Corporate Standard

- Developed by the World Resources Institute and World Business Council for Sustainable Development during a 5 year multi-stakeholder consultation
  - Most widely recognised and used international accounting tool for organizations and preferred tool of the Carbon Disclosure Project
  - Covers the six major GHGs of the Kyoto Protocol
  - Provides a number of industry specific calculation tools
  - To certain extent local guidelines can be incorporated
- Nearly two thirds of the FT500 are reporting on climate change issues and over half (63%) align with the GHG Protocol (CorporateRegister.com)



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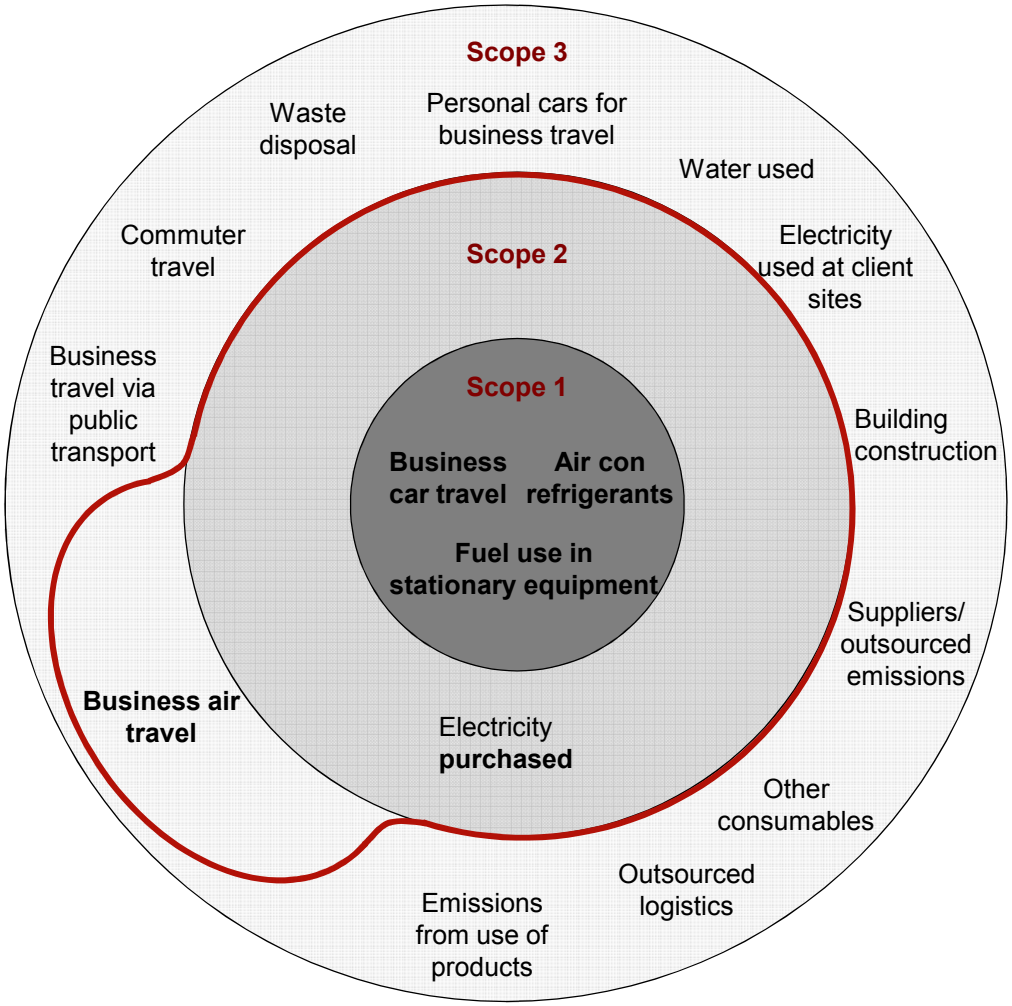
Developing an emissions inventory

Five main steps

- Step 1: Organisational boundaries - defining the parameters
- Step 2: Operational boundaries - setting the scope
- Step 3: Data collection
- Step 4: Data analysis
- Step 5: Evaluation of the emissions performance

Operational boundaries



- Operational boundaries must be set to better manage the full spectrum of GHG risks and opportunities that exist along the value chain
- Identifying emissions sources and setting the scope of the boundary
  - Scope 1 direct emissions = assets owned and/or operated
  - Scope 2 indirect emissions = purchase of electricity
  - Scope 3 indirect emissions = assets and operations not owned/controlled (optional)

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Examples of corporate carbon footprints

- Service-sector office-based companies
  - The largest amount of CO_2 emissions would most likely be from indirect CO_2 emissions attributable to the consumption of purchased electricity (scope 2) and indirect emissions from business air travel (scope 3)
  - Comparatively small carbon footprint but there is value for any company, no matter how small the impact, to be measuring its carbon emissions

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HSBC and SWIRE Pacific Ltd.

HSBC

- For calendar year 2007 for all companies over which operational control is exercised
- GHG Protocol
- Scope 1: 108.948 metric tonnes of CO_2e
- Scope 2: 595.178 metric tonnes of CO_2e
- Scope 3: 110.950 t (employee business travel), 3.550 t(external distributions)

SWIRE PACIFIC

- For calendar year 2007 and for group companies based on equity approach
- GHG Protocol and UK DEFRA
- Total global scope 1: 5.997.000 metric tonnes of CO_2e
- Total global scope 2: 300.647 metric tonnes of CO_2e

Best practice process steps

- Identify key resource persons and assign responsibilities
- Set base year to track emissions over time
- Use recognised standards
- Use local emission factors if available
- Be transparent (assumptions, estimations, exclusions, source of data)
- Develop and regularly up-date central database
- Be consistent in accounting approaches, inventory boundary and calculation methodologies
- Develop a road map if it is too daunting to do complete inventory – cost and time required will decrease with future inventories

Thanks!

For any more information, please contact

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