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www.ioew.at

Climate Change and CO2 Reporting

ISO 14064 and WBCSD

<http://www.klimawandel-global.de/klimawandel/kurzfilm-zum-thema-globale-erwärmung-reaktionen-im-tierreich/>

„Climate change is the single greatest challenge facing the global business community at the start of the 21st century“,
World Economic Forum, Davos, 2000.

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UN attacks climate change as threat to peace

Bloomberg News

UNITED NATIONS, New York: The United Nations Security Council on Tuesday opened its first meeting on global climate change as a threat to international political stability, with Britain hailing the debate as a landmark.

"This is a groundbreaking day in the history of the Security Council," Foreign Secretary Margaret Beckett of Britain told reporters. "What makes wars start — fights over water, changing patterns of rainfall, fights over food production, land use. There are few greater potential threats."

Britain, which this month holds the rotating presidency of the Security Council, called for the meeting, which was limited to security threats posed by climate change. Fifty-three nations are set to address the threat to peace and security created by new weather patterns. Questions such as how to stabilize greenhouse gas emissions won't be addressed.

Eleven days ago the UN Intergovernmental Panel on Climate Change forecast that global warming will cause extinctions to mount, water shortages to spread and droughts and floods to become more frequent as man-made emis-

sions of greenhouse gases warm Earth.

Sub-Saharan Africa, small island states and the major river deltas of Asia are among the most vulnerable areas, the UN panel reported on April 6. The panel said with high confidence that 75 million to 250 million more people in Africa will be exposed to water shortages, rain-dependent agricultural yields could fall by 50 percent by 2020 and the

'The issues of green and peace are inextricably intertwined.'

cost of adapting to changes brought on by global warming could be as much as 10 percent of economic output.

The IPCC on Feb. 2 said temperatures have risen by 0.76 degrees Celsius (1.37 Fahrenheit) since the 19th century, and will rise by 1.1 to 6.4 degrees this century. Global warming is "very likely" caused by human activities, such as emissions of carbon dioxide from burning fossil fuels, according to the panel.

The Security Council meeting "rep-

resents a coming of age and recognition that a failure to act now could see UN peacekeepers patrolling the climate change front line for centuries," Lon-

don-based Gre said in a statement. "It has been so obvious and peace are in and that they m

The meeting proposals, Beck the session to th to the Security C AIDS has since of Security Cou peacekeeping r of refugees and in the world's pe

The British ar Nations, Emyr J der disputes, r plies, resource s and humanitar which climate c international pe

At present, 35 pean Union ar Protocol, which emissions of g combined 5 pe rejected the tre

■ Slower U.S. emissions creep

U.S. emissions of carbon dioxide and other so-called greenhouse gases

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POLITIK

Als eine weitere Folge des Klimawandels

EU befürchtet neue Flüchtlingswellen!

New York/Wien. – Neue Flüchtlingswellen, Konflikte um Trinkwasser, Hungersnöte und Überschwemmungen befürchtet die EU als Folge des Klimawandels. „Die Erderwärmung ist eine Gefahr für den Weltfrieden“, sagt Englands Außenministerin Beckett und setzte das Thema auf die Agenda des UNO-Sicherheitsrates.

Und sie setzte damit – gegen den Widerstand der Veto-Mächte USA, China und Russland – ein wichtiges Signal, dass die EU sich auf allen Ebenen der UNO für

dass seine Folgen eine Gefahr für den Weltfrieden darstellen würden.

Als Vertreter der EU-Ratspräsidentschaft forderte der deutsche UNO-Botschafter Matussek, dass die Auswirkungen des Klimawandels auf Frieden und Sicherheit stärker beachtet werden.

VON CHRISTIAN HAUENSTEIN

den Kampf gegen die Erderwärmung einsetzen werde

Effects of global warming on the Alps



1900



2000

source: www.gletscherarchiv.de



Stern Report, 2008,

4. Assessment Report IPPC, 2008

- Emissions of greenhouse gases need to be half the level of 1990 till 2050 and than stabilized on a level below 10 Mrd. Tonnen Co₂- Äquivalent.
- This requires that the industrialized countries cut emissions till 2020 by 20 – 40 % and till 2050 by 80 %.

Kyoto Protocoll

NACHHALTIG *wirtschaften*

The **Kyoto Protocol** is a protocoll to the UN Framework convention on Climate Change (UNFCCC or FCCC), aimed at fighting global warming. The UNFCCC is an international environmental treaty with the goal of achieving "stabilization of greenhouse gas concentrations in the athmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."

The Protocol was initially adopted on 11 December 1997.

Kyoto Protocoll

NACHHALTIG *wirtschaften*

187 states have signed and ratified the protocol.

Under the Protocol, 37 industrialized countries commit themselves to a reduction of four greenhouse gases (GHG) (carbon dioxide, methane, nitrous oxide, sulphur hexafluoride) and two groups of gases (hydrofluorocarbons and perfluorocarbons) produced by them, and all member countries give general commitments.

Annex I countries agreed to reduce their collective greenhouse gas emissions by 5.2% from the 1990 level. The European Union has set itself a target of minus 8 %.

EU on track, only Austria fails to reach Kyoto target

NACHHALTIGwirtschaften

For several years Austria claimed to be forerunner in environmental protection. But now it is the only country out of the 15 „old“ EU countries to fail to reach its Kyoto target. The other countries will partly cut CO2 emissions even beyond their targets, shows a study of the European Union. Apart from the image loss this failor will also be expensive. Experts estimate that the purchase of CO2 emission certificates will cost Austria about 1 Billion Euros.

(derstandard, 13.11.2009)

Emission Cap and Trade

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Emissions trading (also known as **cap and trade**) is an approach used to control pollution by economic incentives for achieving reductions in the emissions of pollutants.

A central authority sets a limit or *cap* on the amount of a pollutant that can be emitted. Companies are issued emission permits and are required to hold an equivalent number of *allowances* (or credits) which represent the right to emit a specific amount. The total amount of allowances and credits cannot exceed the cap, limiting total emissions to that level.

Companies that need to increase their emission allowance must buy credits from those who pollute less. The transfer of allowances is referred to as a trade.

Emission Cap and Trade NACHHALTIGwirtschaften

In effect, the buyer is paying a charge for polluting, while the seller is being rewarded for having reduced emissions by more than was needed.

Thus, in theory, those who can reduce emissions most cheaply will do so, achieving the pollution reduction at the lowest cost to society.

There are active trading programs in several air pollutants. For greenhouse gases the largest is the European Union Emissions Trading Scheme. In the USA there is a national market to reduce acid rain and several regional markets in nitrogen oxides.

(source Wikidedia)

Joint Implementation (JI) NACHHALTIGwirtschaften

JI is one of three flexible mechanisms set forth in the Kyoto Protocol to help countries with binding greenhouse gas emissions targets (so-called Annex I countries) meet their obligations. Under JI, any Annex I country can invest in emission reduction projects in any other Annex I country as an alternative to reducing emissions domestically. In this way countries can lower the costs of complying with their Kyoto targets by investing in a country where reductions are cheaper, and then applying the credit for those reductions towards their commitment goal. Currently Russia and Ukraine are slated to host the greatest number of JI projects.

Clean Development Mechanism (CDM)

CDM is intended to meet two objectives: (1) to assist parties not included in Annex I in achieving SD; and (2) to assist parties included in Annex I in achieving compliance with their quantified emission limitation and reduction commitments

CDM allows Annex I countries to meet part of their caps using “credits” from CDM emission reduction projects in developing countries. This is subject to oversight to ensure that these emission reductions are real and “additional.” The CDM allows industrialized countries to invest in emission reductions wherever it is cheapest globally

Emissionszertifikatengesetz (EZG)

- Establishes the legal basis in Austria for emission certificates trading in the European scheme.
- Establishes the legal basis for the reduction of CO₂ emissions according to the Kyoto protocol of 1997.
- First version 30. April 2004

Emissionszertifikatengesetz (EZG)

- In the first and second trading period only production processes in defined industry sectors are included, primarily energy production, cement and bricks, steel, pulp and paper, airflights.
- The emission certificates were granted free of charge via the national implementation plans. Only surplus emissions have to be purchased, certificates above need may be traded.

Emissionszertifikatengesetz (EZG)

- The CO₂ emissions are not measured, but calculated from the inputs of energy carriers and raw materials for specific production processes (e.g. cement)
- Distinction between fossile and biogene CO₂
- In Austria, the certification of the CO₂ emission declaration of large emittants has to be performed by a team of a chemist, a process enineer and an accountant for verification of materials used for production and the interface with the accounting information system.

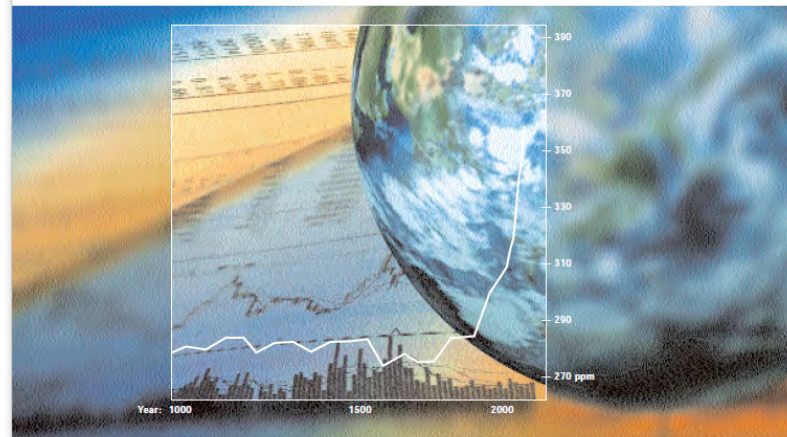
Part 1:

Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals

Part 2:

Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements

The Greenhouse Gas Protocol

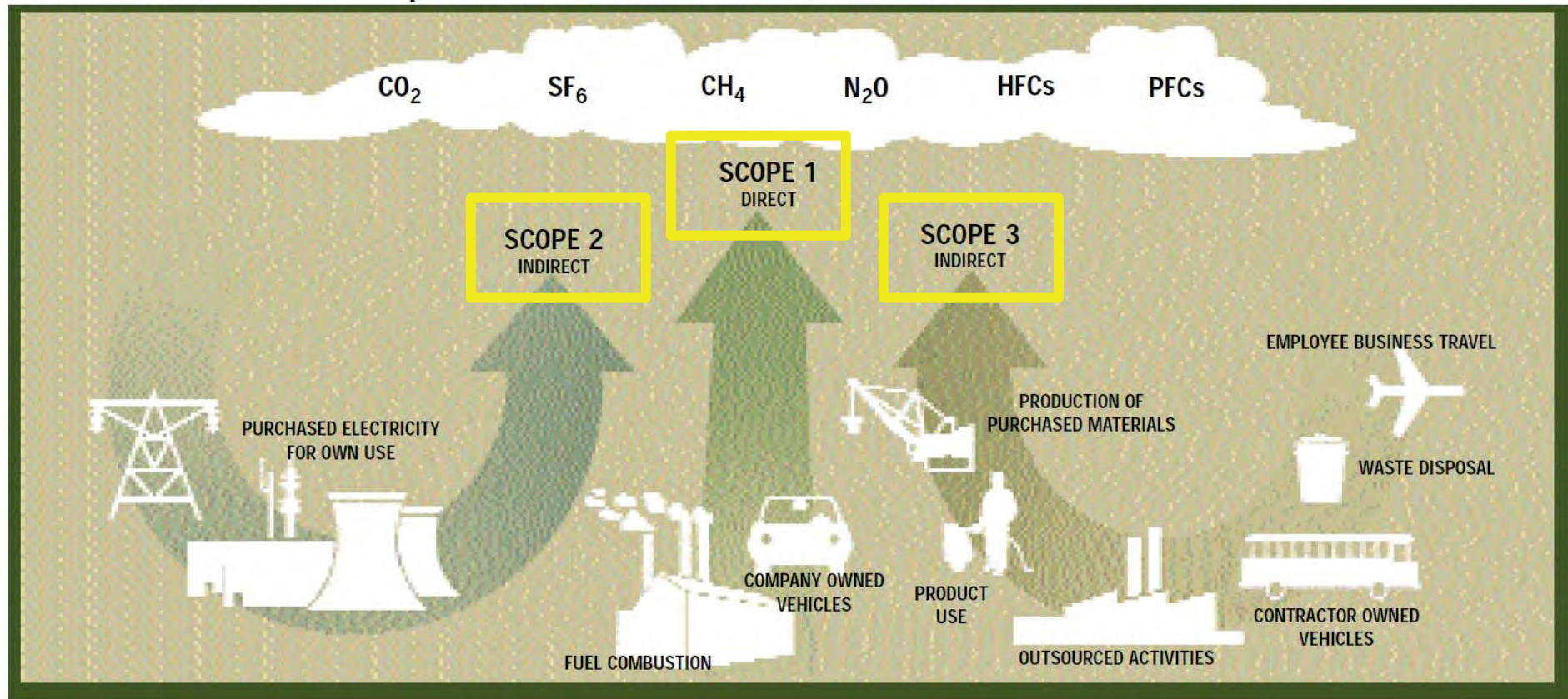


A Corporate Accounting and Reporting Standard

REVISED EDITION



FIGURE 3. Overview of scopes and emissions across a value chain



GHG Reporting ISO 14064, WBCSD

Scope 1: direct emissions from combustion and production processes

Scope 2: indirect emissions from purchased electricity mix

Scope 3: all other emissions, e.g. flights, products

Reported in CO₂-Equivalents

Carbon Disclosure Project

- The CDP is an independent not-for-profit organization holding the largest database of primary corporate climate change information in the world.
- Thousands of organizations from across the world's major economies measure and disclose their greenhouse gas emissions and climate change strategies through CDP.
- www.cdproject.net

Mahathma Gandhi:

- Be the change you want to see!

CO₂-PYRAMIDEN



Brug CO₂-pyramiden

- og hjælp Klimaenke til handling

For at hjælpe klimaet så du køber mest fra bunden af madpyramiden og mindst fra toppen.

I bunden ses de CO₂-lette produkter og i toppen de CO₂-tunge.

CO₂- god

CO₂- moderat

CO₂- tung

Det er udgangspunktet for at handle smart



Become Vegetarian !

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- The most environmentally damaging foods are: wine, beef, pork, rice, cheese, chicken, fish, ice cream, chocolate and sugar confectionery.
- The least environmentally damaging foods are: apples, white cabbage, potatoes, cauliflower, sugar, oil, fat, carrots, beer, Iceberg lettuce, Chinese cabbage and onions.
- (Nordic Folkecentre for renewable energy)
- Vegetables, Fruit and Bread carry about 0-2 kg CO² per Kg, while meat, fish, cheese and chocolate carry about 8 – 20 kg CO² per Kg. In general, it can be said that vegetarians use about 10 % of the CO² of carnivores.

Recommended pyramid

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What is green electricity?

- = production of electricity from renewable energy carriers
- This includes:
 - Water
 - Wind
 - Geothermal energy
 - Sun
 - Tidal energy (not available in Austria)
 - Liquid, gaseous or solid biomasse and
 - Sewage and Landfill gas
 - (In opposition to gas, coal and petrol)

What green electricity is subsidized in Austria?

- In Austria, production of electricity from wind, biomass and photovoltaic is being supported, also small hydropower plants. Larger hydropower plant can be run profitable without additional support.

Who provides green electricity?

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- AAE Naturstrom Vertrieb GmbH
- Anton Kittel Mühle Plaika GmbH
- BEWAG Vertrieb GmbH & Co KG
- ENAMO Ökostrom GmbH
- Kraftwerk Glatzing-Rüstorf reg. Gen.m.b.H.
- Linz Öko-EnergievertriebsGmbH
- Naturkraft Energievertriebsgesellschaft m.b.H.
- Oekostrom Vertriebs GmbH
- Stadtwerke Hartberg Energieversorgungs GmbH
- Unsere Wasserkraft
- Verbund
- VKW-Ökostrom GmbH
(as per March 2009 Quelle e-control)

Useful Links

- www.umweltberatung.at checklist for energy saving
- www.e-control.at lists Austrian electricity providers with costs and energy mix..
- www.energyagency.at lists consulting and funding options.
- www.climateaustria.at CO2 calculator and compensation in national and international projects
- Klima.orf.at : calculator for personal CO2 emissions and options for reduction
- www.germanwatch.org climate change index of the 53 countries with the highest CO2 emissions

Examination questions

- What is Austrias requirement under the Kyoto protocoll?
- What is the meaning of JI and CDM?
- How are CO2 Emissions calculated?
- How are CO2 Emissions reported according to ISO 14065?
- What is green electricity?