GLOSSARY

- Warm-blooded is a term to describe animal species which have a relatively higher blood temperature, and maintain thermal homeostasis primarily through internal metabolic processes. Examples: Mammals and birds.
- Cold-blooded is a term often used to refer to animals that do not use their metabolism to maintain body temperature. Examples: reptiles, insects, arachnids, amphibians and fish
- Aestivation is a state of animal dormancy, characterized by inactivity and a lowered metabolic rate that is entered in response to high temperatures and arid conditions. It takes place during times of heat and dryness, the hot dry season, which is often but not necessarily the summer months. Invertebrate and vertebrate animals are known to enter this state to avoid damage from high temperatures and the risk of desiccation. Both terrestrial and aquatic animals undergo aestivation.
- Hibernation is a state of inactivity and metabolic depression in animals, characterized by lower body temperature, slower breathing, and lower metabolic rate. Hibernating animals conserve food, especially during winter when food supplies are limited, tapping energy reserves, body fat, at a slow rate. It is the animal's slowed metabolic rate which leads to a reduction in body temperature and not the other way around.
- Reforestation Is the restocking of existing forests and woodlands which have been depleted
- > Afforestation is the establishment of a forest or stand of trees in an area where there was no forest
- > **Deforestation** Is the removal of a forest or stand of trees where the land is thereafter converted to a non forest use
- Agroforestry Is an integrated approach of using the interactive benefits from combining trees and shrubs with crops and livestock. It combines agricultural and forestry technologies to create more diverse, productive, profitable, healthy and sustainable land-use systems.
- ➤ Habitat fragmentation is the emergence of discontinuities (fragmentation) in an organism's

- preferred environment (habitat), causing population fragmentation.
- Habitat destruction The process in which natural habitat is rendered functionally unable to support the species present. In this process, the organisms which previously used the site are displaced or destroyed, reducing biodiversity
- ➤ Habitat conservation is a land management practice that seeks to conserve, protect and restore, habitat areas for wild plants and animals, especially conservation reliant species, and prevent their extinction, fragmentation or reduction in range
- Oligotrophic Lake is a lake with low primary productivity, the result of low nutrient content. These lakes have low algal production, and consequently, often have very clear waters, with high drinking-water quality
- ➤ Eutrophic lake is a lake has high primary, productivity due to excessive nutrients and is subject to algal blooms resulting in poor water quality. The bottom waters of such bodies are commonly deficient in oxygen, ranging from hypoxic to anoxic.
- Mesotrophic lakes is a lake with an intermediate level of productivity, greater than oligotrophic lakes, but less than eutrophic lakes. These lakes are commonly clear water lakes and ponds with beds of submerged aquatic plants and medium levels of nutrients
- > Mull soil is one characterised by large soil animals (especially plentiful earthworms), incorporation of organic matter through the topsoil and active bacterial decomposition.
- Mor soil is on the other hand characterised by smaller soil animals, the buildup of a litter layer on top and decomposition mainly led by fungi
- > Calcifuge is a plant that does not tolerate alkaline soil.
- > Calcicole or Calciphyte is a plant that does not tolerate acidic soil.
- ➤ Ecotopes are the smallest ecologically-distinct landscape features in a landscape mapping and classification system. As such, they represent relatively homogeneous, spatially-explicit

- landscape functional units that are useful for stratifying landscapes into ecologically distinct features for the measurement and mapping of landscape structure, function and change.
- Ecozones delineate large areas of the Earth's surface within which organisms have been evolving in relative isolation over long periods of time, separated from one another by geographic features, such as oceans, broad deserts, or high mountain ranges, that constitute barriers to migration
- Productivity or production refers to the rate of generation of biomass in an ecosystem.
- Photoheterotrophs are heterotrophic organisms that use light for energy, but cannot use carbon dioxide as their sole carbon source. Consequently, they use organic compounds from the environment to satisfy their carbon requirements. They use compounds such as carbohydrates, fatty acids and alcohols as their organic food
- Chemotrophs are organisms that obtain energy by the oxidation of electron donors in their environments
- Phototrophs are the organisms (usually plants) that carry out photosynthesis to acquire energy. They use the energy from sunlight to convert carbon dioxide and water into organic materials to be utilized in cellular functions such as biosynthesis and respiration.
- Hemotrophs are organisms that obtain energy by the oxidation of electron donors in their environments
- ➤ Lithotroph is an organism that uses an inorganic substrate to obtain reducing equivalents for use in biosynthesis or energy conservation via aerobic or anaerobic respiration
- ➤ Lithophiles are micro-organisms that can live within the pore interstices of sedimentary and even igneous rocks to depths of several kilometers.
- > Organotroph is an organism that obtains hydrogen or electrons from organic substrates
- Mixotroph is a microorganism that can use a mix of different sources of energy and carbon.
- Photic zone or Euphotic zone is the depth of the water in a lake or ocean that is exposed to sufficient sunlight for photosynthesis to occur.
- Biological pump is the sum of a suite of biologically-mediated processes that transport

- carbon from the surface euphotic zone to the ocean's interior.
- Standing crop is the quantity or total weight or energy content of the organisms which are in a particular location at a particular time.
- > Endolith is an organism that lives inside rock, coral, animal shells, or in the pores between mineral grains of a rock.
- Detritivores are heterotrophs that obtain nutrients by consuming detritus (decomposing organic matter). By doing so, they contribute to decomposition and the nutrient cycles. They should be distinguished from other decomposers, such as many species of bacteria, fungi and protists, unable to ingest discrete lumps of matter, instead live by absorbing and metabolising on a molecular scale. However, the terms detritivore and decomposer are often used interchangeably
- Carrying capacity of a biological species in an environment is the maximum population size of the species that the environment can sustain indefinitely, given the food, habitat, water and other necessities available in the environment
- Brackish water is water that has more salinity than fresh water, but not as much as seawater. It may result from mixing of seawater with fresh water.
- Gene pool is the complete set of unique alleles in a species or population
- Genetic erosion is a process whereby an already limited gene pool of an endangered species of plant or animal diminishes even more when individuals from the surviving population die off without getting a chance to meet and breed with others in their endangered low population.
- Bioterrorism is terrorism involving the intentional release or dissemination of biological agents. These agents are (bacteria, viruses, or toxins), and may be in a naturally occurring or a human-modified form.
- Bioleaching is the extraction of specific metals from their ores through the use of living organisms. This is much cleaner than the traditional heap leaching using cyanide. Bioleaching is one of several applications within bio hydrometallurgy and several methods are used to recover copper, zinc, lead, arsenic, antimony, nickel, molybdenum, gold, silver, and cobalt.

- Biochemical oxygen demand or B.O.D. is the amount of dissolved oxygen needed by aerobic biological organisms in a body of water to break down organic material present in a given water sample at certain temperature over a specific time period..
- Microclimate is a local atmospheric zone where the climate differs from the surrounding area. The term may refer to areas as small as a few square feet or as large as many square miles.
- Biopiracy is the theft of genetic materials especially plants and other biological materials by the patent process. Biopiracy is a situation where indigenous knowledge of nature, originating with indigenous people, is exploited for commercial gain without permission from and with no compensation to the indigenous people themselves.
- BioWeb is the connotation for a network of webenabled biological devices (e.g. trees, plants, and flowers) which extends an internet of things to the Internet of Living Things of natural sensory devices. The BioWeb devices give insights to real-time ecological data and feedback to changes in the environment
- Biomass is the amount of living or organic matter present in an organism. Biomass pyramids show how much biomass is present in the organisms at each tropic level, while productivity pyramids show the production or turnover in biomass.
- Ecological footprint is a measure of human demand on the Earth's ecosystems. It is a standardized measure of demand for natural capital that may be contrasted with the planet's ecological capacity to regenerate
- Algal bloom is a rapid increase or accumulation in the population of algae in an aquatic system. Algal blooms may occur in freshwater as well as marine environments.
- Carbon footprint is a measurement of all greenhouse gases we individually produce and has units of tonnes (or kg) of carbon dioxide equivalent. A carbon footprint is made up of the sum of two parts, the primary footprint and the secondary footprint.
- ➤ The primary footprint is a measure of our direct emissions of CO₂ from the burning of fossil fuels including domestic energy consumption and transportation (e.g. car and plane). We have direct control of these.

- ➤ The secondary footprint is a measure of the indirect CO₂ emissions from the whole lifecycle of products we use those associated with their manufacture and eventual breakdown. To put it very simply the more we buy the more emissions will be caused on our behalf.
- ➤ Carbon diet refers to reducing the impact on climate change by reducing greenhouse gas (principally CO₂) production, without lowering their standard of living
- Greenhouse debt or carbon debt is the measure to which an individual person, incorporated association, business enterprise, government instrumentality or geographic community exceeds its permitted greenhouse footprint and contributes greenhouse gases that contribute to global warming and climate change
- ➤ **Biocapacity** is the capacity of an area to provide resources and absorb wastes. When the area's ecological footprint exceeds its biocapacity, unsustainability occurs.
- Global hectare is a measurement of biocapacity of the entire earth - one global hectare is a measurement of the average biocapacity of all hectare measurements of any biologically productive areas on the planet.
- ➤ Carbon credit and carbon markets are a component of national and international attempts to mitigate the growth in concentrations of greenhouse gases (GHGs). One carbon credit is equal to one metric tonne of carbon dioxide, or in some markets, carbon dioxide equivalent gases. Carbon trading is an application of an emissions trading approach.
- Oil spill is a release of a liquid petroleum hydrocarbon into the environment due to human activity, and is a form of pollution. The term often refers to marine oil spills, where oil is released into the ocean or coastal waters
- Green conventions or green meetings are conventions which are conducted in ways which minimize the environmental burdens imposed by such activities. Green event planners apply environmentally preferred practices to waste management, resource and energy use, travel and local transportation, facilities selection, siting and construction, food provision and disposal, hotels and accommodations, and management and purchasing decisions.

- Gene banks help preserve genetic material, be it plant or animal. In plants, this could be by freezing cuts from the plant, or stocking the seeds. In animals, this is the freezing of sperm and eggs in zoological freezers until further need.
- Biobank is a cryogenic storage facility used to archive biological samples for use in research and experiments
- Xerosere is a plant succession which is limited by water availability. It includes the different stages in a xerarch succession. Xerarch succession of ecological communities originated in extremely dry situation such as sand deserts, sand dunes, salt deserts, rock deserts etc
- Earth Hour is a global event organized by WWF and is held on the last Saturday of March annually, asking households and businesses to turn off their non-essential lights and other electrical appliances for one hour to raise awareness towards the need to take action on climate change.
- Bioprospecting is an umbrella term describing the discovery of new and useful biological samples and mechanisms, typically in less-developed countries, either with or without the help of indigenous knowledge, and with or without compensation. In this way, bioprospecting includes biopiracy and also includes the search for previously unknown compounds in organisms that have never been used in traditional medicine.
- Poaching is the illegal taking of wild plants or animals contrary to local and international conservation and wildlife management laws. Violations of hunting laws and regulations are normally punishable by law and, collectively, such violations are known as poaching.
- Hunting is the practice of pursuing any living thing, usually wildlife, for food, recreation, or trade. In present-day use, the term refers to lawful hunting, as distinguished from poaching, which is the killing, trapping or capture of the hunted species contrary to applicable law.
- ➤ Wildlife includes all non-domesticated plants, animals and other organisms. Domesticating wild plant and animal species for human benefit has occurred many times all over the planet, and has a major impact on the environment, both positive and negative.

- Wildcrafting is the practice of harvesting plants from their natural, or "wild" habitat, for food or medicinal purposes. It applies to uncultivated plants wherever they may be found, and is not necessarily limited to wilderness areas. Ethical considerations are often involved, such as protecting endangered species.
- Conservation biology is the scientific study of the nature and status of Earth's biodiversity with the aim of protecting species, their habitats, and ecosystems from excessive rates of extinction.
- Extinction is the end of an organism or of a group of organisms (taxon), normally a species.
- ➤ Holocene extinction refers to the extinction of species during the present Holocene epoch (since around 10,000 BC
- Wildlife corridor or Green corridor is an area of habitat connecting wildlife populations separated by human activities (such as roads, development, or logging). This allows an exchange of individuals between populations, which may help prevent the negative effects of inbreeding and reduced genetic diversity (via genetic drift) that often occur within isolated populations.
- Biolink zones are a land use category developed for biodiversity conservation and landscape adaptation under changing climates
- Zero-emissions vehicle, or ZEV, is a vehicle that emits no tailpipe pollutants from the onboard source of power.
- Ocean de-oxygenation is a term that has been suggested to describe the expansion of oxygen minimum zones in the world's oceans as a consequence of anthropogenic emissions of carbon dioxide. Oceanographers and others have discussed what phrase best describes the phenomenon to non-specialists.
- Plasticulture refers to the practice of using plastic materials in agricultural applications. The plastic materials themselves are often and broadly referred to as "ag plastics." Plasticulture ag plastics include soil fumigation film, irrigation drip tape/tubing, nursery pots and silage bags, but the term is most often used to describe all kinds of plastic plant/soil coverings. Such coverings range fromplastic mulch film, row coverings, high and low tunnels, to plastic greenhouses.

Nanotoxicology is the study of the toxicity of nanomaterials. Because of quantum size effects and large surface area to volume ratio, nanomaterials have unique properties compared with their larger counterparts.

CLIMATE CHANGE -

- "Climate change" means a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.
- "Greenhouse gases" means those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation.
- "Source" means any process or activity which releases a greenhouse gas, an aerosol or a precursor of a greenhouse gas into the atmosphere.
- "Reservoir" means a component or components of the climate system where a greenhouse gas or a precursor of a greenhouse gas is stored.
- "Sink" means any process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas from the atmosphere.

Adaptation

Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

Adaptation Fund

- The Adaptation Fund was established to finance concrete adaptation projects and programmes in developing country Parties to the Kyoto Protocol that are particularly vulnerable to the adverse effects of climate change.
- ➤ The Adaptation Fund is financed from the share of proceeds on the clean development mechanism project activities and other sources of funding. The share of proceeds amounts to 2% of certified emission reductions (CERs) issued for a CDM project activity.
- The Adaptation Fund is supervised and managed by the Adaptation Fund Board (AFB). The AFB is composed of 16 members and 16 alternates and meets at least twice a year.

➤ Upon invitation from Parties, the Global Environment Facility (GEF) provides secretariat services to the AFB and the World Bank serves as trustee of the Adaptation Fund, both on an interim basis.

Adaptation Committee

- As part of the Cancun Adaptation Framework, Parties established the Adaptation Committee to promote the implementation of enhanced action on adaptation in a coherent manner under the Convention through the following functions:
- I. Providing technical support and guidance to the Parties
- II. Sharing of relevant information, knowledge, experience and good practices
- III. Promoting synergy and strengthening engagement with national, regional and international organizations, centres and networks
- IV. Providing information and recommendations, drawing on adaptation good practices, for consideration by the COP when providing guidance on means to incentivize the implementation of adaptation actions, including finance, technology and capacity-building
- V. Considering information communicated by Parties on their monitoring and review of adaptation actions, support provided and received

Alliance of Small Island States (AOSIS)

- An ad hoc coalition of low-lying and island countries.
- These nations are particularly vulnerable to rising sea levels and share common positions on climate change.
- > The 43 members and observers are American Samoa, Antigua and Barbuda, Bahamas, Barbados, Belize, Cape Verde, Comoros, Cook Islands, Cuba, Dominica, Dominican Republic, Federated States of Micronesia, Fiji, Grenada, Guam, Guinea-Bissau, Guyana, Haiti, Jamaica, Kiribati, Maldives, Marshall Islands, Mauritius, Nauru, Netherlands Antilles, Niue, Palau, Papua New Guinea, Samoa, Sao Tome and Principe, Seychelles, Singapore, Solomon Islands, St. Kitts & Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Timor-Leste, Tonga, Trinidad and Tobago, Tuvalu, US Virgin Islands, and Vanuatu.

Bali Action Plan (BAP)

Included in the Bali Road Map, agreed at the Conference of the Parties in Bali, Indonesia in 2007 (COP13), introduced AWG-LCA.

Bali Road Map

- ➤ The Bali Road Map was adopted at the 13th Conference of the Parties and the 3rd Meeting of the Parties in December 2007 in Bali.
- The Road Map is a set of a forward-looking decisions that represent the work that needs to be done under various negotiating "tracks" that is essential to reaching a secure climate future.
- ➤ It includes the Bali Action Plan, which charts the course for a new negotiating process designed to tackle climate change, with the aim of completing this by 2009.
- ➤ It also includes the AWG-KP negotiations, the launch of the Adaptation Fund, the scope and content of the Article 9 review of the Kyoto Protocol, as well as decisions on technology transfer and on reducing emissions from deforestation.

Biomass fuels or biofuels

- > A fuel produced from dry organic matter or combustible oils produced by plants.
- These fuels are considered renewable as long as the vegetation producing them is maintained or replanted, such as firewood, alcohol fermented from sugar, and combustible oils extracted from soy beans.
- > Their use in place of fossil fuels cuts greenhouse gas emissions because the plants that are the fuel sources capture carbon dioxide from the atmosphere.

Carbon market

- A popular (but misleading) term for a trading system through which countries may buy or sell units of greenhouse-gas emissions in an effort to meet their national limits on emissions, either under the Kyoto Protocol or under other agreements, such as that among member states of the European Union.
- The term comes from the fact that carbon dioxide is the predominant greenhouse gas, and other gases are measured in units called "carbondioxide equivalents."

Cartagena Group

- A collection of 27 countries seeking ambitious outcomes from the UNFCCC process and low carbon domestic output. Founded in 2010.
- Participating countries include Antigua and Barbuda, Australia, Bangladesh, Belgium, Colombia, Costa Rica, Ethiopia, France, Germany, Ghana, Indonesia, Malawi, Maldives, Marshall Islands, Mexico, Netherlands, New Zealand, Norway, Peru, Samoa, Spain, Tanzania, Thailand, Timor-Leste, Uruguay, UK and the European Commission.

Certified emission reductions (CER)

- ➤ A Kyoto Protocol unit equal to 1 metric tonne of CO₂ equivalent. CERs are issued for emission reductions from CDM project activities.
- > Two special types of CERs called temporary certified emission reduction (tCERs) and long-term certified emission reductions (lCERs) are issued for emission removals from afforestation and reforestation CDM projects.

Clean Development Mechanism (CDM)

A mechanism under the Kyoto Protocol through which developed countries may finance greenhouse-gas emission reduction or removal projects in developing countries, and receive credits for doing so which they may apply towards meeting mandatory limits on their own emissions.

"CO2 equivalent"?

- ➢ GHG emissions/removals can be expressed either in physical units (such as grams, tonnes, etc.) or in terms of CO₂ equivalent (grams CO₂ equivalent, tonnes CO₂ equivalent, etc.).
- The conversion factor from physical units to CO₂ equivalent is the Global Warming Potential (GWP) of the corresponding GHG.
- If X Gg of CH₄ is to be expressed in terms of CO2 equivalent, then it is multiplied by 21, which is GWP of CH₄ over 100 years timescale.

Coalition for Rainforest Nations

- A voluntary grouping of largely developing nations with rainforests which addresses issues surrounding environmental sustainability specific to tropical rainforests.
- Participation does not necessarily imply that countries adhere to any specific domestic policies or negotiating positions within the international context.

- At September 2011, the group included Argentina, Bangladesh, Belize, Cameroon, Central African Republic, Chile, Congo, Costa Rica, Cote d'Ivoire, DR Congo, Dominica, Dominican Republic, Ecuador, Equatorial Guinea, El Salvador, Fiji, Gabon, Ghana, Guatemala, Guyana, Honduras, Indonesia, Jamaica, Kenya, Lesotho, Liberia, Madagascar, Malaysia, Nicaragua, Nigeria, Pakistan, Panama, Papua New Guinea, Paraguay, Samoa, Sierra Leone, Solomon Islands, Suriname, Thailand, Uruguay, Uganda, Vanuatu and Vietnam.
- Countries participate on a voluntarily basis primarily through unified negotiating positions, workshops and collaborative programs.

Emission reduction unit (ERU)

A Kyoto Protocol unit equal to 1 metric tonne of CO₂ equivalent. ERUs are generated for emission reductions or emission removals from joint implementation projects.

Emissions trading

- One of the three Kyoto mechanisms, by which an Annex I Party may transfer Kyoto Protocol units to, or acquire units from, another Annex I Party.
- An Annex I Party must meet specific eligibility requirements to participate in emissions trading.

Fugitive fuel emissions

Greenhouse-gas emissions as by-products or waste or loss in the process of fuel production, storage, or transport, such as methane given off during oil and gas drilling and refining, or leakage of natural gas from pipelines

Global warming potential (GWP)

An index representing the combined effect of the differing times greenhouse gases remain in the atmosphere and their relative effectiveness in absorbing outgoing infrared radiation.

Greenhouse gases (GHGs)

- The atmospheric gases responsible for causing global warming and climate change. The major GHGs are carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N20).
- Less prevalent --but very powerful -greenhouse gases are hydrofluorocarbons

(HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF6).

"Hot air"

Refers to the concern that some governments will be able to meet their targets for greenhousegas emissions under the Kyoto Protocol with minimal effort and could then flood the market with emissions credits, reducing the incentive for other countries to cut their own domestic emissions.

Intergovernmental Panel on Climate Change (IPCC)

- Established in 1988 by the World Meteorological Organization and the UN Environment Programme, the IPCC surveys world-wide scientific and technical literature and publishes assessment reports that are widely recognized as the most credible existing sources of information on climate change.
- The IPCC also works on methodologies and responds to specific requests from the Convention's subsidiary bodies. The IPCC is independent of the Convention.

Land use, land-use change, and forestry (LULUCF)

A greenhouse gas inventory sector that covers emissions and removals of greenhouse gases resulting from direct human-induced land use, land-use change and forestry activities.

Least Developed Countries Fund

- The LDCF was established to support a work programme to assist Least Developed Country Parties (LDCs) carry out, inter alia, the preparation and implementation of national adaptation programmes of action (NAPAs).
- The Global Environment Facility (GEF), as the entity that operates the financial mechanism, has been entrusted to operate this fund.

Protocol

- An international agreement linked to an existing convention, but as a separate and additional agreement which must be signed and ratified by the Parties to the convention concerned.
- Protocols typically strengthen a convention by adding new, more detailed commitments.

Quantified Emissions Limitation and Reduction Commitments (QELROs)

Legally binding targets and timetables under the Kyoto Protocol for the limitation or reduction of greenhouse-gas emissions by developed countries.

Registries, registry systems

- Electronic databases that tracks and records all transactions under the Kyoto Protocol's greenhouse-gas emissions trading system (the "carbon market") and under mechanisms such as the Clean Development Mechanism.
- "Registry" may also refer to current discussions on a system for inscribing nationally appropriate mitigation actions.

Rio Conventions

- Three environmental conventions, two of which were adopted at the 1992 "Earth Summit" in Rio de Janeiro: the United Nations Framework Convention on Climate Change (UNFCCC), and the Convention on Biodiversity (CBD), while the third, the United Nations Convention to Combat Desertification (UNCCD), was adopted in 1994.
- ➤ The issues addressed by the three treaties are related -- in particular, climate change can have adverse effects on desertification and biodiversity -- and through a Joint Liaison Group, the secretariats of the three conventions take steps to coordinate activities to achieve common progress.

Rio+20

- The United Nations Conference on Sustainable Development, to be held in Rio de Janeiro, Brazil, on June 4-6, 2012.
- The first UN Conference on Sustainable Development was the "Earth Summit", held in 1992, and it spawned the three "Rio Conventions"-- the UNFCCC, the UNCCD, and the UNCBD.

Special Climate Change Fund (SCCF)

The Special Climate Change Fund (SCCF) was established under the Convention in 2001 to finance projects relating to: adaptation; technology transfer and capacity building;

- energy, transport, industry, agriculture, forestry and waste management; and economic diversification.
- ➤ The Global Environment Facility (GEF), as an operating entity of the financial mechanism, has been entrusted to operate the SCCF.

"Spill-over effects" (also referred to as "rebound effects" or "take-back effects")

- Reverberations in developing countries caused by actions taken by developed countries to cut greenhouse-gas emissions.
- For example, emissions reductions in developed countries could lower demand for oil and thus international oil prices, leading to more use of oil and greater emissions in developing nations, partially off-setting the original cuts.
- ➤ Current estimates are that full-scale implementation of the Kyoto Protocol may cause 5 to 20 per cent of emissions reductions in industrialized countries to "leak" into developing countries.

Umbrella group

- ➤ A loose coalition of non-European Union developed countries formed following the adoption of the Kyoto Protocol.
- Although there is no formal membership list, the group usually includes Australia, Canada, Iceland, Japan, New Zealand, Norway, the Russian Federation, Ukraine, and the United States.

2 degrees C goal

- ➤ A 2 degrees Celsius/Centigrade rise in global temperatures from pre-industrial levels is the highest rise we can afford if we want a 50% chance of avoiding the worst effects of climate change.
- ➤ The current concentration of carbon dioxide in the atmosphere is 370 parts per million
- ➤ The concentration of carbon dioxide equivalent in the atmosphere that the world must stay at or under to stay true to the 2 degrees Celsius goal is 450 parts per million.



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