International Labour Office
Policy Integration Department

The social and decent work dimensions of a new Agreement on Climate Change

A Technical Brief

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June 2009

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Introduction

The purpose of this brief is to highlight the close inter-linkages between climate change and the world of work. It aims to promote a better understanding between both spheres and greater coherence between climate, social and labour policies.

The significant impact of climate change on development, on production and consumption patterns and thus on enterprises, labour markets and workers is increasingly recognized. Similarly, it is becoming clear that in order to succeed, measures to protect the climate and to adapt to climate change will require active support and engagement of millions of employers and workers. These insights about the inter-relations have yet to translate into more coherent policies. This is particularly true for the new global agreement on climate which does not sufficiently reflect the social dimensions of climate change, of measures to adapt and to prevent dangerous climate change. This brief identifies the most relevant issues for policy coherence and ways in which this gap could be bridged.

The brief is addressed to the world of work, ministries of labour, representatives of employers' and workers' organizations as well as experts and policy makers on climate change.

The brief contains brief summaries of the ***state of knowledge about climate change***, the mechanisms and the effects and of the repercussions for the world of work. It introduces salient features of the present international climate regime such as the ***UN convention and the Kyoto Protocol*** and of the ***current negotiations*** to arrive at a new global agreement in Copenhagen in December 2009.

The core of the brief is a discussion of entry points for promoting policy coherence between climate and social and labour policies. The brief concludes with a ***glossary of frequently used technical terms*** and a guide to ***key sources and resources*** of information.

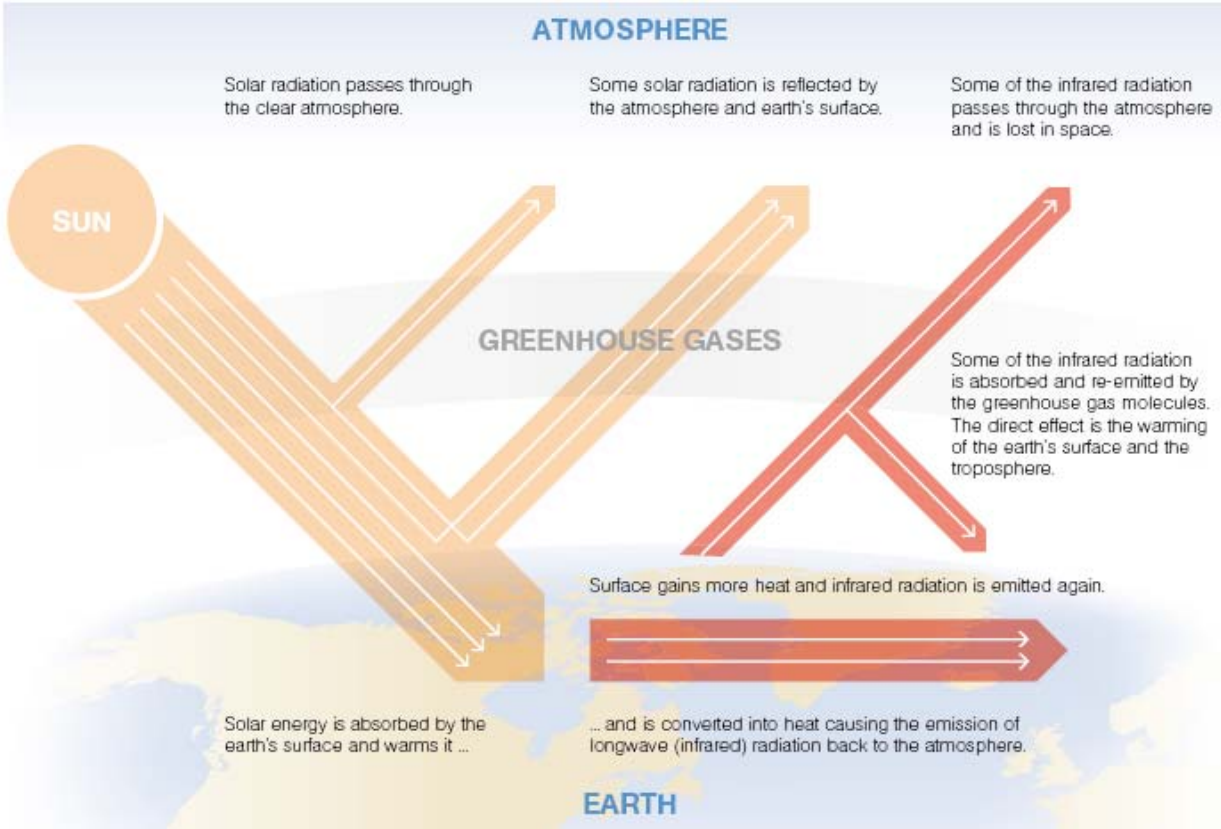
The brief has made use of texts and illustrations from the publication "Uniting on Climate change: A guide to the Climate Change Convention and Kyoto Protocol" published by the United Nations Framework Convention on Climate Change (UNFCCC) in 2007, the UNFCCC's website, the Intergovernmental Panel on Climate Change (IPCC) and the documents and discussions at the International Labour Conference 2007 as well as the ILO Governing Body in November 2007 and November 2008.[1]

[1] See last section on key information resources.

1. Climate Change: the scientific basis in a nutshell[2]

Greenhouse gases and the greenhouse effect

The world's climate has always varied naturally but compelling evidence from around the world indicates that a new kind of climate change is now under way, foreshadowing drastic impacts on people, economies and ecosystems. Levels of carbon dioxide and other 'greenhouse gases' in the atmosphere have risen steeply during the industrial era owing to human activities like fossil fuel use and deforestation, spurred on by economic and population growth. Like a blanket round the planet, greenhouse gases trap heat energy in the Earth's lower atmosphere (see below). If levels rise too high, the resulting overall rise in air temperatures – global warming – is liable to disrupt natural patterns of climate.



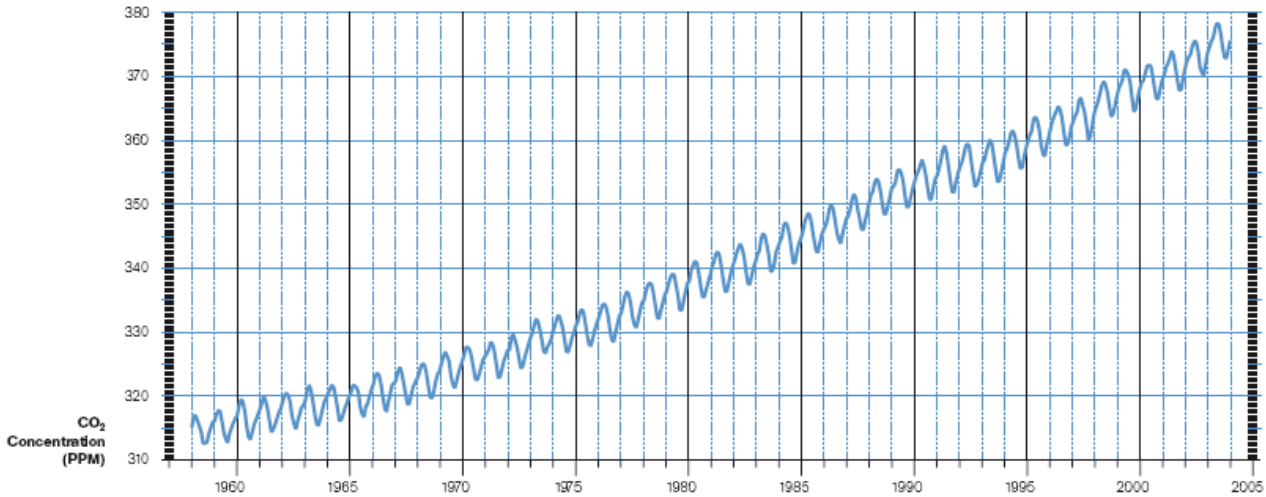
In its Fourth Assessment Report, the Intergovernmental Panel on Climate Change (IPCC)[3] concluded that the evidence that climate change is already occurring is unequivocal and is due in large part to human activity.

[2] Source of the section, "Uniting on Climate. A guide to the Climate Change Convention and the Kyoto Protocol", 2007

[3] The Intergovernmental Panel on Climate Change (IPCC) is a scientific intergovernmental body set up by the World Meteorological Organization (WMO) and by the United Nations Environment Programme (UNEP) provide the decision-makers and others interested in

The IPCC says the world faces an average temperature rise of around 3°C this century if greenhouse gas emissions continue to rise at their current pace and are allowed to double from their pre-industrial level. The impacts of this climate change, particularly temperature increases, are already being witnessed on natural and human systems around the world and are very likely to increase.

Figure I-2. **Carbon dioxide in the atmosphere, Records from Mauna Loa, Hawaii (in parts per million by volume) show how CO_2 concentrations in the atomspere have increased since accurate records began.**



Source: Keeling and Whorf 2001 in Global Environment Outlook 3 (UNEP/Earthscan Publication 2002)

The provisions of the United Nations Framework Convention on Climate Change (UNFCCC) concern all greenhouse gases not covered by the 1987 Montreal Protocol[4]. Reduction targets under the Kyoto Protocol, however, concern only the following six:

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur hexafluoride (SF_6)

The first three are estimated to account for 50, 18 and 6 per cent, respectively, of the overall global warming effect arising from human activities. Although these gases are naturally occurring, their emissions have increased dramatically over the past two centuries due to human activities. CO_2 is produced in large quantities from the consumption of energy from burning fossil fuels, and deforestation. CH_4 and N_20 emissions are produced mainly from agricultural activities. The HFCs and PFCs are used as replacements for

climate change with an objective source of information about climate change. http://www.ipcc.ch/

[4] Protocol to the United Nations Convention on Protection of the Ozone Layer http://ozone.unep.org/

ozone-depleting substances such as chlorofluorocarbons (CFCs) currently being phased out under the Montreal Protocol. SF_6 is used in some industrial processes and in electric equipment.

Evidence of Climate Change[5]

Warming follows emissions with a long time lag due to buffering by the oceans and because some GHG are long lived. The world will experience further climate change even if emissions stop today, albeit to a much lesser extent than otherwise. Adaptation to climate change in an effort to buffer its negative impacts is therefore inevitable.
Most impacts in the short to medium term will neither come from rising mean temperatures nor from rising sea levels, but rather from increased variability of weather and more frequent and extreme events like storms, droughts, floods and heat-waves.

More extreme weather

Numerous long-term changes in the climate have been observed, including extreme weather such as droughts, heavy precipitation, heat waves and the intensity of tropical cyclones.

Trends towards more powerful storms and hotter, longer dry periods have been observed. Warmer temperatures mean greater evaporation, and a warmer atmosphere is able to hold more moisture -- hence there is more water aloft that can fall as precipitation. Similarly, dry regions are apt to lose still more moisture if the weather is hotter; this exacerbates droughts and desertification.

The frequency of heavy precipitation events has increased over most land areas. Significantly increased precipitation has been observed in eastern parts of North and South America, northern Europe and northern and central Asia. There is also observational evidence for an increase of intense tropical cyclone activity in the North Atlantic since about 1970.

Drying has also been observed over large regions, i.e. the Sahel, the Mediterranean, southern Africa and parts of southern Asia. In Africa's large water catchment basins of Niger, Lake Chad, and Senegal, total available water has decreased by 40 to 60 per cent, and desertification has been worsened by lower average annual rainfall, runoff, and soil moisture, especially in southern, northern, and western Africa.

The decline of winter

Average Arctic temperatures increased at almost twice the global rate in the past 100 years. Temperatures at the top of the permafrost layer have generally increased since the 1980s by up to 3°C. In the Russian Arctic,

[5] Source of the section: “Uniting on Climate. A guide to the Climate Change Convention and the Kyoto Protocol”, 2007 and “Decent Work for Sustainable Development- The Challenge of Climate Change”, ILO Document for discussion in the Working Party on the Social Dimension of Globalization, ILO Governing Body 2007

buildings are collapsing because permafrost under their foundations has melted.

Snow cover has declined by some 10 per cent in the mid- and high latitudes of the Northern Hemisphere since the late 1960s. Mountain glaciers and snow cover have declined in both hemispheres and widespread decreases in glaciers and ice caps have contributed to sea level rise. New data evaluated by the IPCC shows that losses from the ice sheets of Greenland and Antarctica have very likely contributed to sea level rise from 1993 to 2003. The average global sea level rose at an average rate of 1.8 mm per year between 1961 and 2003, but between 1993 and 2003 it rose by 3.1 mm per year. The latest scientific findings on this issue show that changes in the polar ice sheets could raise sea levels by a metre or more by 2100. The implications could be severe since ten per cent of the world's population - about 600 million people - live in vulnerable areas.

Almost all mountain glaciers in non-polar regions retreated during the 20th century. The overall volume of glaciers in Switzerland has decreased by two-thirds.

Shifts in the natural world

Scientists have observed climate-induced changes in at least 420 physical processes and biological species or communities.

In the Alps, some plant species have been migrating upward by one to four meters per decade, and some plants previously found only on mountaintops have disappeared.

Across Europe, the growing season in controlled, mixed-species gardens lengthened by 10.8 days from 1959 to 1993. Butterflies, dragonflies, moths, beetles, and other insects are now living at higher latitudes and altitudes, where previously it was too cold to survive.

Impacts of climate change on regions and economic sectors

Developing countries have historically contributed least to emissions causing climate change but stand to suffer most because they are the most vulnerable and least able to adapt, particularly populated areas like the Asian mega-deltas, small island States, and Sub-Saharan Africa.

The economic sectors most dependent on the weather, such as agriculture and tourism, are likely to be most affected along with settlements and industry located in coastal and river flood plains as well as other areas prone to storms. By the middle of the century, freshwater shortages for more than 1 billion people in Asia are to be expected. Negative impacts on agriculture are already observed, particularly in Africa, where production will be severely compromised if emissions continue unabated.

In the medium to long term, projected climate change from current trends will lead to serious disruption of economic and social activity in many sectors on

all continents. The technical and economic potential to reduce emissions to levels of climate change considered tolerable exist. Mitigation, i.e. measures to reduce emissions or remove GHG from the atmosphere are both necessary and cheaper than inaction according to the IPCC and the Stern Review[6].

Emission trends and pathways to avert dangerous climate change

Global emissions of greenhouse gases have continued to rise during the last decade. In 2004 total emissions were 49 Gigatons[7] of CO_2 eq, up from 39.4Gt in 1990 (the reference year for the Kyoto Protocol). As a result, the concentration of CO2 in the atmosphere has risen faster in the last decade than at any time since continuous measurement began in 1960. If current trends were to continue, global temperatures can be expected to rise by a further 4-6 degrees Celsius by the end of the century, which would cause enormous damage.

Scientific scenarios show that deep and early cuts in emissions are essential to limit global warming to what are deemed manageable levels. The technology to achieve drastic cuts is available.

Mitigation: the potential to reduce greenhouse gas emissions

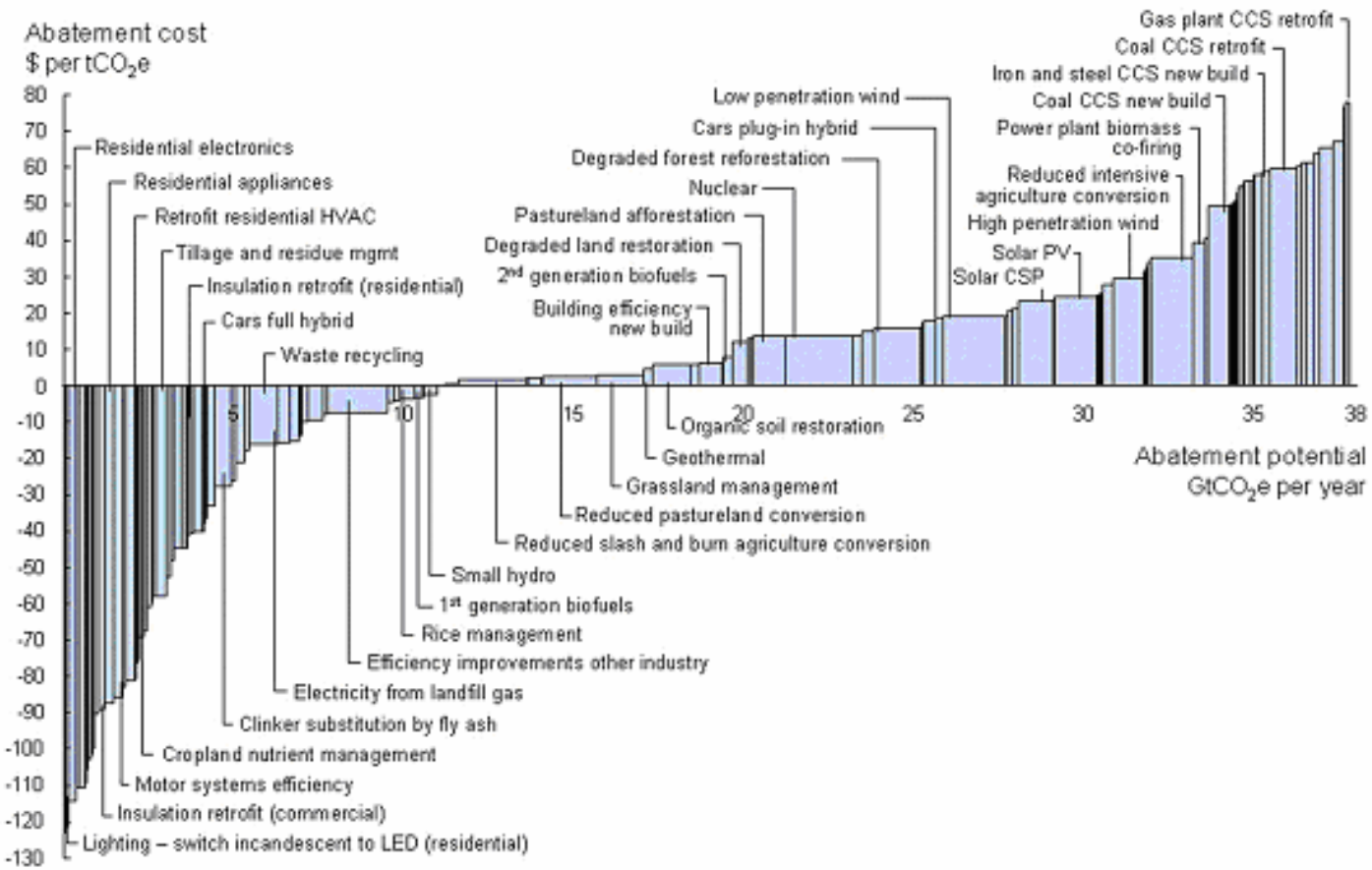
The total mitigation potential of existing technology is estimated at 16–30 Giga tonnes CO_2, enough to offset the projected increases in emissions and reduce concentrations of GHG below current levels. Mitigation potentials are significant in all sectors in both industrialized and developing countries. The highest potentials exist in the building sector, in agriculture and in industry.

The figure below shows the cost curve for greenhouse gas abatement by 2030. It plots the potential size of each reduction measures against the cost of the action. The cost of each reduction measure is shown on the vertical axis (US$ per ton avoided of greenhouse gas emissions) while the horizontal axis shows the amount of CO_2 eq. that can be avoided by the measure (gigatons of emissions per year). About 12 Gigatons of emissions reduction could be achieved at negative net cost and would thus actually be profitable. Another 15 Gigatons could be reduced at cost of less than $20/ton of CO_2.

[6] Stern Review: An analysis of the economics of climate change led by Sir Nicholas Stern, the former Chief Economist of the World Bank, known as the "Stern Review". A summary and the full text of the Stern Review are available at http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change /stern_review_report.cfm

[7] 1 Gigaton = 1^9 tons = 1 billion tons

Figure: Global cost curve for greenhouse gas abatement opportunities beyond business as usual. Greenhouse gas measured in Gigatons of CO_2equivalent.



Source: McKinsey Global Institute (2008)

2. Climate Change and the Word of Work

Climate change itself, adaptation to it and efforts to arrest it by reducing emissions have far-reaching implications for economic and social development, for production and consumption patterns and therefore for employment, incomes and poverty. These implications harbour both major risks and opportunities for decent work in all countries but particularly for the most vulnerable in the least developed and small island States.

Direct impacts

Climate change poses a threat to the achievement of the Millennium Development Goals (MDGs), including because of its effect on food security. A further MDG-related negative impact is on health which will also affect the workforce, particularly in developing countries. Another weather dependent sector is tourism where employment has been growing fast. In all three, agriculture, tourism and health, women are likely to be affected more than men.

In the absence of new social security systems, more frequent and severe natural disasters are likely to trigger or accelerate migration flows and could increase existing political tensions and instability. The response to such crises could help to make local societies more resilient if it aimed at adapting livelihoods rather than short-term disaster relief to return to the original situation.

Adaptation to climate change

Major investments in adaptation could offer significant employment and income opportunities in areas such as extending coastal defences, reinforcing buildings and infrastructure, water management and harvesting. Adaptation will require the transfer of numerous new technologies on a large scale. It will also involve the relocation of exposed settlements and industry. Adaptation in agriculture could have positive or negative impacts on employment and income depending on the labour inputs of new crops and farming practices and their compatibility with smallholder farming.

Mitigation of climate change

Energy efficiency gains have historically been one of the biggest contributors to reductions in emissions. They will require the transfer and deployment of new technology. Much of the capital stock of buildings and equipment is long lived and has slow renewal rates. The significant and often low-cost contributions from improvements in existing processes and facilities can only be achieved by the active involvement of managers and workers.

Gains in energy efficiency which do not require major investments will be particularly important for small and medium-sized enterprises. The IPCC emphasizes that these represent the bulk of employment and manufacturing capacity in developing countries. They account for half of the exports of China

for example. Approaches for reducing emissions without endangering competitiveness and employment will be particularly essential.

The transition to a greener economy

Existing studies agree that a transition to a low carbon economy should not be a “job killer” but rather lead to a net increase in employment. This typically small net gain in industrialized countries is, however, the result of major labour market transitions with substantial losses of some jobs more than compensated by increases in others. Most of these transitions are likely to take place within economic sectors such as power generation, energy-intensive industries or transport. Outcomes for labour markets and the climate will be best if these transitions are anticipated and managed with the active participation of employers and workers. An example of a tripartite mechanism to facilitate such transitions is the national sectoral round tables for the implementation of the Kyoto commitments in Spain.

All aspects of adaptation and of mitigation require new technical and often also entrepreneurial skills. Increases in energy efficiency and in renewables will be a big part of the equation. The IPCC emphasizes that both have significant potential to create new employment. This would be in “green jobs”. Examples of such green jobs include the hundreds of thousands of new employment opportunities created in wind and solar energy production in China and Spain, in the programmes to make existing buildings more energy efficient in Germany and in France as well as in the Brazilian bio-energy and recycling programmes.

In the climate debate employment only features marginally and is regarded as merely a “co-benefit” of mitigation measures. This view overlooks the fact that the benefits for employment and development are vital for making many mitigation measures technically feasible, economically viable and socially acceptable. Even emission reductions that can be achieved at no cost or with a benefit like some 30 per cent of emissions in buildings will not be realized without raising awareness, suitable incentives, investments in human resources and enterprises capable of carrying out the work.

Small-scale renewable energy for decentralized power generation for the 1.6 billion people who do not have access to modern forms of energy at the moment would be a major boost for development and poverty reduction through green jobs.

3. The International Climate regime: The United Nations Framework Convention on Climate Change (UNFCCC)

The Convention

The objective: preventing dangerous interference with the climate system

Parties met for the first time in February 1991 and adopted the United Nations Framework Convention on Climate Change, in 1992. The ultimate objective of the Convention is to stabilize atmospheric concentrations of greenhouse gases at a level that will prevent dangerous interference with the climate system.

The new Convention was opened for signature at the United Nations Conference on Environment and Development[8] (or Earth Summit) in Rio de Janeiro in June 1992 and entered into force in 1994. The Convention had been joined by 191 States and the European Community. This almost worldwide membership makes the Convention one of the most universally supported of all international environmental agreements.

The actors: governments ('parties') and other stakeholders

Negotiations of previous and future agreements are the exclusive prerogative of the Parties to the Convention. These are national governments and the European Union. They are typically represented by ministries of environment and foreign affairs.

All other stakeholders participate as observers. They include Inter-governmental Organizations such as the United Nations and the UN specialized agencies among which the ILO. The UN has developed a system-wide strategy to support member countries in the negotiations as well as in formulating and implementing policies related to climate change[9].

Civil society engages very actively with the climate change process through a number of accredited non-governmental observer organizations identified by acronyms:

- ENGOs: Environmental non-governmental organizations
- BINGOs: Business and industry non-governmental
- organizations
- TUNGOs: Trade Union non-governmental organizations
- RINGOs: Research and Independent Non-governmental Organisations

[8] http://www.un.org/geninfo/bp/enviro.html
[9] http://www.un.org/climatechange/pdfs/Acting%20on%20Climate%20Change.pdf

- LGMA: Local government and municipal authorities
- IPO: Indigenous peoples organizations

The contribution of observers has been recognized as vital. Observers attend sessions and exchange views with other participants, including negotiators. They provide experience, expertise, research results, information and perspectives which contribute to new insights and approaches for tackling complex problems. Their presence also promotes transparency. As observers, they have the opportunity to express their views on the different negotiation's items during opening and closing sessions. They may be given the floor during other sessions with the consent of the parties if time permits.

Three groups of countries under the Convention

The Convention divides countries into three main groups with differing commitments:

- **Annex I Parties**[10], which include the industrialized countries member of the OCDE in 1992 and countries with economies in transition. A requirement that affects only these countries is that they had pledged to adopt climate change policies and measures with the aim of reducing their greenhouse gas emissions to 1990 levels by the year 2000 and,

- **Annex II Parties**[11] consist of the OECD members of Annex I but not countries with economies in transition. They are required to provide financial resources to enable developing countries to undertake emissions reduction activities under the Convention and to help them adapt to adverse effects of climate change. In addition, they have to "take all practicable steps" to promote the development and transfer of environmentally friendly technologies to economies in transition parties and developing countries.

- **Non-Annex I Parties**, which are mostly developing countries. Certain groups of developing countries are recognized by the Convention as being especially vulnerable to the adverse impacts of climate change, including countries with low-lying coastal areas and those prone to desertification and drought. Others (such as countries that rely heavily on income from fossil fuel production and commerce) feel more vulnerable to the potential economic impacts of response measures to climate change which reduce greenhouse gas emissions.

  They are subject to general commitments to respond to climate change, the same that Annex I and Annex II Parties. They agree to compile an inventory of their greenhouse gas emissions and submit reports – known as national communications- on actions they are taking to implement the Convention.

[10] See glossary
[11] See glossary

Reporting on commitments and achievements
Central to the process is an imperative to share, communicate and respond to information by way of 'national communications'. These reports are compulsory for all countries and provide the means to monitor progress made by Parties in meeting their commitments and in achieving the Convention's ultimate objectives. The Convention emphasizes activities that promise to answer the special needs and concerns of vulnerable countries, such as investment, insurance and technology transfer. The 48 Parties classified as least developed countries (LDCs) by the United Nations are given special consideration under the Convention on account of their limited capacity to respond to climate change and adapt to its adverse effects.

The Kyoto Protocol

Binding commitments to reduced emissions
In December 1997 a substantial extension to the Convention that outlined legally binding commitments to emissions cuts was adopted at the third Conference of Parties (COP3) in Kyoto, Japan. The Kyoto Protocol entered into force on 16 February 2005[12]. The most notable elements of the Protocol are its binding commitments on Annex I Parties to limit or reduce greenhouse gas emissions, and its innovative mechanisms to assist these Parties in meeting their emission commitments.

During the so called 'first commitment period' 2008-2012, the developed countries parties to the Kyoto Protocol committed to a reduction of 5.2% of their greenhouse gas emissions compared to 1990 levels. This global target is broken down into specific targets for each country which can be substantially higher or lower than the global (see table below).

The Kyoto Protocol shares the objective of the Convention to stabilize atmospheric concentrations of greenhouse gases at a level that will prevent dangerous interference with the climate system.
The Kyoto Protocol builds upon and enhances many of the commitments already in place under the Convention and require Parties to:

- **Annex I Parties:** must undertake domestic policies and measures to reduce GHG emissions and to enhance removals by sinks. In implementing this commitment. Each Annex I Party must strive to minimize any adverse impact of these policies and measures on other Parties, particularly developing country Parties as well as provide additional financial resources to advance the implementation of commitments by developing countries.

[12] After at least 55 Parties to the Convention had ratified it, including enough industrialized countries listed in the Convention's Annex I to encompass 55 per cent of that group's carbon dioxide emissions in 1990.

- **Both Annex I and non-Annex I Parties must cooperate in the areas of:**
    - Development, application and diffusion of climate-friendly technologies;
    - Research on and systematic observation of the climate system;
    - Education, training, and public awareness of climate change;
    - The improvement of methodologies and data for greenhouse gas inventories.

Countries included in the Kyoto Protocol and their emissions targets

Country	**Target (1990** - 2008/2012)**
EU-15*, Bulgaria, Czech Republic, Estonia, Latvia, Liechtenstein, Lithuania, Monaco, Romania, Slovakia, Slovenia, Switzerland	-8%
US***	-7%
Canada, Hungary, Japan, Poland	-6%
Croatia	-5%
New Zealand, Russian Federation, Ukraine	0
Norway	+1%
Australia	+8%
Iceland	+10%

The 15 States who were EU members in 1990 will redistribute their targets among themselves, taking advantage of a scheme under the Protocol known as a "bubble", whereby countries have different individual targets, but which combined make an overall target for that group of countries. The EU has already reached agreement on how its targets will be redistributed.
** Some EITs have a baseline other than 1990.
*** The US has not ratified the Kyoto Protocol.
Note: Although they are listed in the Convention's Annex I, Belarus and Turkey are not included in the Protocol's Annex B as they were not Parties to the Convention when the Protocol was adopted.

Source UNFCCC

Innovative mechanisms to achieve targets

Unlike other multilateral environmental agreements, the Kyoto Protocol allows Annex I Parties to change the level of their allowed emissions over the commitment period through participation in the Kyoto Protocol mechanisms and enhancement of carbon sinks. The three mechanisms are joint implementation, the clean development mechanism and emissions trading[13].

Through these mechanisms, Parties may generate or acquire additional emission allowances, which are then added to the Party's assigned amount. These mechanisms are designed to boost the cost-effectiveness of climate change mitigation by opening ways for Parties to cut emissions, or enhance carbon 'sinks', more cheaply abroad than at home. Although the cost of limiting emissions or expanding removals varies greatly from region to region, the effect for the atmosphere is the same regardless where the action is taken.

The current commitment period under the Kyoto protocol expires in 2012. To sustain the efforts to reduce emissions and to provide a stable framework for carbon markets and investments into infrastructure, particularly for energy and power generation and allowing time for ratification by member countries, a successor agreement needs to be in place by the end of 2009.

[13] See glossary for explanation

4. Towards a new climate agreement: the Bali Road Map

From Bali 2007 to Copenhagen 2009

The Conference of the Parties at its thirteenth session (CoP 13) in Bali, Indonesia, (2007) adopted the Bali Action Plan (BAP)[14] and decided to launch "a *comprehensive process to enable the full, effective and sustained implementation of the Convention through long-term cooperative action, now, up and beyond 2012, in order to reach and adopt a decision at its fifteenth session*". The outcome, known as a future agreement, should be presented at COP 15 in Copenhagen in December 2009[15].

Four building blocks and a shared vision for a future agreement

The Bali Action Plan includes the four building blocks that will be part of the future agreement: enhanced adaptation, enhanced mitigation including emission reduction from deforestation and forest degradation, technology transfer and finance.

The BAP also contains an important paragraph about a *shared vision* for long-term cooperative action which will guide all countries to achieve the ultimate objective of the Convention. Countries have expressed that a statement on a shared vision for long-term cooperative action should communicate their political resolve to achieve their goals for enhanced action on adaptation, mitigation, technology and financing.

What makes the new agreement different from the Kyoto Protocol?

The new agreement will have two important differences in relation to the Kyoto Protocol:

- It will have been discussed among all countries which are party to the Climate Change Convention, including the USA. The future agreement is to include specific commitments to be fulfilled by all countries following the Principle of common but differentiated responsibilities and capabilities. Moreover, this will be the first time that a global and ambitious agreement is being guided by the findings of the scientific community.
- The new agreement is to provide for much deeper cuts in emissions. As recognized by the Bali Action Plan, the level of greenhouse gas emissions reduction required is much larger than the 5.2% of the Kyoto Protocol. A reduction of emissions by half by 2050 is deemed necessary for GHG concentrations in the atmosphere to remain below

[14] http://unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf#page=3

[15] COP 13 also decided that the process should be conducted under a Subsidiary Body under the Convention, the so-called Ad Hoc Working Group on Long-term Cooperative Action (AWG-LCA). Countries need on average two years to ratify a new agreement, in this regard and in order to prevent a gap between the KP period (2008-2012) and the new agreement, the accord should be finalized by the end of 2009.

450 ppm[16] CO_{2eq}[17]. It would result in a global warming of 2°C on average. This is considered the maximum concentration to avoid a substantial risk of unmanageable consequences and dangerous, possibly irreversible and self-reinforcing climate change. The reduction in emissions would take cuts of the order of 60–80 per cent in industrialized countries and still need 30 per cent lower levels in developing countries.

Stabilization scenarios show that a 450 ppm CO_{2eq} maximum requires global emissions to peak over the next 10–20 years. Making economic growth and development compatible with stabilizing the climate calls for "low carbon economies" worldwide.

[16] ppm: parts per million

[17] According to the IPCC's Fourth Assessment Report: Pages 39 and 90 of Technical Summary http://www.ipcc.ch/pdf/assessment-report/ar4/wg3/ar4-wg3-ts.pdf and page 776 of Chapter 13 http://www.ipcc.ch/pdf/assessment-report/ar4/wg3/ar4-wg3-chapter13.pdf.

5. Potential entry points for promoting coherence between social and labour policies and the future climate change agreement

The following chapter discusses the inter-linkages between social and labour issues and policies, climate change and the new agreement. It draws on the discussions at the Governing Body of the ILO in November 2007 and November 2008.

The relevant linkages are identified with respect to the shared vision and the four building blocks for the future agreement. Elements to be reflected in the future agreement in order to promote policy coherence are captured in a box at the end of each section.

A Shared-Vision for long-term Cooperative Action

Broad-based inclusive development and equity

The new agreement should be guided by the principle of equity. The new agreement should be an opportunity for countries to broaden access to employment and income opportunities created in the transition to low carbon economies, which are also resilient to climate change. The shared vision for long-term cooperative action should therefore provide a global framework for a just transition to a low-carbon, sustainable economy. This just transition framework should enhance the opportunities for development, for poverty reduction, for sustainable enterprises and access to decent work. This requires a strengthening of capacities and coherent policies to seize opportunities arising from mitigation and adaptation while reducing negative impacts in those countries, regions, sectors and social groups facing challenges.

Coherent Policies

In order to minimize the cost and negative impacts and to realize the potential benefits, environmental, economic and social policies and programmes need to be well informed, coherent, broadly supported and able to engage stakeholders -governments, representative of employer's, and workers' organizations- in social dialogue for the design and implementation of policies.

Respect for and protection of human rights, including labour rights, should form an integral part of polices and programmes on measures to adapt or to mitigate climate change.

Dialogue

Dialogue will also be essential for dealing with the downside of reducing emissions of greenhouse gases. Workers and entrepreneurs should be assured that a green environment for society does not mean an unemployment slip for them: re - training, social security schemes, active

labour market policies and programmes to diversify economies need to be put in place to soften the blow for them.

In order to turn the response to climate change into a development opportunity:

- The future agreement on climate change should include provisions to ensure a just transition to sustainable, low-carbon economies with access to opportunities for decent work and social protection for all whose livelihoods, incomes and employment are affected by the need to adapt to climate change and to reduce emissions to levels that avert dangerous climate change.
- The new agreement should encourage institutionalized formal involvement of stakeholders, particularly representative of workers' and employers' organizations, through their active participation in its formulation and implementation, in particular for a just transition to a low carbon economy.

Enhanced Action on Adaptation

Labour markets and livelihood vulnerability assessments
Labour market and livelihood vulnerability assessments will provide a good understanding of social, labour market and enterprise risks and vulnerability related to climate change and on the need for adaptation measures. Such a baseline is essential to quantify and qualify the needs for adaptation to climate change as well as to tailor interventions and allow monitoring of adaptation programs.

Socio-economic information
Climate related impacts often disrupt the functioning of local economies. The ability of enterprises to maintain or resume economic activity and people to earn an income will be crucial after a climate impact such as a storm, a flood or a drought. Vulnerability assessments should include socio-economic information on the structure of local economies in exposed parts of countries, including the size and nature of enterprises, main sources of employment and income, critical factors such as respect for human rights, including labour rights, coping strategies, access to credit and social networks.

Sectoral adaptation in a Local Economic Development approach
Embedding adaptation into sectoral and local economic development leads to more integrated and effective adaptation. It provides opportunities to actively engage sectoral and local stakeholders in design and implementation. Targeted training can help potentially affected individuals in sectors at risk to be able to find new activities in other economic sectors and allow households diversifying their sources of income in line with the adaptation strategies.

Building solid enterprises able to adapt to climate change

An important condition in reinforcing the capacity of an affected local economy to cope with climate change is the existence of a solid fabric of micro and small enterprises, able to adapt to a changing environment and flexible enough to resist shocks. Building and maintaining such a fabric requires:

- An enabling environment for SMEs and micro-enterprises.
- Targeting sensitive value chains.
- Capacity development programs and business development services in order to unleash the potential of local economy to adapt to the changing situation.
- Building up skills of workers and managers to identify and assess changes, to implement early warning systems, technical skills to improve and adapt technologies to changes and to diversify production.
- Support to local saving, micro-finance and banking as well as consolidating the local banking system, diffusion of microfinance programmes and developing financial risk-sharing mechanisms.
- Promotion of public-private partnerships to better engage the local private sector in adaptation to climate change programmes.
- Embedding of adaptation to climate change in local economic development rather than adaptation as a stand-alone goal and programme.
- Social dialogue among representatives of workers', employers' organizations and governments at all levels, in an institutionalized manner, to build consensus and enhance efficiency of measures to be taken, should be the base of any adaptation programme.

Strengthening and development of social security and safety nets

Social security and safety nets programmes have proven to be among the most important measures for enhancing economic resilience to climate change. Vulnerable sectors and areas need social protection programmes and safety nets to cushion the immediate impact of climate change, particularly in the informal economy.

Strengthening adaptability of individuals through improved skills

One of the most important measures for enhancing adaptability to climate change is to enhance employability of workers and job seekers through vocational training. Targeted training can help potentially affected individuals in being more flexible in the search for employment and allow households to diversify their sources of income. Targeted support to women and youth has to be considered.

In order for adaptation frameworks or programmes to enhance positive social and labour outcomes:

- Adaptation framework/programme should be based on labour market and livelihood vulnerability assessments, including in the informal economy. These assessments should be the base of the national adaptation plans.
- Ensuring that adaptation to climate change adequately addresses the need to increase resilience of enterprises and livelihoods and to diversify the economic activity.
- The adaptation priorities should be undertaken in a holistic and integrative manner and be consistent with current and future development planning while meeting the local needs.
- Workers and enterprises in highly vulnerable economic activities (rural areas, agriculture, and tourism) and vulnerable areas such as coastal zones and urban slums areas should be considered as particularly vulnerable groups and just transition measures for these populations and regions should be prioritized in the adaptation frameworks/programme. In this regard the national adaptation plans should articulate with relevant national polices including the Decent Work Country Programmes[18].
- Strengthening or creation of social security schemes and safety nets in order to reduce vulnerabilities and risks related to climate change events.
- In order to promote an enabling environment to support adaptation actions all countries should look at flexibility and protection to manage change. Sustainable enterprises[19] and economies must develop the ability to adapt to rapidly changing conditions in the marketplace. In order to support enterprises and their workers (women, men and youth) to cope with such challenges, governments should develop a legal and institutional framework, including labour regulation, social protection, active labour market policies and efficient employment services which also support enterprises' capacity to adapt. Such policies should be developed in full consultation with the social partners. Countries should also promote and facilitate micro-businesses and SMEs to promote diversification of household income sources through vocational and entrepreneurship training as well as active labour market policies.
- The involvement of social partners –governments, representatives of employers and worker' organizations- by strengthening existing institutions to deal also with adaptation policies, and creating new social dialogue frameworks at international, national and local levels should be part of planning and implementation of adaptation framework/programmes.

[18] http://www.ilo.org/public/english/bureau/program/dwcp/
[19] See ILO conclusions concerning the promotion of sustainable enterprises: http://www.ilo.org/dyn/empent/docs/F836599903/ILC96-VI-2007-06-0147-2-En.pdf

Enhanced Action on Mitigation by Developed and Developing Countries

Assessment of impacts on Labour Markets and Potential for Green Jobs
Mitigation measures can have significant positive as well as negative consequences for enterprises, workers and communities. Adequate ex-ante analysis of impacts on employment, incomes and local development should be conducted to maximize benefits and to anticipate the need for just transitions.

Good analysis of possible labour market impacts is therefore vital for the design of effective policies, including accompanying measures to smoothen the transition. A crucial tool to employ in analysis and policy making is social dialogue among those most affected by these transitions –workers, employers and governments - to work towards fair and efficient policies.

Opportunities and constraints for clean development, however. vary by country, region and sector. Millions of green jobs are already in existence in areas including renewable energy, energy efficiency and recycling; and their numbers are growing fast. While identifiable green jobs look set to be a growing source of employment and clean development into the future, greening of enterprises and redefining many jobs is a major challenge.

Employment Benefits of Mitigation Actions
While the IPCC report has emphasized the significant potential to create new employment through mitigation efforts, generally employment only features marginally in the climate debate as a “co-benefit” of these measures. This view overlooks the fact that the benefits for employment and development are vital for making mitigation measures technically feasible, economically viable, socially acceptable and politically sustainable.

Besides that, much environmental degradation is poverty-driven: reducing poverty through productive decent employment is an important route toward greater environmental sustainability. Economic growth at the expense of environmental quality is unsustainable and self-defeating even in narrow economic cost/benefit terms.

Greening enterprises
Individual enterprises can make a major contribution to reducing both emissions of greenhouse gases and the environmental footprint in general through labour-management initiatives resulting in greener workplaces. Gains are often quickly achieved, at a very low cost and without the need for major capital investment. This potential is barely mobilized.

Dialogue and knowledge-sharing on best practices
Countries could benefit from sharing knowledge and experience on social impact assessment and developing a shared methodology based on best practices. The approach used successfully for adaptation (the Nairobi Work Programme) could be a suitable method in this regard. The dialogue among those responsible for implementing the different policies and measures,

government, representative of workers' and enterprises' organizations, is crucial for the success of the climate regime.

Skill development and capacity buildings for workers, entrepreneurs and governments

The success of the whole range of mitigation policies and measures will depend on the capacities of those who need to respond and implement these decisions in enterprises and in society as a whole. An effective response to climate change needs to mobilize millions of entrepreneurs and workers. Skill development among employers and workers as well as capacity building among government and administration services will therefore play a major role in tackling climate change at all levels, national, regional, local and sectoral.

Successfully facing the challenge of climate change and achieving decent work will only be possible with the support of the key actors in the world of work. It will take governments with adequate institutional capacity as well as the current and future labour force skilled in low-carbon technologies and production methods. Finally, enterprises of all sizes need to be well informed about how to shift to a lower emission production while respecting workers' rights and enabling to them to contribute at their workplaces.

Active participation of employers and workers' organizations

Organizations of industry/employers and workers have an in-depth understanding of the technical options, human resource requirements as well as of the economic and social implications of mitigation measures. These stakeholders should actively participate in the design, implementation and monitoring of policies to reduce the cost, enhance the effectiveness, improve health and safety and maximize benefits in terms of employment. Sectoral organizations have an important role in facilitating just transitions for enterprises, workers and communities negatively affected by mitigation policies.

Key elements to effectively address mitigation needs in developed and developing countries and to turn them into an opportunity for decent work include:

Developed countries

- In order to assure a just transition to a low-carbon economy and anticipate transition measures, developed Parties should assess the impacts on enterprises and labour markets of their domestic and non-domestic actions, in terms of quantity (new opportunities, and job losses) and quality of employment in line with the ILO Decent Work Agenda[20].
- Recognizing the major role of individual enterprises for reducing greenhouse gas emissions, particularly domestically in developed countries.

[20] http://www.ilo.org/global/About_the_ILO/Mainpillars/WhatisDecentWork/lang--en/index.htm

- A section on labour and employment policies and programmes designed to facilitate the implementation of the mitigation commitments should be integrated in the mitigation plans.

Developing Countries

- In order to ensure a sustainable development, developing countries should assess the impacts on livelihoods, enterprises and labour markets of their Nationally Appropriate Mitigation Actions (NAMAS), in terms of quantity (new opportunities, and job losses) and quality of employment in line with the ILO Decent Work Agenda.
- Sustainable development and measures and low-emission development strategies and plans of NAMAS should specifically include the major role of workers and enterprises in their formulation, implementation and achievement.
- NAMAs committed by developing countries should include a section on labour policies and programmes meant to facilitate the mitigation objectives, technology, financing and capacity-building needs.

Both developed and developing countries

- Organizations of industry/employers and workers should actively participate in the design, implementation and monitoring of policies, plans, programmes and strategies, including the Clean Development Mechanism (CDM), to reduce the cost, enhance the effectiveness improve health and safety and maximize benefits in terms of employment.
- Institutions for bipartite and tripartite social dialogue should be an integral part of the set-up for the implementation of any mitigation effort.
- Building capacity of employers, workers and governments in line with the mitigation efforts to be part of the policies, plans, programmes and strategies related to mitigation, including the Clean Development Mechanism.

Economic and social consequences of response measures

Adverse effects on the following social parameters should be minimized, both domestically and in other countries:

- Volume of employment/unemployment
- Quality of employment
- Distributional effects of mitigation policies and protective and compensation measures
- Competitiveness of enterprises which will depend among others on: size, imports-exports, type of climate change regulation and incentives
- Social protection programmes and safety nets as a tool to reduce the adverse effects.

In order to clarify the complex effects it is necessary to:

- Develop an assessment methodology
- Establish clear guidelines to avoid negative spill-over effects of policies and measures.

- Institutionalized formal tripartite social dialogue at all levels
- Lessons learned and good practices sharing among those which are affected.

Policy approaches and positive incentives relating to reducing emissions from deforestation and forest degradation (REDD)[21] *in developing countries*

Generating employment and income opportunities for forest communities

The success of measures to reduce deforestation and forest degradation in developing countries will depend in large measure on the access to sustainable forest and land-use generating sufficient employment and income opportunities for forest dwellers and communities on the agricultural frontier. Policies should include measures to generate such opportunities and to channel incentives to communities which preserve and rehabilitate forests.

Rights of Indigenous Peoples and the ILO Convention 169

Care should be taken to promote the role and respect the rights of indigenous and tribal peoples in the conservation of forests as carbon sinks in line with the provisions of ILO Convention 169.

Emission reduction from deforestation and forest degradation will favour positive social and labour outcomes by:

- Policy approaches in the framework of reducing emissions from deforestation will include policies aiming at generating sufficient employment and income opportunities for forest dwellers and communities on the agricultural frontier.
- REDD activities should measure, report and verify the impacts on local communities, including indigenous people with respect to income, employment, migration and cultural identity.
- Capacity building should include local communities and indigenous peoples as well as medium-sized enterprises to ensure broad access to incentives for avoided deforestation and for the rehabilitation of degraded forests

[21] REDD: Reducing Emissions from Deforestation and Forest Degradation in Developing Countries

Enhanced action on financing, technology and capacity-building

Climate Change investments for social development

Investments into adaptation and mitigation can result in a quantum leap for economic and social development if the countries and the people who need them most are targeted: the 1.3 billion working poor, the 190 million unemployed and the 500 million new job seekers arriving on the labour market of developing countries and emerging economies over the next 10 years.

Special needs of small and medium-sized enterprises

The vast majority of enterprises in the world and the most important employers are small firms which may not possess either the financial wherewithal, either the information on climate change (or both) in order to adjust their business practices. Moving to a sustainable development trajectory therefore will require a particular focus on small enterprises.

Progress is very slow however, because vast numbers of individuals and enterprises are still excluded from clean development and need access to small loan and micro-finance schemes and to payments for environmental services. The financial mechanism needs to provide the volume required as well as the ability to target resource flows and overcome barriers to access including information and transaction costs.

Enabling technology transfer: building capacity of workers and enterprises

While most attention is focused on the development and transfer of existing and new technologies, experience demonstrates that access to technology and finance are necessary but not sufficient conditions for the successful deployment of technologies. Without qualified entrepreneurs and skilled workers, available technology and resources for investments can either not be used at all or cannot deliver the expected environmental benefits and economic returns or social justice. In this regard, the weakest link in the production chain will determine the level of performance that can be attained.

Mapping skill requirements

Creating a map of skill requirements is an urgent and vital first step as it can inform ad hoc programs for potential skills upgrading. In parallel, measures are needed to equip education and vocational training systems for coping with new skills demands and with the re-profiling of many existing jobs in low-emission economies.

Action on financing, technology and capacity building can be designed and formulated to achieve both environmental and decent work goals:

Enhanced action on the provision of financial resources and investment:

- Strengthen the role of public funding, including fiscal reorientation to ensure necessary funding to compensate those who suffer the most and help mobilize public support at the national level.
- Innovative institutions and mechanisms including micro-finance, with social criteria to better cope with those risks and damages caused by climate change, assuring the inclusion of vast number of individuals and enterprises currently excluded from financing.
- The financial mechanism of the future agreement and its provisions should pay special attention and be shaped to address the need of poor communities and micro, small and medium sized enterprises in vulnerable regions and countries.
- The national coordinating bodies to be established to address all aspects of the definition and implementation of climate change programme and projects (including those that have received technology, finance and capacity building assistance from developed countries) should include and count on the active participation of social partners, particularly representatives of workers' and employers' organizations and labour government's representatives.

Enhanced action on technology:

- The participation of local stakeholders, including local governments, representative of workers and employers' organizations, in the definition and implementation of the technology action plans is essential to identify the specific national needs in terms of technologies, policies, actions and funding.
- Regulatory frameworks for technology development, deployment, diffusion and transfer will include access to information, as well as finance, particularly for small and medium-sized enterprises, and local communities.
- Attention to enabling and complementary factors for technology development: work methods, operational procedures, monitoring and continuous improving at workplace level.
- Public-private partnerships should be enhanced during the whole process of technology transfer: development, deployment, diffusion and transfer. In this regard, cooperation between countries, including North-North, North-South and South-South cooperation, should be promoted.
- Attention should be paid to the need for preventing the exporting of polluting industries to the less developed countries.

Capacity-building

- Skills development and capacity building programmes to meet the skills needs in terms of mitigation, adaptation and sustainable and low-carbon development strategies should be embedded in all policies and programmes related to climate change.
- These programmes should address simultaneously those social challenges facing by countries such as the growing informal economy, social inequality, unemployment and working poor.

Glossary

The following is a compilation of the most frequently used terms in the climate change debate and in the negotiations as well as in discussions about social and labour policies. Many of these terms have a well-defined in this context which is often not identical with the colloquial use of the same terms. The definitions below have been taken from authoritative sources, namely the UNFCCC, IPCC and ILO.

Adaptation to climate change
Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. Source: UNFCCC

Ad hoc Working Group on further commitments for Annex I Parties under the Kyoto Protocol (AWG-KP)
The AWG-KP was established by Parties to the Protocol in Montreal in 2005 to consider further commitments of industrialized countries under the Kyoto Protocol for the period beyond 2012, and is set to complete its work in Copenhagen in 2009. Source: UNFCCC

Ad hoc Working Group on Long-term Cooperative Action (AWG-LCA)
The AWG-LCA was established in Bali in 2007 to conduct negotiations on a strengthened international deal on climate change, set to be concluded in Copenhagen in 2009. Source: UNFCCC

Annex I Parties
The industrialized countries listed in this annex to the Convention which were committed return their greenhouse-gas emissions to 1990 levels by the year 2000 as per Article 4.2 (a) and (b). They have also accepted emissions targets for the period 2008-12 as per Article 3 and Annex B of the Kyoto Protocol. They include the 24 original OECD members, the European Union, and 14 countries with economies in transition. (Croatia, Liechtenstein, Monaco, and Slovenia joined Annex 1 at COP-3, and the Czech Republic and Slovakia replaced Czechoslovakia.) Source: UNFCCC

Annex II Parties
The countries listed in Annex II to the Convention which have a special obligation to provide financial resources and facilitate technology transfer to developing countries. Annex II Parties include the 24 original OECD members plus the European Union. Source: UNFCCC

Anthropogenic greenhouse emissions
Greenhouse-gas emissions resulting from human activities. Source: UNFCCC

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. Source: UNFCCC

Business Development Services
Wide range of services used by entrepreneurs to help them operate efficiently and develop their businesses. Focuses on promoting the access to and use of these services by micro, small, and medium scale enterprises. May include training, consultation services, marketing services and information resources that help firms gain access to services usually enjoyed only by larger firms. Source: ILO

Carbon cycle
The term used to describe the exchange of carbon (in various forms, e.g., as carbon dioxide) between the atmosphere, ocean, terrestrial biosphere and geological deposits. Source: IPCC

Capacity building
In the context of climate change, the process of developing the technical skills and institutional capability in developing countries and economies in transition to enable them to address effectively the causes and results of climate change. Source: UNFCCC

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. Source: UNFCCC

Climate
Climate is usually defined as the "average weather", or more rigorously, as the statistical description of the weather in terms of the mean and variability of relevant quantities over periods of several decades (typically three decades as defined by WMO). These quantities are most often surface variables such as temperature, precipitation, and wind, but in a wider sense the "climate" is the description of the state of the climate system. Source: IPCC

Climate change (FCCC usage)
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. Source: IPCC

Climate change (IPCC usage)
Climate change as referred to in the observational record of climate occurs because of internal changes within the climate system or in the interaction between its components, or because of changes in external forcing either for natural reasons or because of human activities. It is generally not possible

clearly to make attribution between these causes. Projections of future climate change reported by IPCC generally consider only the influence on climate of anthropogenic increases in greenhouse gases and other human-related factors. Source: IPCC

Conference of the Parties (COP)
The supreme body of the Convention. It currently meets once a year to review the Convention's progress. The word "conference" is not used here in the sense of "meeting" but rather of "association," which explains the seemingly redundant expression "fourth session of the Conference of the Parties." Source: UNFCCC

Decent Work
Decent Work is that productive work developed under conditions of freedom equity, security and dignity, in which rights are protected and adequate remuneration and social coverage are provided. Decent work was characterised by the following components: a) productive work; b) protection of rights; c) adequate pay and d) social coverage. Source: ILO

Emission quota
The portion or share of total allowable emissions assigned to a country or group of countries within a framework of maximum total emissions and mandatory allocations of resources or assessments. Source: IPCC

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. Source: UNFCCC

Employability
Relates to portable competencies and qualifications that enhance an individual's capacity to make use of the education and training opportunities available in order to secure and retain decent work. Source: ILO

Employment
Work carried out in return for payment. Also refers to the number of people in paid employment and self-employment. Source: ILO

Energy intensity
Ration of energy consumption and economic or physical output. At the national level, energy intensity is the ratio of total domestic primary energy consumption or final energy consumption to gross domestic product or physical output. Source: IPCC

Fundamental Principles and Rights at Work
The ILO Declaration on Fundamental Principles and Rights at Work, adopted in June 1998, highlights this set of core labour principles endorsed by the international community. The Declaration covers four main areas for the establishment of a social “floor” in the world of work:

1. Freedom of association and the effective recognition of the right to collective bargaining
2. Elimination of all forms of forced or compulsory labour
3. Effective abolition of child labour
4. Elimination of discrimination in respect of employment and occupation.

Source: ILO

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. Source: IPCC

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). Source: UNFCCC

Green Jobs
Green Jobs reduce the environmental impact of enterprises and economic sectors, ultimately to levels that are sustainable. Green Jobs are found in many sectors of the economy from energy supply to recycling and from agriculture and construction to transportation. They help to cut the consumption of energy, raw materials and water through high-efficiency strategies, to de-carbonize the economy and reduce greenhouse-gas emissions, to minimize or avoid altogether all forms of waste and pollution, to protect and restore ecosystems and biodiversity. Source: ILO

International Labour Standards
International Labour Standards are Conventions and Recommendations adopted by the International Labour Conference, covering a broad range of matters in the field of social and labour matters. Source: ILO

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. Source: IPCC

Joint implementation (JI)
A mechanism under the Kyoto Protocol through which a developed country can receive "emissions reduction units" when it helps to finance projects that reduce net greenhouse-gas emissions in another developed country (in practice, the recipient state is likely to be a country with an "economy in transition"). An Annex I Party must meet specific eligibility requirements to participate in joint implementation. Source: UNFCCC

Labour Market
A system consisting of employers as buyers and workers as sellers, the purpose of which is to match job vacancies with job applicants and to set wages. Source: ILO

Livelihoods
A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living. Source: ILO

Local Economic Development
A development process that encourages partnership arrangements between private and public stakeholders in a defined territory, enabling the joint design and implementation of a common development strategy and the use of local resources and competitive advantages. Source: ILO

Market Barriers
Conditions that prevent or impede the diffusion of cost-effective technologies or practices that could mitigate GHG emissions. Source: IPCC

Microfinance
The provision of financial services to the poor on a sustainable basis. Source: ILO

Nairobi Work Programme
The Nairobi work programme is a 5 year programme (2005-2010) implemented by Parties, intergovernmental and non-governmental organizations, the private sector, communities and other stakeholders.
Its objective is assist all Parties, in particular developing countries, including the least developed countries and small island developing States to:

- improve their understanding and assessment of impacts, vulnerability and adaptation to climate change;
- make informed decisions on practical adaptation actions and measures to respond to climate change on a sound scientific, technical and socio-economic basis, taking into account current and future climate change and variability. Source: UNFCCC

National adaptation programmes of action (NAPAs)
Documents prepared by least developed countries (LDCs) identifying urgent and immediate needs for adapting to climate change. The NAPAs are then presented to the international donor community for support. Source: UNFCCC

Nationally appropriate mitigation actions
Actions included in the Bali Action Plan under the category of “enhanced national/international action on mitigation of climate change” to be carried out by developing country Parties. These actions should be developed *in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner*. Source: UNFCCC

National communication
A document submitted in accordance with the Convention (and the Protocol) by which a Party informs other Parties of activities undertaken to address climate change. Most developed countries have now submitted their fourth national communications; most developing countries have completed their first national communication and are in the process of preparing their second. Source: UNFCCC

Precautionary principal
Avoiding a solution that is irreversible, because the assumptions on which the solution is based may prove incorrect, in favour of a seemingly inferior solution that can be reversed. Source: IPCC

REDD
Policies and measures aiming at Reducing Emissions from Deforestation and Forest Degradation in Developing Countries. Source UNFCCC

Reforestation
Replanting of forests on lands that have previously contained forests but that have been converted to some other use. Source: UNFCCC

Skill
An acquired and practised ability to carry out competently a task or job, usually of a manual nature. Source: ILO

Small Enterprise
Use for small commercial and service enterprises. Use SMALL SCALE INDUSTRY for small scale manufacturing enterprises. Source: ILO

Social Dialogue
Social dialogue is defined by the ILO to include all types of negotiation, consultation or simply exchange of information between, or among, representatives of governments, employers and workers, on issues of common interest relating to economic and social policy. It can exist as a tripartite process, with the government as an official party to the dialogue or it may consist of bipartite relations only between labour and management (or trade unions and employers' organisations), with or without indirect government involvement. Concertation can be informal or institutionalised, and often it is a combination of the two. It can take place at the national, regional or at enterprise level. It can be inter-professional, sectoral or a combination of all of these.

The main goal of social dialogue itself is to promote consensus building and democratic involvement among the main stakeholders in the world of work. Successful social dialogue structures and processes have the potential to resolve important economic and social issues, encourage good governance, advance social and industrial peace and stability and boost economic progress. Source: ILO

Sustainable development
Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Source: IPCC

Trade Union
Organization of employees, usually associated beyond the confines of one enterprise, established for protecting or improving, through collective action, the economic and social status of its members.

Tripartism
Tripartite cooperation is defined as referring "to all dealings between the government and workers' and employers' organizations concerning the formulation and implementation of economic and social policy". Tripartism is reflected in the structure of the ILO itself: both the International Labour Conference and the Governing Body are composed of equal numbers of government, workers' and employers' representatives. Tripartism at the national level is enshrined in a number of ILO Conventions and Recommendations. The Tripartite Consultation (International Labour Standards) Convention, 1976 (No. 144) specifically requires effective consultation between government, employers' and workers' representatives at each stage of ILO standards-related activities. Source: ILO

Value Chain
Describes the full range of activities which are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use. Source: ILO

Key sources and resources

The following provides links to key resources related to:

- the science of climate change,
- the international legal regime on climate change in particular the Convention,
- UN sources
- ILO.

1. **The science of climate change**
   - **IPCC webpage:** http://www.ipcc.ch/
   - **IPCC's assessment reports (2007): http://www.ipcc.ch/ipccreports/assessments-reports.htm**
   - **Stern Review on the economics of climate change:** http://www.occ.gov.uk/activities/stern.htm

2. **International legal regime and the UN Framework Convention on Climate Change**
   - **UNFCCC webpage:** http://unfccc.int
   - **Texts of Convention:** http://unfccc.int/essential_background/convention/background/items/2853.php
   - **Text of the Kyoto protocol:** http://unfccc.int/kyoto_protocol/items/2830.php
   - **National communications and other useful information about Parties:** http://unfccc.int/parties_and_observers/parties/items/2352.php
   - **Positions and inputs from civil society:** http://unfccc.int/parties_observers/ngo/submissions/items/3689.php
   - **Calendar of negotiations:** http://unfccc.int/meetings/unfccc_calendar/items/2655.php

3. **UN climate portal:** http://www.un.org/climatechange/

4. **ILO and ILO constituents**
   - **Governing Body discussions climate change:**
     - **2007: Decent work for sustainable development –The challenge of climate change** http://www.ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_084890.pdf
     - **2008: Employment and labour market implications of climate change** http://www.ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_099711.pdf
   - **International Labour Conference:**

- **2007: Decent work for sustainable development** http://www.ilo.org/public/english/standards/relm/ilc/ilc96/pdf/rep-i-a.pdf

- **Green jobs initiative:**
  - **ILO:** http://www.ilo.org/integration/themes/greenjobs/lang--en/index.htm
  - **United Nations Environment Programme (UNEP):** http://www.unep.org/labour_environment/features/greenjobs.asp
  - **International Organization of Employers (IOE):** http://www.ioe-emp.org/
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IPCC (2007), *4th assessment report: Climate change 2007, WG II: impacts, adaptation and vulnerability - summary for policy makers,* Intergovernmental Panel on Climate Change, Geneva
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