

Trade unions and climate change¹

Equity, justice & solidarity in the fight against climate change

Summary

Time for tackling climate change: Addressing global climate change is critical to the economic, social and environmental interest of all peoples of the world. Trade unions believe that ambitious mitigation action is fundamental if we want to leave our children a sustainable world and a chance for social and development goals to be achieved. These actions must be fairly shared and distributed **between** and **within** countries: responsibility and capacity must be the guiding principles for burden sharing. As representative trade unions from the North & South, we ask all governments to respect the mandate of the UN Framework Convention on Climate Change and firmly commit to emission reductions on the basis of their differentiated responsibilities and respective capabilities. (More on mitigation in pages 3-4)

Time for hope, time for “green & decent” jobs: Climate policies provide an opportunity for restoring hope, repairing and rebuilding national economies on a sustainable basis and creating jobs while reducing GHG emissions. Trade unions are working around the world to realise the huge opportunities for “green and decent” job creation stemming from this global transformation and, importantly, for improving traditional jobs to make them socially and environmentally sustainable. Ambitious national and international collective bargaining strategies could realize workers’ and enterprises’ potential while delivering environmentally friendly outcomes. (More on the “green and decent work” opportunities in pages 5-6 and 19).

Time for a just transition: Economic transformation can not be left to the “invisible hand” of the market. Government-driven investments, innovation and skills development, social protection and consultation with social partners (unions and employers) are essential if we want to make change happen. This is why we call for a “just transition” as a means for smoothing the shift towards a more sustainable society and restoring hope in the capacity of a “green economy” to sustain jobs and livelihoods for all (More on “Just Transition” in pages 4 and 7-9).

Time for bridging the ‘adaptation’ gap: The poor cannot be left to plunge into even greater misery. Sufficient public funding should be directed from developed countries to adaptation in developing countries. The latest should mainstream adaptation into their development and employment policies. Social protection schemes, decent work promotion and quality public services as a means for reducing poverty and thus vulnerability to climate change are fundamental. (More on adaptation in pages 10-13)

Time for making investments and technology work for all: Major investments are needed to develop long-term sustainable industrial policies, aimed at retaining and creating decent and “green”/sustainable jobs, “greening” all workplaces and developing and deploying technology. Innovation policies, including social innovations, are also key. Developed countries have to scale up their efforts regarding technology transfer and funding research and innovation in developing countries. (More on investments and technology in pages 14-16)

Time for workers and workplaces to become actors of their future: Since almost three-quarters of global greenhouse gases come from manufacturing, energy production or supply, transport and construction, workplace actions will be crucial in order to

¹ Trade Union Statement to COP15, United Nations Framework Convention on Climate Change – UNFCCC, Copenhagen, Denmark (7-18 December, 2009).

achieve change. Workers and workplaces need pro-active and preventive policies to be put in place regarding adaptation to climate change, as well as the potential impacts of mitigation policies. (More on workplaces in pages 17-18).

Introduction

The multiple crises the world is facing –fuel, food, unemployment, climate - all have their origins in a socially unjust and environmentally unsustainable model which endangers the capacity of our societies to provide decent lives to the world’s people. This model has translated wealth creation into environmental degradation and the concentration of income in the hands of a few. It has promoted a system where unsustainable production modes are taken as the necessary “collateral damage” for achieving growth and development, with deregulation and free market economics, creating an international system that has underperformed, sometimes very badly, in exercising governance of globalisation. All these crises punish the worse-off and most vulnerable, those who did little to cause the problems. The world is now at the crossroads when a new global agreement on climate change is to be decided. It is time for designing it in a way which will improve people’s lives and provide them with new opportunities for decent and green jobs while reducing environmental degradation.

A sustainable way out of the crisis can be found if these multiple challenges are coherently addressed. We need to transform our societies and workplaces into sustainable ones, as a means for ensuring the survival of jobs and livelihoods both today and tomorrow.

The consequences of an uncontrolled proliferation of GHG emissions are now sufficiently obvious and predictable. Without a strong and innovative multilateral solution, the main victims of climate change will be the workers, in particular in developing countries, whose sole responsibility will be to have been born poor in the most fragile parts of the planet. It has become imperative to reach a strong international agreement: an agreement in which the needs and aspirations of all are taken into account; an agreement that will effectively shape the blueprint for the type of society we wish to build and pass on to future generations.

For trade unionists, climate change raises important questions about social justice, equity and human rights across countries and generations. It is now time for action. Trade unions engage in current climate negotiations with a message of commitment, solidarity and action.

Commitment - as representative trade unions from the North & South, we ask all governments to respect the Convention’s mandate and, in priority, those in developed countries and major economies in the developing world to firmly commit to emission reductions, on the basis of their different responsibilities and respective capabilities. Emission reductions are key for sustainable growth and offer an opportunity to tackle the economic and financial crisis through social and environmentally-responsible investments; they can be drivers for decent employment creation. They can no longer be postponed.

Solidarity - trade unions and their members are well aware of the fact that transitions are by no means easy processes, that moving towards a low carbon economy so as to develop in an environmentally responsible manner represents an arduous task and that the poorest must not end up paying the highest price. We therefore stress the need to support and assist those who are the most vulnerable during the transition process. Climate justice, the defence of rights and social protection are crucial to a fair and sustainable transition.

Action - as representatives of millions of workers, we are part of the solution. Fully aware of our responsibilities regarding workers and future generations, we have

undertaken actions with a dual commitment towards the environment and society. At every level – international, regional, national, sector and workplace – trade unions have begun to advance towards a fairer, environmentally responsible society that respects human and labour rights.

As trade unions, we believe these negotiations should initiate a new and more ambitious process of social change, where we will not only discuss the urgently needed emission reductions but also consider the means for changing the way we produce, consume and interact, always on the basis of solidarity and mutual respect. Governments and other actors committed to this struggle can count on workers and their trade unions as drivers for social and environmental change.

Time for tackling climate change

We reaffirm the commitment of the global trade union movement to achieving an agreement that will limit the global temperature rise to no more than 2°C. Consistent with this fundamental objective, trade unions urge Governments at the UNFCCC in Copenhagen to follow the IPCC scenario for reducing global greenhouse gas (GHG) emissions to 85% lower than their 1990 levels by the year 2050 and emphasise the need for interim targets for this to be achieved, including a corresponding reduction of at least 25%-40% by developed countries by 2020 below 1990 levels.

The ITUC recognises that specific circumstances in developed countries may dictate targets that are more or less ambitious, provided that the net emission reduction of Annex I countries is within the targets advocated by the IPCC.

We also call on major emitters in developing countries and countries that have surpassed a certain development threshold to participate through a range of policies including targets on renewable energy, energy efficiency, clean coal technology and avoided deforestation, among others. These need to be accompanied by clear objectives and mechanisms in developed countries to provide with finance and enhance technology development and transfer. Such contributions are particularly needed in light of the principle of “historic responsibilities” for the current climate crisis.

While acknowledging their need to make the transition to low-carbon development in a way consistent with their capabilities, developing countries should be able to provide access to decent livelihoods and quality jobs for their citizens.

Medium term objectives (i.e. 2020) would require the possibility for reviewing the agreement to be adopted in Copenhagen on the light of the fifth IPCC assessment report, which will come out in 2014/2015, in case the scientific evidence might require more ambitious actions. A review clause would be helpful, combined with a full-scale evaluation of the environmental effectiveness of the agreement.

Governments have to guarantee a just path for the transition **between** and **within** countries, thus protecting the most vulnerable in society.

There must be provision for the fair distribution of the cost associated to emission reductions, so that the poorest will not carry the heaviest burden. Income needs to be taken into account in order to direct emission reduction efforts towards those with the capacity to carry out such measures.

TRADE UNIONS TOGETHER AT THE INTERNATIONAL LEVEL

Trade unions are undertaking major steps towards the construction of a new unionism, truly international, representative and ambitious: the voice of workers of today and tomorrow at the international level.

THE INTERNATIONAL TRADE UNION CONFEDERATION (ITUC) was created in 2006. It represents 170 million workers through its 312 affiliated organisations in 157 countries and territories. Its Work Programme, adopted at its Founding Congress, underlines the need for the international community to implement an overarching strategy for sustainable development with linkages between labour and environment. See <http://www.ituc-csi.org/>

AND ON CLIMATE CHANGE...

TRADE UNIONS CREATED THE ITUC TASK FORCE ON CLIMATE CHANGE: In June 2007, the ITUC General Council stressed that it was vital for unions to raise the public profile of climate-related social issues (employment, income, migration, consultation, etc.). It was also crucial that trade union approaches be reflected within ongoing international negotiations. Therefore, in December 2007 the Council took the decision to establish a Trade Union Task Force. All ITUC regional bodies are represented by high level trade union members, balanced between developed and developing countries' unions representing the 170,000,000 members of the ITUC. More than 30% of the members and the Chair of the Task Force are women.

CAPACITY BUILDING: An ambitious programme on Labour and Environment coordinated by the Sustainlabour Foundation provides for training of trade unionists on climate change through sessions organised in all three developing regions. These activities will be followed up through more in depth training as well as through the creation of regional experts' networks.

FOLLOW UP OF THE UNFCCC PROCESS: In 2007, trade unions created the Ad-Hoc Working Group on Climate Change in order to provide necessary follow up to UNFCCC negotiations. To date, the working group counts with the participation from 49 National Centres from 39 countries, 3 Regional ITUC organisations (Africa, Americas and Asia Pacific) and the European Trade Union Confederation (ETUC), 5 International Global Union Federations (Building and Woodworkers' International, International Transport Workers' Federation, Public Services International, the International Textile, Garment and Leather Workers' Federation and the International Federation of Chemical, Energy, Mine and General Workers' Unions), 2 International Trade Union bodies (the ITUC and TUAC) and 1 UN agency (ILO).

Time for hope,

Time for green & decent jobs

Time for a Just Transition

The great transformation that is needed to change our unsustainable, carbon-intensive societies provides us with the opportunity to create green and decent jobs, transform and improve traditional ones and include democracy and social justice in environmental decision-making processes. The transformation has to be an inclusive process; it has to come along with a social pact - a pact for a global and just transition.

The just transition trade unions are calling for is based in the following policies:

- 1. Make green opportunities real:** Major investments are needed to develop long-term sustainable industrial policies, aimed at retaining and creating decent and "green"/sustainable jobs, "greening" all workplaces and developing and deploying new low carbon technologies. Innovation policies, including social innovations, public investment and reorientation of financial flows towards sustainable development are also key.
- 2. A sound starting point:** Research and early assessment of the effects of climate change and climate change policies on employment, skills, livelihoods, gender equity and other social aspects are crucial for better preparing change.
- 3. Come & talk!** : Governments have to consult with unions, employers, communities, and all groups which need to be part of the transformation. Democracy, social partners' consultation and respect for human and labour rights form the baseline conditions in order to ensure a smooth and effective transition towards a sustainable society.

4. **You train the workers, the future gets closer:** Changes on the ground require trained workers on clean processes and technologies; this is key for absorbing and developing new technologies and for realising the potential of green investments. This must include formal and non formal education, training, retraining, and life-long learning for workers, their families, and the communities that depend upon them.

5. **It's also about protection!** Vulnerability may be a source of reluctance to support change. Social protection schemes, including active labour market policies (social security including social insurance and income maintenance, and job placement services, among others) and access to public services at affordable prices (health, basic energy, water and sanitation needs) are key for ensuring justice in the transition.

6. **One size does not fit all:** Each region and community at risk requires its economic diversification and climate change adaptation plan; a "free-market adaptation" will only lead to suffering and opposition to climate measures.

A low-carbon economy, a driver for green(er) jobs

The IPCC Fourth Assessment Report has drawn attention to the dangerous and irreversible consequences of climate change. The effects on the economy – including on employment - will be catastrophic if ambitious and effective measures are not taken to reduce GHG emissions. While employment protection has sometimes been cited as a reason for not engaging in GHG emission reductions, the available evidence indicates that climate change mitigation has positive net employment effects. Trade unions believe that climate change represents a potentially positive opportunity to create jobs on the basis of a sustainable and fair society.

A report released by UNEP, ILO, ITUC and IOE, "Green Jobs: towards decent work in a sustainable, low-carbon economy"² provides us with a global overview of the opportunities and challenges ahead in the path towards greener jobs. The report findings stress that millions of green jobs already exist in industrialised countries, emerging economies and developing countries. It reports more than 2.3 million jobs in the renewable energies sector, around 4 million direct green jobs based on improving energy efficiency in buildings solely in the US and the EU, and substantial opportunities for green jobs in the transport sector. The message seemed to have been heard. A number of countries are emphasising the importance of employment creation with respect to the environmental measures in their recovery packages. The French « Observatoire Français de Conjoncture Economique » has announced the creation of 500,000 green jobs by 2020 as a result of the implementation of the "Grenelle de l'Environnement », in sectors such as renewable energies, recycling, clean transport, and energy efficiency in buildings. In Japan, employment in environmental industries is expected to double to 2.8 million people by 2020.

Green jobs can make a major contribution to clean economic growth, development and poverty reduction. For this to be realised, the quality of these green jobs needs to be improved. Many of them, such as those in recycling, construction or biofuels for example are informal and without proper management, stand to cause highly contrary effects. As an example, serious labour and human rights violations have been recorded in relation

² The report defines "Green jobs" as those which reduce the environmental impact of enterprises and economic sectors, ultimately to levels that are sustainable. "Green jobs" are those in agriculture, industry, services and administration that contribute to preserving or restoring the quality of the environment. 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 minimise or avoid altogether all forms of waste and pollution, and to protect and restore ecosystems and biodiversity.

to feedstock production for biofuels. There is also a need for adapting “green” solutions to local realities and aspirations.

Trade unions remain committed to fostering decent working and living conditions for workers, be it in old or new sectors. Poverty is in many cases at the roots of environmental degradation. Stable and decent wages can ensure proper living conditions and contribute to the protection of natural resources. There is a need to urgently develop national and international bargaining strategies, aimed at scaling up workers' and employers' efforts in providing decent and green working conditions.

Trade unions will work towards the transformation of all jobs into environmentally-friendly and socially-decent jobs. Green jobs are a first step towards this transformation.

Why do we need a Just Transition?

The future agreement needs to be based on a broad and sustainable political consensus around the need for ambitious emission reduction measures, if it is to provide the stable framework on which governments and enterprises can base strategies and investments.

The agreement needs to signal to all countries and stakeholders that the signatories are mindful of its social and economic impacts and that it proposes a strategy for addressing them, in particular with respect to the damage caused by climate change, the right to development in a carbon-constrained world, the need for social fairness and transforming job losses into new green and decent job opportunities. The latter is particularly important in the current economic crisis.

Democratic decision making and respect for human and labour rights are essential in order to ensure the fair representation of workers' and communities' interests at the national level. Trade unions propose that employment, income, wealth distribution, purchasing power, gender equity and measures to tackle poverty be placed at the centre of discussions.

Governments must ensure there would be no net loss of employment as a result of climate change policies. Any new agreement should address:

- effects on employment from climate-induced disruptions, i.e. displacement, migrations, unemployment in climate-sensitive sectors and climate refugees,
 - effects on employment from the implementation of adaptation measures (i.e. investments in infrastructure or transformations in production), and
 - effects on employment of the impacts associated with mitigation efforts.

The achievement of social justice must be guaranteed when implementing mitigation and adaptation measures. Decent and green jobs promotion and social protection systems' development and innovation and low carbon technology deployment will be key in ensuring communities' resilience and the reduction of GHG emissions while maintaining jobs in energy-intensive sectors.

It is crucial to institutionalise dialogue, participation and awareness raising. It is now time for governments at the UNFCCC to promote democratic decision making at the national level and to clearly show support for accompanying measures to ensure that workers and communities are not negatively affected by a new economy, and to guarantee a fair distribution of the costs that are associated with this collective effort.

SPANISH SOCIAL DIALOGUE: FOR “SMOOTHING” THE TRANSITION

WHO ?

Spanish Trade Unions (CCOO & UGT), government and business organisations

WHY ?

To prevent, avoid or reduce the potentially adverse effects that could result from compliance with the Kyoto Protocol, in particular those related to competitiveness and employment

WHAT ?

Established a platform for tripartite social dialogue on climate change, bringing the three Parties together under an umbrella 'Dialogue Table'. Seven follow-up tables, one for each industrial sector have been organised, along with the second meeting for the residential, commercial and transport sector.

An in-depth study on social and economic effects of the National Allocation Plan on employment will be undertaken by CCOO, in the framework of this tripartite social dialogue.

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FRENCH GRENELLE FOR THE ENVIRONMENT AND THE SEA

WHO ?

The French government, along with trade unions, employers, NGOs and local authorities.

WHY ?

There was a need to generate a long term consensus around French public policy on environment and sustainable development .

WHAT?

The Grenelle de l'Environnement was organised during 6 months in 2007. Different working groups were established to evaluate and recommend policies on specific issues. All this was assembled in a final report, submitted to the French President who elaborated a law on the basis of the recommendations. Major decisions regarding climate, biodiversity, housing, transports or environmental democracy were made. This modality of work, which enabled for a broad consultation and consensus-building was used for other issues in 2009, such as in the Grenelle de la Mer ("Grenelle for the Sea") or on Industrial Risks. These meetings realised the potential of the labour movement as an expert in social dialogue, as a moderator between different parties, and also reinforced cooperation between different actors around the challenges we have ahead.

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CLIMATE CHANGE AND EMPLOYMENT IN EUROPE: INFORMATION AS A BASIS FOR DECISION-MAKING

WHO?

The European Trade Union Confederation (ETUC), SYNDEX, Wuppertal Institute and ISTAS

WHY?

To know the potential repercussion on employment of a reduction of 40% in the European Union's CO2 emissions by 2030 as a consequence of climate policies, in particular in four sectors (energy production, energy-intensive industries, transport and building) in 11 EU countries.

WHAT ?

An ambitious study which provides a clear assessment of the employment effects of climate change policies in the energy production sector, the risks for job relocation and the means for mitigating this risk, and the potential for job creation in the transport, energy-efficiency and building sectors. The study comes to the conclusion that the net result on employment would be slightly positive. It points to the need for clear and foreseeable climate policies, substantial public investment in R&D, renewable and combined heat & power (CHP) energy, public transport systems and renovation of buildings, in addition to well designed economic instruments taking into account the impact on low income households and energy intensive industries. The authors call for 'Employment transition programmes', with adequate funding and negotiated with the social partners, in order to anticipate, minimise and mitigate the negative social consequences of adaptation and mitigation policies for workers.

More Information: <http://www.etuc.org/a/3676>

A new, in-depth study on climate change, new industrial policies and ways out of the climate and economic crises is being undertaken. More information apanneels@etuc.org

Anticipate, prevent and address the challenges in specific sectors

As the Stern Review³ reminded us, climate change represents the biggest market failure in history. We cannot trust the same failed market mechanisms to successfully steer out of this crisis. The problem has to be solved through regulation, democratically-decided and implemented public policies and most importantly political leadership. Former UN Secretary General Kofi Annan highlighted what he called a “frightening lack of leadership” when dealing with the post-2012 scenario. As unions, we call in this negotiation for such leadership to be shown and to be consolidated.

Trade unions support the need for ambitious and effective emission reduction targets. However, while agreeing on ambitious targets for mitigation as an important first step, trade unions are aware of the difficulties of transforming such targets into policies. We are aware that most nations of the world have rarely managed to achieve social justice in their economic restructuring.

The international community needs to understand that potentially negative impacts result from the inadequate design of the climate change policy framework. Difficulties arise from a lack of consultation, anticipation and protection of those communities that are particularly exposed to emission reduction policies. National implementation of mitigation and adaptation policies requires impact assessment and democratic participation to secure social and economic benefits.

For this reason, we support the elaboration of a framework that ensures a progressive transition. Such a framework should be based on the following principles:

Consultation: In order to better anticipate effects and better accompany the transition, governments have to institutionalise formal consultation networks for information exchange and dialogue with communities and workers that will be most affected by climate change or by measures implemented to deal with it.

Local and regional information-gathering processes should promote social dialogue as well as consultation involving representatives of affected actors (i.e. trade unions and employer organisations) for a better understanding of their needs.

Anticipation: A proper consultation process will not be sufficient unless it is accompanied by relevant studies assessing the impacts of alternative emission reduction scenarios on production systems. Systematic country, region and sector-specific studies on climate change policies and their impacts on employment and labour markets must be carried out. Ex-ante analysis of policies is key, as this enables their redesign and improvement.

Protection: Certain sectors, such as those linked to fossil fuel energy and other energy intensive sectors will face significant changes in the global shift to a low carbon energy and industrial future. This includes industries such as steel, iron and aluminium, fossil fuel-based power generation as well as energy intensive services, such as road transport. It is of utmost importance to support investment in low carbon technologies and energy efficiency measures, retaining and developing viable low carbon industries, wherever possible, supported by skills and training programmes for a low carbon, resource efficient economy.

When risks for certain sectors are unavoidable, measures must be taken in consultation with trade unions, to protect the most vulnerable in the production chain: the workers. This protection is clearly defined in the concept of just transition, which calls for:

- Protection through training: Protecting the workers requires raising the profile of vocational training in new sectors & re-training for workers in negatively affected sectors. Skills upgrading remains an overlooked policy in all the debates

³ Stern, N. (2006). *Stern Review on the economics of climate change*. HM treasury, UK

dealing with economic diversification or technology transfer. Skills shortages could become a serious bottleneck for mitigation as well as cause lost livelihood for workers in sectors at risk. Active labour market policies must also be part of this 'transition package', in order for workers to "fit" a changing labour environment. The overarching ambition of these policies is to establish fair and comprehensive social protection systems, adapted to the challenges posed by climate change and its policies.

- Protecting the economic life of communities: Trade unions believe that a transition is needed in order to secure the economic livelihoods of communities that depend on sectors which are at risk. This transition needs to include policies to promote clean and energy-saving technologies, the development of socially responsible entrepreneurship, creation of alternative income-earning opportunities and economic diversification.

In the long run, only investments, domestic research and development, ambitious training policies and economic diversification will effectively protect the communities that currently depend on GHG-intensive production.

Just Transition measures need to be provided for by law before the implementation of emission reduction mechanisms that could result in job losses. Otherwise, the possibility for obtaining global consensus on these measures risks being undermined.

Other social and economic impacts

Trade unions highlight the importance of widening the discussion and analysing social and economic consequences of emission reduction within different areas of the economy.

Risks of carbon leakage⁴ need to be addressed with a cautious, prudent and, as far as possible, multilateral approach. There is still no consensus within the union movement on the way to address this critical challenge. Many trade unions support border adjustment mechanisms and/or free allocation of emission permits based on benchmarking as a response to leakage concerns, in light of the actual current and the potential future exposure of industries to international competition from countries who fail to enact GHG reducing policies. Other trade unions consider auctioning of emission permits a valid option for ensuring equity between sectors. A debate is needed in order to build an international position on this issue.

The potential effects of border adjustment mechanisms on international trade and developing country economies, the consequences of the internalisation of the real cost of transporting goods and the effects of a relocation of polluting industries to developing countries without strong mitigation regimes all need to be taken into account.

Global sectoral agreements in aviation and transport as well as in manufacturing industries could reduce the risks linked with carbon and job leakage. These agreements could be drivers of technological change in both developed and developing countries' industries. It would be essential, however, to ensure that the emissions data collected under global sectoral agreements are accurate and verifiable.

Further assessments of the distributional effects of climate change-related policies, the effects of mitigation measures on poverty (for example, from a reduction in subsidies for electricity), incomes, equity and gender equality are required, as well as the analysis of compensation measures to be implemented to "cushion" these effects. In this context, trade union, academic and employer expertise needs to be integrated into the decision making process.

The design, implementation and evaluation of the Clean Development Mechanism (CDM) and Joint Implementation (JI) projects must be in line with sustainable development

⁴ "Carbon leakage" occurs when there is an increase in emissions in one country as a result of an emission reduction by a second country with a strict climate policy. It implies the relocation of production and/or investment in the second country.

plans of host countries and should not be implemented in isolation. There is a need for them to incorporate poverty eradication, equality promotion, and sustainable development while reducing emissions. This requires, inter alia, real progress on the evaluation of these projects, the development of social indicators and other tools that reflect broad societal values and norms, and the inclusion of social benefits in the assessment of CDM and JI, as well as the creation and improvement of participation and consultation mechanisms in CDM host countries, including workers' involvement. Sustainable development criteria is essential in order to ensure that projects secure additionality. Moreover, it is necessary to underscore that these projects do not help achieving transformation of production and consumption in developed countries, as they are based on reducing emissions abroad.

Time for bridging the adaptation gap

"We are drifting into a world of adaptation apartheid"
Desmond Tutu, Former Archbishop of Cape Town

Poor communities in developing and developed countries are already suffering from the impacts of climate disruption. Yet they are at risk because they are poor. The socially-advantaged have a freedom of residence and movement which the socially disadvantaged do not have. This makes clear that the struggle to adapt to climate change should not and cannot be separated from the fight against poverty and in favour of a more just and egalitarian society.

As indicated in the 2008 UNDP Human Development Report, Hurricane Katrina provided a potent reminder of human fragility in the face of climate change in developed countries, especially when impacts interact with institutionalised forms of inequality. Across the developed world, public concern over exposure to extreme climate risks is mounting. Yet climate-related disasters are often concentrated in poor countries. On average 262 million people were annually affected by climate disasters over the 2000 to 2004 period - over 98% of them lived in the developing world.

As trade unions we have never accepted the violation of human rights which consists in allowing fellow human beings to die of hunger or of preventable diseases. We will not accept now that human beings die because of climate change.

Climate change feeds into the vicious circle of poverty by adding more barriers to development. Environmental events generate huge amounts of stress for poor households: droughts, resource depletion and floods, among others, are either at the source of or reinforce their already critical social and economic situations (for example resource depletion aggravates unemployment, which reinforces migration subsequently contributing to a loss of human resources and endangering rural economies).

Therefore the poverty challenge and the climate challenge have to be tackled in a mutually reinforcing manner. All governments, in the North and the South, have a key role to play in providing the political will and the necessary coherence in this fight. Many developed countries are investing heavily in the development of climate defence infrastructures. Developing countries face far more severe adaptation challenges. Those challenges have to be met by governments operating under severe financing constraints and by poor people themselves.

Trade unions believe that a new socially fair and climate-friendly development path needs to emerge. Developing countries need to simultaneously shift towards sustainable production models and supply adequate access to energy. Synergies between decent work creation and adaptation policies must be explored, since the provision of a sustainable income reduces vulnerability.

Quality public services and strong public sector leadership at all levels of government must be at the heart of the global response to climate change. Public-public partnerships for technology transfer in the utilities sector, for example, should be encouraged and financially supported. Public procurement contracts should include specifications for social, labour and environmental sustainability standards.

Trade unions highlight the role of public services in areas such as education, public health and transportation, and access to energy to cover basic needs, among others. All these are essential in order to contribute to fair and efficient climate policies (efficient climate policies will require a highly qualified work force, researchers, and engineers; a reduction in GHG emissions will be facilitated by more public transport which at the same time would increase access to mobility for the poor).

The particularly critical situation of Small Island and Low-lying developing countries requires international solidarity. Scientists warn about the immense risks for their economies, populations and the very survival of their territories, which have already started to suffer from a rise in the frequency and the scale of extreme weather events such as hurricanes and floods. The needs of these countries and their communities need to be urgently addressed, entailing international assistance particularly for the most vulnerable countries.

Furthermore, trade unions believe climate justice cannot be achieved without gender justice. Climate change is not gender neutral. Women are generally more vulnerable and represent the majority of the world's poor and powerless. Their livelihoods are more dependent on natural resources that are being threatened by climate change. Women are a potential source of innovative adaptation strategies and must be empowered to play a central role at all decision making levels on climate change, including within unions such as those in the utilities sector. Principles of gender equity must be adopted at all stages of the international climate change strategy, from research to analysis to the design and implementation of mitigation and adaptation strategies.

Poverty reduction policies require radical responses to climate change. In order for this to happen, we believe that a holistic approach should be developed, including:

- Sustainable service and infrastructure development: the provision of public responses and investments will require greater foresight and planning. Quality public services and strong public sector leadership must be at the heart of the global response to climate change. Investments in water, health, transportation, housing and other essential services and infrastructures should contribute to reversing the destructive trend of privatisation and deregulation, and should be democratically accountable. Partnerships for technology transfer in the utilities sector, for example, should be encouraged and financially backed.
- Capacity building: workers and communities need to be informed, involved and trained to respond to the challenges they will face in their workplaces and in their homes. Lack of information is a serious barrier to adaptation. Union structures have the capacity to disseminate precautionary measures, disaster prevention & response strategies as well as to initiate the debates about a long-term economic adaptation of zones at risk because of climate change.
- Social protection, including insurance: Social protection is the tool that our world has developed to reduce vulnerability. As climate change increases the uncertainties about meeting people's needs, governments must implement protective social measures, including access to decent housing, food security, access to safe drinking water and health services and minimum income, as well as ensuring the traditional right to social security. Trade unions consider that climate-related risks require improved and adapted insurance and re-insurance mechanisms for poor households. Particular attention should be given to implementing public-managed schemes and to reviving cooperative and mutualist as complementary ones. Private insurances should be regulated along similar objectives.

Adaptation & international solidarity

The world's poor cannot be left with the choice of either trying to make do with the limited resources at their disposal or else plunging into even greater misery. Social justice and respect for human rights demand stronger international commitment to adaptation.

It is therefore fundamental to transfer means for adaptation as well as ensuring technology transfer.

Water, health and infrastructure have been identified as the most vulnerable sectors and those in which investments are urgently needed. Such investments need to take into account other realities as well, including the growing incidence of HIV/AIDS and other diseases which are limiting poor countries' ability to properly deliver such services. Financial flows should be directed towards developing countries, in order to help them addressing coherently all their pressing challenges, including climate change.

Trade unions call for countries to honour the commitments that they made at Monterrey and Gleneagles for a major increase in development aid to assist poor countries and for greater accountability of governments to properly deliver on their commitments from one year to the next.

Sufficient public funding should be directed to adaptation in developing countries. According to UNFCCC, UNDP and Oxfam, over the 2013-2017 period, a mobilisation of at least €200 billion for adaptation planning and implementation in developing countries is needed. Taking into account that funding is aimed at repairing a damage developing countries have not caused, financial resources should not be transformed into loans or other forms of financial burden for developing countries in the future.

Climate, adaptation & the world of work

Adaptation to climate change offers the opportunity to engage on new paths of economic development: a development which respects workers' rights and the environment. Regional, sectoral and local research is needed to better understand the effects that adaptation measures will have on the economy, poverty reduction and employment.

Nevertheless, we can safely say that adaptation strategies - if they improve societies' and economies' capacity to react and adapt to climate change - do not necessarily have a negative impact on livelihoods or employment.

While climate change will negatively affect agriculture, livestock management, forestry, ecosystems, health and human settlements, particularly in developing countries, accompanying adaptation measures would yield positive effects on employment, or at least limit the severity of the negative impacts.

Trade unions call for coherent national and regional strategies on climate-related issues

Energy strategies, water, biodiversity and migration provide some examples of problems that need to be tackled at both the national and regional level, particularly in the many parts of the world where there is substantial regional or sub-regional integration of markets and policies (like in the EU or the Mercosur). In such regions, mainstreaming climate protection into regional policies is an imperative if they are to be sustainable.

Energy strategies: Energy security is today a main concern for all countries. The achievement of such an objective, in particular for smaller economies, is difficult. While regional approaches to energy strategies have emerged, in most countries climate change has not yet been mainstreamed, nor have emissions limitations, particularly in developing contexts. In addition to mainstreaming climate change, regional energy strategies must promote a sustainable energy mix with rapidly increasing shares of renewable energies, higher energy efficiency and conservation, decentralisation of

production, and an equitable access to energy services, as well as solutions for sustainable transport and housing.

Water: The impacts of climate change in water availability and quality, as well as on the increased frequency and intensity of droughts and floods will intensify current water management problems in developing countries and in specific sectors. Hydrological systems with poor or no water management are the most vulnerable to the adverse impacts of climate change. Public investments will be essential for providing universal access to water and sanitation and to provide with the infrastructure needed to prevent disasters and ensure rapid and effective post-disaster response. Workers will need to be hired, trained and equipped to fulfil these functions. Action at the regional level must guarantee access to clean water for the whole population, and the shared management of hydrological systems and transboundary groundwater.

Migration: Climate change, because of its effects on communities already under pressure endangers peoples' livelihoods. This reinforces current internal migration trends (from countryside to urban centres) as well as international migration. Climate change thus also puts pressure on urban infrastructures and urban dwellers. Many important cities in the world, in particular in developing countries are coastal and are therefore vulnerable to rising sea levels and to extreme weather events, which stand to cause or aggravate regional migration trends. This is the reason national and regional policies must be designed and developed to deal with disaster relief as much as with migration and resettlement of displaced communities. At the international level, adequate alternatives in full respect of migrants' human rights are required in place of the current absence of sustainable policies for migration.

Biodiversity: Many species are at risk because of climate change and changes in land use. The destruction of biodiversity, in particular of original forests, reduces carbon sinks and also impacts lower income households, who depend on wildlife for their livelihoods. As the wild environment does not follow political boundaries, its conservation needs regional and international action. Governments must take action in order to stop deforestation. In many countries, this phenomenon is linked to an export-driven and resource-depleting model, which promotes monocultures and uses agro-toxics, also harmful for workers, communities and the environment, which are already suffering the consequences. In the Amazonian area which is crucial in the fight against climate change, all governments should act in a coordinated manner to fight against the devastating effects that intensive agriculture, cattle farming and biofuels production are having in the region.

Agriculture: Soil desertification, massive deforestation and floods, among others, has a direct negative effect on rain-fed agriculture jobs. Innovative adaptation tools, and new agricultural methods, rotation of cultures, efficient water use and pesticides substitution are valuable pathways for reducing this sector's climate and sustainability footprint and ensuring a sustainable adaptation to climate-driven events.

Transport: Massive changes in the organisation of the world's transport industry are at the heart of the globalisation process. The unit cost of goods transport has fallen dramatically to below 1% of total production costs, opening up new patterns of production and distribution and dramatically changing the socio-economic life of our society. Market pressures keep transport costs down and cheap transport has imposed a heavy price in terms of pollution, energy consumption, safety, working conditions and living standards of transport workers and a reduction in the quality of urban and community life. Effective measures need to be taken to promote the use of modes of transport that are the most energy-efficient in the movement of passengers and goods with particular attention to the benefits of inter-modality. However, transport's multi-modal nature means individual efficiencies cannot be considered in isolation. Only a planned approach which combines measures to limit private car use, such as high fuel and vehicle taxation and road pricing, with fast, comfortable, affordable and efficient

integrated bus, taxi and urban rail systems can solve this problem. The promotion and financing of such systems should be a central responsibility of the public authorities. The fundamental principle in planning for sustainable transport must be the internalisation of external costs. Transporters should cover the total costs of transport — including costs such as congestion, pollution, general health, accidents and poor quality employment, which are currently paid by society as a whole. These measures need to be taken in connection with effective policies for land-use planning and for replacement of travel by private car through greater availability and use of public transport.

Adaptation could also provide positive opportunities for sectors at risk and might even help to improve worker education and income. All adaptation measures should be analysed in terms of their impact on employment creation and on poverty reduction, so that the country only chooses those that have positive outcomes in both areas. Such an approach should be implemented in all countries since unemployment reduction is a top priority for fighting poverty.

Adaptation measures vary by sector, but all should include provisions for workers whose jobs are at risk.

Time for making investments and technology work for all

In a context of financial instability where most economies are facing grave risks of deep recession and rising poverty, it is time to seize the opportunity for changing the political and economic system that has led to the current financial, social and ecological tragedies. The time has come for an in-depth reform of the international financial system, for innovative international financing instruments, for fair rules in international trade and for making our societies low-carbon and climate-resilient.

Converting our existing economies into sustainable societies will reduce energy dependence, protect natural resources and provide decent livelihoods to the workers of the world. Ambitious green investment and financial regulation can be a source of good quality employment creation, social cohesion and growth.

The means for achieving this transition should come from many sources:

- Domestic (including reforms in fiscal systems; and from banks, which should allocate an important part of their resources for credits for environmental and socially friendly-initiatives, among others), and
- International (including through international taxation of financial transactions, which is technically feasible and would be efficient in mobilising an important amount of funds, and other new forms of financing).

Trade unions call on governments to take a responsible and forward-looking approach, as these measures would enable achievement of fair development in poor countries and could provide the seedbed for clean and healthy economic growth in the future.

Financial means for achieving adaptation and mitigation actions in developed and developing countries

A major effort should be initiated by the developed countries and advanced developing countries, in which there exist mechanisms to promote research, innovation and investment. Governments and private enterprises should re-direct financial flows towards these types of investments. Developed countries have to make major financial support and green technologies available to developing countries to enable them to contribute to reducing carbon emissions. South-South cooperation can also play a role in spreading technologies in developing countries. Attention should be paid to the need for promoting long-term and non-speculative investment flows.

Trade unions will pay close attention to financial flows for mitigation investments to developing countries. While this will be necessary in order to enhance the contribution of

developing countries, in particular emerging economies, to the global emissions reduction effort, significant attention should be given simultaneously to meeting adaptation needs and to policies aiming at reducing poverty and vulnerability.

Mitigation and adaptation mechanisms are for the global good and must not be based on an approach of “charity” or “philanthropy” which puts “receiving” countries in a technology & resource-dependent situation vis-à-vis donor countries.

Funds for adaptation must be new and additional to existing Official Development Aid (ODA) commitments, adequate and predictable. Funds under the UNFCCC must be democratically-governed.

Trade unions call on governments at the UNFCCC to include in the financial mechanism provisions related to “just transition” policies, such as social/employment vulnerability assessments, re-training and economic diversification in the least developed countries as part of the commitment to adaptation, among others.

Trade unions consider that a fair and redistributive tax system is a principal source of funding for adaptation. Fiscal reorientation needs to take place in order to ensure sustainable development, a fairer distribution of wealth and an equitable social protection system that includes insurance and access to healthcare for those most exposed to climate risks as well as compensation, retraining and unemployment benefits for those working in sectors that could be affected by climate changes or by policies initiated to tackle it. Trade unions consider that revenue neutrality should be a key objective for tax reforms. Attention should be given to pressures on low and middle income households.

The carbon market, by providing an incentive to invest in emission reductions policies, should be established in such a way as to ensure stable and reliable funding for mitigation and adaptation. The need for ensuring a predictable trend for CO₂ permits and current instabilities in the financial markets highlights the importance of having transparency with active government oversight and a rational and forceful regulatory system in these markets.

Technology options for succeeding in the transition towards a low-carbon world

Many technologies are already available to avoid a carbon intensive future but they need to be deployed on a wider scale⁵. Their cost, their current low levels of deployment, restrictive application of patents and lack of political will are responsible for the poor diffusion of such technological innovations, and hence, of current increases in GHG emissions.

Trade unions express their concern about current debates on this topic, which underestimate the importance of ensuring the appropriateness of technologies to local conditions, the need for training the local workforce or developing domestic research and development capacities in developing countries. In addition, trade unions highlight the importance of “social innovation” which, through the introduction of organisational, community or individual changes, has proven to be key in achieving sustainable outcomes.

Public research needs to be strengthened, as this is a key component of technology development. Training and education is also crucial for any long-term strategy involving new technologies. Substantial increases in global and national funding for public research and development and training are needed, as these have decreased in the recent years. Attention should be paid to the need for preventing the exporting of polluting industries

⁵ “The range of stabilisation levels for GHG concentrations that have been assessed can be achieved by deployment of a portfolio of technologies that are currently available and those that are expected to be commercialised in coming decades, provided that appropriate and effective incentives are in place and barriers are removed”. IPCC, 4th Assessment Report. Responses to Climate Change

to the less developed world. Technological capacity needs to be developed in developing countries, with sufficient public oversight.

Trade unions raise once again the importance of developing policies aimed at reducing energy demand and at ensuring a sustainable mix of energies, which will prioritise renewable energies, which are highly labour-intensive, employ local workforce and are environmentally friendly.

Trade unions call for an intensification of efforts when dealing with energy saving, energy efficiency and demand management policies. These measures, in addition to their already proven effectiveness for reducing emissions, could create new jobs by substituting often imported energy by domestically produced energy-efficient technologies and services, and by re-spending the energy costs saved as additional available income in other ways. They also reduce the cost of energy for households. Therefore, governments need to move quickly to devote far greater resources to the development and deployment of cleaner technologies in areas such as battery use in transport, solar and wind energy and electrical grid efficiency, combined heat & power, sustainable waste management, among others.

As the International Energy Agency (IEA) assesses that most energy will still come from fossil fuels in 2050, it is necessary to carry out further research on transitional technologies, including technologies for using coal in a cleaner manner. This may be done through carbon capture and storage (CCS). Further resources for research, rapid deployment and demonstration plants are needed in order to determine whether CCS is cost-effective, energy-efficient and environmentally-innocuous, and thus, practical for broad application and mass deployment in coming decades. Trade unions call for a participatory and transparent framework for developing these technologies, which will ensure their social and environmental sustainability as well as avoid promoting further dependence vis à vis developed countries' production models.

For technologies to do the quantum leaps necessary for this transition, an "international innovation agenda" needs to be discussed. In addition, global sectoral agreements for sectors such as transport could stimulate the adoption of the best available technologies and their dynamic development.

Coherence in international governance

We call on the UN system to develop wider coherence and further linkages between UN Conventions. In addition, UNFCCC should work with civil society to identify impacts of trade policies and agreements at the WTO and elsewhere on measures required to combat climate change (i.e. carbon leakage). Deregulation promoted by free trade agreements has proven to be incompatible with climate and environmental protection. Thus, the UNFCCC has to ensure that where there is a clash between such trade policies and the imperative to take action on climate change, governments at all levels will have the policy space to prioritise climate change.

SOCIAL AND ENVIRONMENTAL CHALLENGES IN LATIN AMERICA: A TRADE UNION RESPONSE

Who? The Trade Union Confederation of the Americas (TUCA)

Why? To address the need to propose an alternative economic, social and environmental model for the region.

What? The II Trade Union Conference on Labour and Environment in Latin America and the Caribbean was held in Buenos Aires, 5-6 May 2009. The Conference resolved to unify social movements in the region's positions on the need to act urgently to address the crisis of distributive justice, to transform the State and restore its role in the regulation of the economy and the promotion of development, and to reaffirm the right to economically, politically, socially and environmentally sustainable development, taking into account the fact that the planet's natural resources do not allow for the expansion of industrialized countries' consumption patterns to the rest of the world. We urgently need to combat climate change by constructing alternative models of sustainable development, which will require putting a stop to free trade

and investment agreements that allow for environmental degradation and the exploitation of our resources.

Within this context, the Conference adopted a number of proposals that can be added to those in the declaration of the international union movement.

Climate justice and debt: Industrialized countries have an environmental debt to pay to countries in the South. Climate justice will be achieved when developed countries pay this debt, which means adopting measures to drastically and urgently reduce their greenhouse gas emissions, making funds available to poor countries for climate change mitigation and adaptation processes, and transferring “clean” technology for the development of environmentally sustainable productive processes.

Flexibility mechanisms: The Latin American and Caribbean trade union movement sees the development of Clean Development Mechanisms (CDM) and the proposals of mechanisms for Reducing Emissions from Deforestation and Forest Degradation (REDD) as instruments that commodify possible solutions to climate change, without providing any incentive to go beyond developed countries’ model that preys on the environment.

For more information, contact maite.llanos@csi-csa.org

Time for workers and workplaces to become actors of their future

While the responsibility for implementing GHG emission reductions and adaptation measures resides at the international and national level, it is in communities and workplaces that the impact of the necessary efforts will be felt. Through proactive and sustainable policies aiming at guaranteeing decent incomes, governments have the capacity to protect the poorest.

Through awareness-raising campaigns and promotion of environmental education, it is at the community level that many opportunities exist to move towards more sustainable consumption.

But it is naturally within workplaces that this battle will be fought and won. Since almost three-quarters of global greenhouse gases come from manufacturing, energy production or supply, transport and construction⁶, workplace actions will be crucial in order to initiate and achieve the necessary process of change within these sectors. Workplaces need to be at the centre of material and emission reductions, changes in production and sustainable development.

The role and responsibilities of enterprises need to be transformed to respond to the climate challenge. Bipartite and tripartite social dialogue and the inclusion of climate-related measures in collective agreements (for example in the area of skills and training) are key and their role should be highlighted in current negotiating processes. Workers must be directly involved and consulted at every point along the way.

Workplaces need pro-active and preventive policies to be put in place regarding adaptation to climate change, as well as the potential impacts of mitigation policies.

Trade unions have already begun their work. We are training and engaging workers in order to meet this challenge. In this regard, respect for trade union and other workers’ rights is essential in order to enhance the potential for workplace action and guarantee the effective participation of the trade union movement and environmental protection. Rights, such as the right for union representatives to be informed, trained and involved in decision making when dealing with the environment, as well as whistle-blower protection and the right to refuse dangerous or environmentally or health-damaging work, must be guaranteed.

⁶ IPCC Assessment Report 4 (2007) Summary for Policymakers, figure SPM3.

CLIMATE CHANGE PROTECTION BEGINS FROM THE WORKPLACE

WHO?

Trade unions in different countries (UK, Japan, Spain, Germany)

WHY?

Workplaces are at the centre of the combat against climate change.

WHAT ?

In the UK, the Trade Union Congress (TUC) has promoted trade union-led initiatives to cut energy use in a wide range of green workplace demonstration workplaces across the UK - for example at Corus steelworks, Friends Provident (financial services), DEFRA (the Government's environment Ministry), the TUC's head office, Scottish Power, and the British Museum. All projects promoted unions to undertake staff surveys, 'green' open days, training for 'Union Environmental Reps', and support for negotiations with management. This resulted in actual energy savings - for example the TUC halved its night-time energy use (and cut waste to landfill by 40%) and the British Museum reduced its electricity use by 7%. Unions are now adding green skills and training, and energy savings initiatives into the local collective bargaining agenda with management.

In Japan, the Japanese Trade Union Confederation (JTUC-RENGO) launched its "Eco-Life 21" campaign, which targets workplace action and consumer behaviour of workers. It promotes cloth bags to replace plastic bags, setting appropriate indoor temperatures, implementation of ecostyle dress codes (cool biz & warm biz), eco-commuting, green purchasing and Environmental Household Accounting, among other initiatives.

In Barcelona, Spain, unions have created the Reference Centre on mobility, aiming at promoting sustainable mobility, informing workers about facilities for reaching the closest bus station, bicycle or car-sharing opportunities.

In Germany, the German Trade Union Confederation (DGB) and its educational institution, the DGB Bildungswerk, together with the Federal Ministry for Environment (BMU) have launched an initiative to raise awareness of the need for more efficient use of materials and energy among work council members and employees, which can lead to cost reduction through an increase in energy productivity, as an alternative to policies aimed at reducing labour costs. New skills at the workplace will lead to innovation, more efficient processes and thus result in CO2-savings.

Final Remarks

We live in a diverse world. From highly dense urban areas to isolated rural communities, we have to nourish ourselves from these different experiences and work in solidarity with environmental, gender and social NGOs, local governments, consumer organisations and indigenous peoples, among others, as a means for achieving a solid consensus around climate policies.

In the last decade, trade unions have been involved in all the meetings of the Conference of the Parties (COP) to the UNFCCC. Our work is based on the belief that a commitment to ensure workers' participation in decision-making and to put in place employment transition will realise workers' potential in the struggle against climate change.

Trade unions will continue to raise awareness among workers and their communities on the need for fair, urgent and robust climate change policies. A paradigm shift towards an environmental and socially responsible society needs the commitment of workers and their organisations and the recognition of their role. We will work towards this end.

More information on Trade Union and Climate Change:

ITUC special website on climate change: <http://climate.ituc-csi.org>

Sustainlabour webpage <http://www.sustainlabour.org>

TUCA webpage on environment <http://www.csa-csi.org/content/section/27/194/>

ILO Green Jobs Initiative: <http://www.ilo.org/integration/themes/greenjobs/lang--en/index.htm>

At COP15, meet the trade union delegation in the World of Work (WoW) pavilion



14-16 December 2009

LO-DK building

Copenhagen, DK.

[Http://climate.ituc-csi.org](http://climate.ituc-csi.org)

GREEN JOBS: TOWARDS DECENT WORK IN A SUSTAINABLE, LOW-CARBON WORLD

A recently released report, "Green Jobs: Towards Decent Work in a Sustainable, Low-Carbon World" coordinated by the United Nations Environment Programme (UNEP), the International Labour Organisation (ILO), the International Trade Union Confederation (ITUC) and the International Organisation of Employers (IOE), says efforts to tackle climate change could result in the creation of millions of new "green jobs" in the coming decades. Green jobs are jobs which contribute to a reduction of the environmental impact of enterprises and economic sectors. The report identifies some already existing green jobs:

- **Energy supply – renewable sources of energy:** more than 2.3 million green jobs have been created in recent years, even though these still only supply 2 per cent of energy. The wind power industry employs some 300,000 people, the solar PV sector an estimated 170,000, and the solar thermal industry more than 600,000, many of the latter in China. Countries with active policies to promote renewable energy have seen employment in the sector surge. In Germany, the number of such jobs almost quadrupled to 260,000 in less than 10 years.

- **Energy efficiency, particularly in buildings and construction:** this has one of the biggest potentials to reduce greenhouse gas emissions and to create jobs in the process. Some 4 million direct green jobs based on improving energy efficiency already exist economy-wide in the United States as well as in a number of European countries. Buildings currently account for less than one million of this total but could be a significant source of green jobs.

- **Transportation:** efforts are needed to reduce the footprint of cars and boost mass transit. In addition to jobs in the manufacture of fuel efficient and low pollution and emissions cars, there are over 5 million jobs in railways in China, India and the European Union alone, and millions more in public transport worldwide.

- **Basic industries and recycling:** industrial sectors like iron and steel, aluminum, cement, pulp and paper account for a large share of the use of energy and raw materials as well as of emissions of greenhouse gases. A crucial option in order to reduce the impact of these industries is recycling (for example, it is estimated that more than 200,000 jobs are involved in secondary steel production worldwide).

- **Agriculture:** The report finds that there is considerable potential in agricultural sector as evidenced by sustainable practices on family farms, organic production and successful adaptation to climate change.

- **Forestry:** Given the hope pinned on forest as carbon sinks and considering their role as providers of renewable raw materials, pools of biodiversity, regulators of water flows and other environmental services, it is clear that green jobs in forests will play an increasingly important role in the future.

The report highlights the fact that the incremental but broad shift to the greening of most workplaces can make a very substantial contribution to reducing environmental impacts and to preventing the negative effects of climate change. These gains are often quick, low cost and do not imply major investments in new technologies.

The report makes clear that green jobs are not automatically concomitant with decent work. Many current recycling jobs for instance recover raw material and thus help to alleviate pressure on natural resources, but the process used is often dirty, dangerous and difficult, causing significant damage to the environment and to the health of workers and those in their communities. Jobs tend to be precarious and incomes are usually low. If green jobs are to be a bridge towards a truly sustainable future, this needs to change.

Skills gaps and shortages in qualified labour are fast becoming binding constraints for the greening of economies in industrial and developing countries alike. Closing the current skills gap and anticipating future needs are essential for a broad and rapid transition towards a green and low carbon economy.

Assessments and monitoring of the evolution of green jobs and of the transformation and shifts in the labor market should include indirectly induced employment as well as displacement effects.

In order to meet the environmental and social challenges that lie ahead, a broad cross-section of the population should also benefit from green jobs, such as youth, women, farmers, rural populations and slum dwellers. For this potential to be realised, governments have to play a pro-active role in promoting green job strategies.