The mounting cost of energy-intensive production and consumption patterns is widely recognized. It is timely to move towards a high-employment, low-carbon economy. Green Jobs hold the promise of a triple dividend: sustainable enterprises; poverty reduction; and a job-centred economic recovery.

Juan Somavia, ILO Director-General
(March 2009)
Meeting the challenges of the 21st century

The 21st century faces two defining challenges.

- The first is to avert dangerous climate change and a deterioration of natural resources which would seriously jeopardize the quality of life of present and future generations.

- The second is to deliver social development and decent work for all. This includes lifting over 1.3 billion people, four out of ten workers in the world, and their families above the poverty line and providing decent job opportunities for 500 million young people entering the labour market over the next 10 years. It also means access to modern forms of energy for 1.6 billion people who still do not have any, and decent housing and sanitation for over 1 billion slum dwellers in mega-cities.

These two challenges are intimately linked and cannot be addressed separately any more. Green jobs and the promotion of the green economy have become the key drivers for achieving economic and social development that is also environmentally sustainable.
The transformation to a sustainable, low-carbon economy

The rapid shift to a low-carbon economy which is needed to avoid irreversible and dangerous climate change effects on societies and economies. The transformation will have profound impacts on the way we produce, consume and earn a living in all countries and sectors. The drive towards sustainability will have to be economy-wide, greening all production processes and will involve most enterprises, workers and citizens. It will be a second great transformation, on the scale of the industrial revolution, but it needs to occur very fast.

Global emissions of greenhouse gas need to be reduced sharply over the next decades. This requires millions of enterprises and workers contribution to drastically improving energy efficiency and shifting to clean sources such as renewable energy. There are similar challenges to curtail unsustainable use of natural resources, to reduce waste, prevent pollution and safeguard sustainable food production for a growing world population. These shifts will cause major structural changes in economies and labour markets.

Climate change is already taking its toll through increasingly variable weather patterns and more frequent extreme events. More frequent and more severe droughts, floods and storms are costing lives, destroying infrastructure and disrupting economic activities. Developing countries, micro-enterprises, small businesses, poor workers and poor communities are particularly vulnerable.
**Green jobs: a low-carbon economy with decent work in sustainable enterprises**

For the ILO, the notion of **green jobs** summarizes the transformation of economies, enterprises, workplaces and labour markets into a sustainable, low-carbon economy providing decent work.

**Green jobs** reduce the environmental impact of enterprises and economic sectors, ultimately to levels which are sustainable. They contribute to reducing the need for energy and raw material, to avoiding greenhouse gas emissions, to minimizing waste and pollution, and to restoring ecosystem services like clean water, flood protection and biodiversity. The concept of **green jobs** is evolving and will change over time. Its precise definition, e.g. for the purposes of labour market assessment, will depend on the country and the sectors concerned.

**Green jobs** can be created in all sectors and enterprises. There are direct jobs in sectors producing greener goods and services, indirect jobs in their supply chain and induced jobs, when savings on energy and raw material are spent on more labour-intensive goods and services.

**Green jobs** can be created in urban as well as in rural areas, and include occupations across the spectrum from manual to highly skilled.

The potential for green jobs exists in countries at all levels of economic development. Indeed, it is often higher in developing countries. Investments and programmes to promote **green jobs** can be targeted at those who tend to need them most: young people, women and the poor.
In order for green jobs to play this key role in socially inclusive development, they need to be decent jobs which provide adequate incomes, social protection and respect for the rights of workers, and give workers a say in decisions which will affect their lives. Investment in skills development is a vital but often neglected condition for the successful greening of economies and enterprises.

**Green jobs and the economic crisis**

At a time when the world is beset with massive losses of jobs and incomes, a significant number of countries have adopted economic stimulus packages with major investment in greening their economy.

Large green recovery packages are in place in China, the United States, the Republic of Korea, Japan, the European Union and elsewhere.
They include investments in reducing the demand for energy through the promotion of energy efficient buildings, public transport, electrical appliances and cars, as well as diversifying the supply of clean and renewable energy (wind, solar, biomass and geothermal). Green stimulus packages, including in developing countries, aim to restore ecosystems services and rehabilitate rivers, forests and water catchment areas.

Green jobs are crucial to overcoming the economic crisis. They are a practicable and effective option for reviving economies and can contribute to creating large numbers of jobs quickly. This is also true for the major investments needed to adapt to climate change.

If invested wisely, the resources to overcome the economic crisis could leave a legacy of energy-efficient infrastructure, rehabilitated ecosystems, renewable energy sources, and enterprises and workplaces that are more resilient to climate change. They could lay the foundations for a greener economic future which is environmentally sound, economically productive and socially sustainable.

Green jobs - some visible, some less visible

Potential for mitigating climate change by reducing the emission of greenhouse gases is concentrated in economic sectors such as energy, building, manufacturing, transport, agriculture and forestry. Fulfilling this potential, however, depends on input from many other sectors, including energy and resource-intensive ones like mining, iron and steel, chemicals and information technology.

Green jobs include direct employment in the manufacture, installation and operation of low-emission renewable energy, but also indirect jobs in making steel for gearboxes and windmill towers, composite chemicals for blades and concrete for the foundations of a windmill.

For sustainable economies and societies, enterprises and workers also need to be resilient in the face of climate change and natural resource constraints, to be able to adapt to climate change and to meet the challenges of a transition from energy and resource-intensive products, services and processes to a greener, low-carbon economy. A socially just transition for enterprises, workers and communities is part of the ILO agenda on green jobs.

Much less visible but equally important are the people who improve process efficiency in industry, managers who reduce the energy and resource consumption of factories, offices and other buildings, technicians, procurement officers, logistics dispatchers and many others.
What world leaders say about green jobs

UN Secretary-General Ban Ki-moon

The crisis, devastating as it is, offers an excellent opportunity to promote green economic development. The way forward should include a focus on labour-intensive projects that reduce greenhouse gas emissions and help communities adapt to global warming. The transition to a low-carbon economy can create millions of jobs. (19/11/2008)

President Obama, United States of America

Now, the choice we face is not between saving our environment and saving our economy. The choice we face is between prosperity and decline. ... We can allow climate change to wreak unnatural havoc across the landscape, or we can create jobs working to prevent its worst effects. (22/4/2009)

President Hu-Jintao, China

Achieving sustainable development and protecting the earth - our common homeland - is closely bound up with the fundamental interests of peoples of the world as well as the immediate interests of vast numbers of workers. Pursuing the civilized development road of faster productivity growth, better standard of living and sound ecosystem and realizing economic and social development while living harmoniously with nature so that workers live and work in a good ecological environment is the basic purpose of achieving sustainable development as well as an important precondition for decent work for all workers. (7/1/2008)

Making green jobs a reality: the ILO’s Global Programme

The ILO is endeavouring to become the recognized international organization for dealing with the impact of climate change, of policies related to it and of other environmental challenges and opportunities in the World of Work.

To this end, it is working to deepen its expertise in analysis and policy advice on the formulation and implementation of policies and measures which contribute to recovery from economic crisis in the short-term and to promoting fair globalization and the development of sustainable enterprises and economies which are efficient, socially just and environmentally sound in the medium to long term.
Prime Minister Han Seung-soo, Republic of Korea

The government will consolidate its job creation and green growth policies to better prepare for the future. The government’s top priority is to create more job opportunities in the face of the global economic crisis. At the same time, it will actively implement green growth strategies to enhance its economic growth potential. (9/1/2009)

President José Manuel Barroso, EU Commission

Responding to the challenge of climate change is the ultimate political test for our generation. Our mission, indeed our duty, is to provide the right policy framework for transformation to an environment-friendly European economy and to continue to lead the international action to protect our planet. Our package not only responds to this challenge, but holds the right answer to the challenge of energy security and is an opportunity that should create thousands of new businesses and millions of jobs in Europe. We must grasp that opportunity. (23/1/2008)

President Kgalema Motlanthe, South Africa

Measures to protect the environment and mitigate the impact of climate change can also contribute to job creation. (20/2/2009)

The ILO strategy for the green jobs programme includes producing a comprehensive knowledge base, tested tools and practical approaches, a strong team from various ILO units and offices, the full involvement of the ILO constituents, strategic partnerships and the pooling of resources to achieve shared goals.

The ILO programme currently concentrates on five priorities:

1. tools with which to diagnose labour market impact and to inform policy;
2. practical approaches to the greening of enterprises;
3. promotion of green jobs in waste management and recycling;
4. green jobs in renewable energy and energy efficiency; and
5. job creation and enterprise in the adaptation to climate change.

Policy assistance for green job creation and capacity building

The Green Jobs Programme has been growing very rapidly since it began in 2008. It includes:

- active participation in international policy debates such as climate negotiations and the G8;
- global analysis and research;
- assistance to ILO member countries and constituents;
- capacity building for ILO constituents.
Country programmes: The number of countries in which the programme is active has been rising rapidly, particularly in the Asia-Pacific region. They include:

- **Bangladesh** waste management
- **Brazil** biofuels, green jobs in social housing
- **China** mapping labor market impacts climate change, energy efficiency
- **Costa Rica** sustainable agriculture and eco-tourism
- **Haiti** infrastructure for adaptation to climate change
- **India** local development and renewable energy, green jobs and employment guarantee
- **Philippines** local development for adaptation to climate change
- **Somalia** adaptation to climate change
- **Tanzania** waste management
- **Thailand** greening enterprises

Training and capacity building. Inadequate awareness, knowledge and capacity among ILO constituents are major constraints on their active participation in the formulation and implementation of relevant policies. The International Training Centre in Turin has developed and tested a course on green jobs for ILO constituents, which is held at the Centre. Training in specific regions and countries is planned.

Institutional structure. Within the ILO, the Programme is supported by networked teams of ILO field offices, technical units at Headquarters, the International Institute for Labour Studies and the ILO International Training Centre in Turin. The teams establish partnerships with other international institutions, in member countries and in specific economic sectors. The Policy Integration Department provides coordination and facilitates programme development.
Partnerships for solutions - The Green Jobs Initiative

The ILO work on green jobs is built around partnerships, of which the most important continues to be the Green Jobs Initiative between the United Nations Environment Programme (UNEP), the International Labour Organization (ILO), the International Trade Union Confederation (ITUC) and the International Organization of Employers (IOE).

The Green Jobs Initiative was launched in order to promote opportunity, equity and just transitions to sustainable economies and to mobilize governments, employers and workers to engage in dialogue on coherent policies and effective programmes leading to a green economy with green jobs and decent work for all.

The Green Jobs programme is also part of the United Nations system-wide strategy for addressing climate change. A strategic partnership with UNEP has been put in place and collaboration around the theme of environment and poverty reduction been enhanced with international specialized agencies such as UNDP and UNITAR.

The growing network of international and national partners also includes development and research institutions such as the European Union and the Chinese National Academy of Social Sciences as well as non-governmental organizations, including Development Alternatives (India) and Grameen Shakti (Bangladesh).

For more information:

- The Green Jobs Initiative
  Policy Integration Department
  International Labour Office
  1211 Geneva 22
  Switzerland
  http://www.ilo.org/greenjobs

- Green jobs for Asia-Pacific

Key resources:

- ILO Governing Body on Climate Change and Decent Work
  GB.303/ESP/4 303th Session:

- The Financial and Economic crisis: A Decent Work Response

- ILO Director-General
  Speech at the G8 labour ministers’ meeting, Niigata, Japan, 13 May 2008:
  http://www.ilo.org/greenjobs

- UNEP Global Green New Deal
  http://www.unep.org/greeneconomy/index.asp

- ITC Turin Green jobs training course
  http://greenjobs.itcilo.org/