



Green jobs

Facts and Figures



International
Labour
Organization

UNite to combat CLIMATE CHANGE

Green jobs – Good jobs: a dual challenge

Green Jobs have become an emblem of a more sustainable economy and society, that preserves the environment for present and future generations and is more equitable and inclusive of all people and all countries.

The rationale for green growth and clean development has mostly been presented as a win-win situation for the environment and for economic development. Relatively little and superficial attention has been paid to the social dimension of sustainable development, in particular to the implications for employment and for decent work.

According to a report commissioned by the UN Environment Programme under a joint Green Jobs Initiative with the International Labour Office (ILO), growing numbers of green jobs will be created as the move toward a low-carbon and more sustainable economy gathers momentum. Although winners are likely to far outnumber losers, some workers may be hurt in the economic restructuring toward sustainability.

Environmental degradation, including the deterioration and exhaustion of natural resources are among the most serious threats to economic and broader sustainable development. These will in the future be exacerbated by the impact of climate change, which is already felt in many developing countries. In the medium to long term, projected climate change will lead to serious disruption of economic and social activity in many sectors on all continents. 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 thus for employment, incomes and poverty reduction. These implications harbor both major risks and opportunities for working people in all countries, but particularly for the most vulnerable in the least developed countries and in small island States.

From a broad conceptual perspective, employment will be affected in at least four ways as the economy is oriented toward greater sustainability:

- Additional jobs will be created – as in the manufacturing of pollution-control devices added to existing production equipment.
- Some employment will be substituted – as in shifting from fossil fuels to renewable, or from truck manufacturing to rail car manufacturing, or from land filling and waste incineration to recycling.
- Certain jobs may be eliminated without direct replacement – as when packaging materials are discouraged or banned and their production is discontinued.
- Many existing professions (such as plumbers, electricians, metal workers, and construction workers) will simply be transformed and redefined as day-to-day skill sets, work methods, and profiles are greened.

THE DUAL CHALLENGE OF GREEN JOBS IN NUMBERS

The environmental challenge

- **Climate related disasters:** 262 million people affected annually from 2000-2004
- **Water shortages:** 1.8 billion people expected to suffer from fresh water scarcity by 2025, mostly Asia and Africa
- **Environmental refugees:** potentially 50 million environmental refugees due to climate change over next few years
- **Displacement by flooding:** 330 million people in coastal areas, flood plains of rivers and small island States increasingly exposed
- **Food shortages and malnutrition:** affect 180 million people today and threaten to affect 600 million people by 2080
- **Pollution:** 2 million people globally die prematurely each year due to indoor and outdoor air pollution
- **Loss of biodiversity:** the great majority of well-studied species are declining in distribution, abundance or both. 40 per cent of the global economy is based on biological products and processes. Poor people, especially those living in areas of low agricultural productivity, depend heavily on the genetic diversity of the environment

The decent work challenge

- **Working poor:** 1.3 billion people in the world with earnings too low to lift them and their dependants above the poverty threshold of US\$ 2/day (more than 43 per cent of the global workforce)
- **Unemployed:** 190 million globally
- **Young job seekers:** over 500 million additional job seekers over the next 10 years
- **Insecurity:** 5.3 billion people without access to any social security coverage
- **Access to energy:** 1.6 billion people without access to modern energy (almost 1 in 4 humans living today)
- **Adequate housing:** 1 billion slum dwellers in poor housing lacking essential facilities such as clean water and sanitation

What are Green jobs?

Green jobs reduce the environmental impact of enterprises and economic sectors, ultimately to levels that are sustainable. Specifically, but not exclusively, this includes jobs that help to protect ecosystems and biodiversity; reduce energy, materials, and water consumption through high-efficiency strategies; de-carbonize the economy; and minimize or altogether avoid generation of all forms of waste and pollution.

Green jobs in emerging economies and developing countries include opportunities for managers, scientists and technicians, but the bulk can benefit a broad cross-section of the population which needs them most: youth, women, farmers, rural populations and slum dwellers.

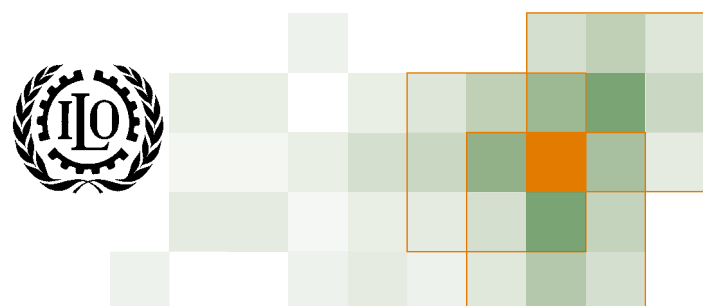
However, many jobs which are green in principle are not green in practice because of the environmental damage caused by inappropriate practices. The notion of a green job is thus not absolute, but there are 'shades' of green and the notion will evolve over time. Moreover, the evidence shows that green jobs do not automatically constitute decent work. Many of these jobs are "dirty, dangerous and difficult". Employment in industries such as recycling and waste management, biomass energy and construction tends to be precarious and low-paid. If green jobs are to be a bridge to a truly sustainable future, this needs to change. Green jobs therefore need to comprise decent work. Decent, green jobs effectively link Millennium Development Goal 1 (poverty reduction) and Millennium Development Goal 7 (protecting the environment) and make them mutually supportive rather than conflicting.

Green jobs initiative

The ILO is joining forces with the United Nations Environment Programme (UNEP) as well as with other UN agencies and partners to help realize the potential for green jobs and a positive labour market transition in the face of climate change. In his report to the International Labour Conference on "Decent Work for Sustainable Development", ILO Director-General Juan Somavia called for a major ILO programme on climate change. The ILO "green jobs initiative" responds to climate change as one of the three priorities for the UN system established by UN Secretary-General Ban Ki-moon. The ILO programme will help to fill the knowledge gaps, contribute to policy formulation and assist member countries as part of the Decent Work Country Programmes.

For more information on the green jobs and the green jobs initiative:

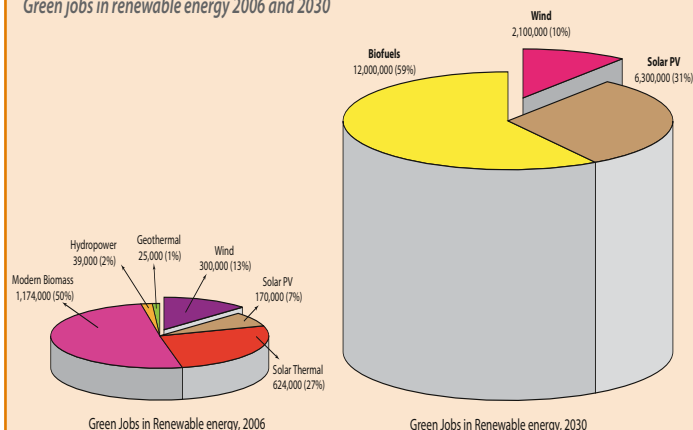
<http://www.ilo.org/integration/greenjobs/index.htm>



KEY FIGURES

- The global market for environmental products and services is projected to double from US\$1,370 billion per year at present to US\$2,740 billion by 2020.
- Half of this market is in energy efficiency and the balance in sustainable transport, water supply, sanitation and waste management.
- Millions of green jobs already exist in industrialized countries, emerging economies and developing countries i.e.: In energy supply – renewable sources of energy, energy efficiency – particularly in buildings and construction, transportation, basic industries and recycling, agriculture, forests.
- 2.3 million people have in recent years found new jobs in the renewable energy sector alone, and the potential for job growth in the sector is huge. Employment in alternative energies may rise to 2.1 million in wind and 6.3 million in solar power by 2030.
- Clean technologies are already the third largest sector for joint venture capital after information and biotechnology in the United States, while green venture capital in China more than doubled to 19 per cent of total investment in recent years.
- Renewable energy generates more jobs than employment in fossil fuels. Projected investments of US\$630 billion by 2030 would translate into at least 20 million additional jobs in the renewable energy sector.
- In agriculture, 12 million people could be employed in biomass for energy and related industries.
- A worldwide transition to energy-efficient buildings would create millions of jobs as well as "green" existing employment for many of the estimated 111 million people already working in the construction sector.
- Investments in improved energy efficiency in buildings could generate an additional 2-3.5 million green jobs in Europe and the United States alone, with a much higher potential in developing countries.

Green jobs in renewable energy 2006 and 2030



International Labour Office
4 route des Morillons
CH-1211 Geneva 22
Switzerland

Tel. +4122/799-7912
Fax +4122/799-8577
September 2008