

Creating Green Jobs in the Indian economy

a value chain analysis based approach



*Green Jobs
...decent work in a low carbon world*

Meeting the challenges of the 21st century

The global community faces two defining challenges in the 21st century:

- to mitigate and adapt to climate change and deterioration of natural resources
- to deliver social development and decent work for all.

Intimately linked, these challenges seriously jeopardise the quality of life of present and future generations. They call for providing decent job opportunities to 500 million young people entering the labour market in the next 10 years and for lifting over 1.3 billion people above the poverty line.

These challenges cannot be addressed separately any more. Green Jobs in green economies have become the key drivers for economic and social development that is environmentally sustainable.

In response to these challenges and to catalyse the key drivers, the International Labour Organisation (ILO), together with UNEP, ITUC

(full) and IOE (full) has launched a "Green Jobs Initiative".

The Indian perspective

India needs over 10 million jobs created each year. Current levels of employment generation will be insufficient to lift the unemployed or underemployed above the poverty threshold. Nor can they provide work for millions of young new entrants to the labour market.

Micro, Small and Medium Enterprises (MSMEs) will continue to be major employment providers in the country. While holding vast potential in terms of generation of employment, MSMEs face serious challenges vis-à-vis decent work issues and environmental impact.

The ILO has initiated a demonstration project in India in collaboration with the TARA Livelihood Academy, an affiliate of Development Alternatives, to identify and test pathways towards sustainable development through the creation of Green Jobs.

The Green Jobs Demonstration project seeks to support Indian MSMEs in the vital role they can play as driving forces towards an economically, socially and environmentally sustainable development of the country.

The core of the demonstration project, also a key focus of the initiative, lies in the promotion of win-win strategies in value chains. These strategies can support adoption of green technologies that lower greenhouse emissions amongst MSMEs, while opening up opportunities for increased incomes and alternative livelihoods.

A comprehensive value chain methodology that integrates the three aspects of sustainability opens up far-reaching opportunities to expand low-carbon pathways to economic development - thereby enabling Green Growth and creating 'Green Jobs'.

What are Green Jobs?

The notion of green jobs encapsulates the transformation of enterprises, workplaces and labour markets into a sustainable low-carbon economy providing decent work. From a local development perspective, particularly in India

Green Jobs:

- a) reduce the environmental impact of enterprises and economic sectors, ultimately to levels which are sustainable
- b) can be created in all sectors and enterprises
- c) can be created in urban as well as in rural areas, and include occupations across the spectrum, from manual to highly skilled

The concept of Green Jobs is evolving; its precise definition depends on the country and sector concerned. Investments and programmes to promote Green Jobs can be targeted to those who need them most: young people, women and the poor.

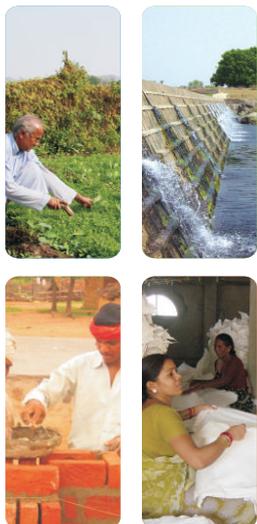
From a local development perspective, particularly in India, Green Jobs can be understood as safe and dignified occupations that create income and social security for people, reduce carbon dependency, regenerate the natural resource base and contribute to sustainable growth of national economies.

Green Jobs Demonstration Project

This Green Jobs demonstration project is being implemented in three phases: Assessment, Material Development and Implementation. It is carried out through a process that systematically identifies key intervention points within a sector. These intervention points would enable the adoption of green technologies, reduction of greenhouse gas emissions, improved working conditions and enhanced value addition leading to local employment generation and eventual transformation in identified sub-sectors.

High potential sectors were identified on the basis of employability potential; impact on environmental degradation through either release of CO₂ or Methane; strong intrinsic characteristics like existence of Sector Support Organisations; gender inclusive labour; and favourable external factors - access to green technologies, finance and training institutions. Out of these, two clusters were identified: the Rice Flakes (Poha) Cluster in Ujjain and the Dairy Cluster in Jabalpur, both from the state of Madhya Pradesh. These two clusters had the maximum potential of partnering in implementation of environmentally sustainable and decent work practices.

Over the course of 2009, the Green Jobs Initiative will develop capacity building resources and map out how the 'greening' of jobs can take place in these two clusters.



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)



Dairy Cluster, Jabalpur

Decent work concerns are inadequately addressed, especially health and safety issues and working conditions, including a widespread dearth of acceptable sanitation facilities or drudgery reducing devices.

“Greening” Opportunities and Key Intervention Points

The cluster has tremendous potential for green enterprises and Green Jobs. Identified strategies to realise such potential comprise the following:

- Introduction and familiarisation of key stakeholders with environmentally sustainable and value-adding dung management processes that would result in reduction of methane emissions (approximately 80,000 tonnes of CO₂ equivalent), cleansing of the local water supply and improvements in worker conditions.
- Dissemination to stakeholders within the cluster the business case for the adoption of biogas-based technology within the value chain, with the aim of facilitating progress through information and linkages.
- Support in achieving enhancement in livelihood opportunities for workers involved in dung handling, especially women.

d) Capacity building of critical actors in the areas of:

- Environmentally sustainable dung management
- Improved water efficiency and recycling
- Organic composting for fodder production and sale as 'green' fertilizer
- Enterprise development and management
- Carbon revenues, including institutional networking to enable bundling of emission reductions from multiple dairy farms
- Convergence and linking up with existing government schemes supporting the decent work agenda

Jabalpur, a medium sized city in the state of Madhya Pradesh comprises a dense cluster of 171 dairy farms with daily milk output in the range of 125,000-150,000 litres. There are significant opportunities for creation of Green jobs via a win-win strategy in this cluster, as summarised below:

Key Cluster Characteristics

This cluster possesses strong sector organisation and employs 15,000 people, of which 20% are women.

The dairy farms practice poor waste management processes, especially with regard to the treatment of dung, therefore releasing substantial amounts of methane and contaminating the local river. These two environmental issues have important implications in terms of catalysing climate change and damaging local ecosystems respectively.



Rice Flakes (colloquially known as Poha) are one of the most versatile ready-to-cook foods in India. The Poha Cluster in Ujjain comprises of 45 units with annual production of 40,000 tonnes. Turnover is around Rs. 70 Million with retail distribution networks extending across the country and a few locations internationally.

Key Cluster Characteristics

This cluster is characterised by strong support systems; it has a strong association of Poha manufacturers and is linked to a range of business service providers. One thousand people are employed directly, of which 30% are women.

The cluster contributes significantly to CO₂ emissions due to inefficient kilns and

Rice Flakes (Poha) Cluster, Ujjain

roasters that use saw dust as fuel wood. The workers operate in poor occupational conditions without well organised social security systems.

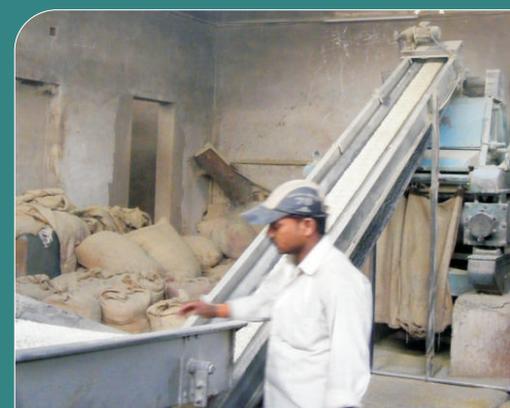
“Greening” Opportunities and Key Intervention Points

- To facilitate and promote the adoption of appropriate technology through know-how transfer to pioneering enterprises.

Improved kilns and roasters would reduce carbon emissions in the range of 30 to 40% and improve occupational conditions through lower temperatures and reduced air pollution. Improved soaking process, recycling and safe disposal of water would avoid unnecessary overuse and contamination.

- Capacity building of critical actors in the areas of

- Occupational Health and Safety
- Improved kiln operation and maintenance
- Carbon revenues, including bundling of emissions reductions
- Linking up with government social protection schemes



Development Alternatives Group (DA) is a not-for-profit research and development organisation involved in innovations, social enterprise and action. Established in 1983 in New Delhi (India), the organisation innovates Eco-Solutions and implements programmes aimed at poverty eradication and environment regeneration. TARA (Technology for Action for Rural Advancement) is a social enterprise of DA Group which pioneers business approaches by which local entrepreneurs can help improve rural lives. TARAhaat is a Development Enterprise of DA Group. Its vision is to empower people to achieve their aspirations by using Information and Communication Technologies (ICT).

TARA Livelihood Academy (TLA) is a DA Group commitment towards extending the reach of the capacity building services to millions of underprivileged people; particularly women and youth. Its mission is to provide access to 'Green Jobs' to millions through skill development and enterprise support services. TARA Livelihood Academy conducts training programmes for the unskilled, mid-career professionals and aspiring entrepreneurs.

The International Labour Organization (ILO) was established in 1919 to promote the cause of social justice and by doing so, to contribute to ensuring universal and lasting peace. In 1946, ILO became the first specialized agency of the United Nations. ILO's tripartite structure makes it unique among UN organizations. The tripartite constituents, composed of the government, employers' and workers' representatives, have an equal voice in shaping policies and programmes. Decent Work is the corner stone of ILO's endeavours. It encompasses four objectives that are inseparable, interrelated and mutually supportive - promoting fundamental principles and rights at work, promoting employment and enterprise creation, extending social protection and reinforcing social dialogue with the cross-cutting themes of gender and development. The Decent Work Agenda strives for economic growth with equity through a coherent blend of social, economic and environment goals for opportunities for all women and men to obtain decent and productive work in conditions of freedom, equity, security and dignity - in other words, not just more jobs, but better jobs. DW is translated into Decent Work Country Programmes (DWCPs) at country levels, prepared jointly by the ILO and its tripartite partners. The DWCP for India, aligned to India's 11th Five-Year Plan, has three priorities: promotion of employment - quantitative and qualitative aspects, progressive extension of social protection and tackling unacceptable forms of work with a focus on child and bonded labour.

The ILO's global Green Jobs Initiative was launched in November 2007, in collaboration with the United Nations Environment Programme and International Trade Union Confederation, to support concerted efforts by the tripartite partners to promote environmentally sustainable jobs and development. As an integral component of DWCP-India, a demonstration programme on Green Jobs has been launched in one State in India as part of a regional programme.



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