



GREEN JOBS MALAYSIA PROJECT

Project Background

In an era of climate change, resource scarcity and environmental degradation the promotion of green jobs has become synonymous with a wider development agenda driving efforts towards a greener and fairer development path.

What are Green Jobs?

Green jobs are direct employment in any economic sector and activity which reduce their negative environmental impact, ultimately resulting in levels that are sustainable. They are 'decent' jobs that help to reduce consumption of energy and raw materials, de-carbonize the economy, protect and restore ecosystem services, flood protection and biodiversity and minimize the production of waste and pollution.

The beginnings of the Project:

During the run up to the climate change negotiations held in Copenhagen in 2009, the Malaysian Prime Minister Najib Tun Razak pledged a 40% reduction in Malaysia's GHG emissions intensity by 2020. This was followed by the unveiling of the Malaysian New Economic Model (NEM) on 30 March 2010 which defined a number of Strategic Reform Initiatives (SRIs) to propel the country forward towards Vision 2020 goals and recommended for the setting of green economy policy platform. This GHG emissions intensity target was further endorsed by the National Policy on Climate Change of 2009. Moreover, the National Green Technology Policy of 2010 was developed by the Cabinet Committee on Green Technology with the Ministry of Energy, Green Technology and Water (KeTTHA) to support the development of new green industries and green jobs.

In May 2011, the Green Jobs Action Plan Workshop conducted in Kuala Lumpur served to enhance social dialogue on green jobs in Malaysia and set the stage for further collaboration between the ILO and tripartite constituents in Malaysia (government, workers' and employers organizations) on the promotion of green jobs.

Against this backdrop, Green Jobs Malaysia Project was born in 2012. Through enhanced capacity of constituents, the project will assist Malaysian government to shift to a low-carbon, environmentally friendly and climate resilient economy that helps accelerate the jobs recovery, reduce social gaps, support development goals and realize decent work.

“

The role of the ILO must take up to promote the considerable potential for creation of decent work associated with the transition to a low-carbon sustainable development path and to minimize and manage the inevitable dislocation that will accompany it.

”

- Guy Ryder, ILO Director General

Development Objective

To raise the capacity of the government and social partners in Malaysia in order to have a clearer understanding of the prevalence of green jobs across the economy, and to identify entry points for further green job creation, but also to identify supply side gaps, for a better understanding of the impacts on the labour market of climate smart policies and the potential for gender responsive green jobs creation.

By scenario modelling, government and social partners will be able to **provide policy alternatives and devise programmes for the promotion of green employment opportunities**, and **conduct national discussions on the mainstreaming of green jobs into development, social and employment policies**.

Specific Objectives

Immediate Objective 1:

Increased information on the environmental and socio-economic impacts on employment;

Immediate Objective 2:

Enhanced constituents' capacity on green jobs and use the analytical tool(s) for green job analysis; and

Immediate Objective 3:

Raised awareness and compliance to developed national competency standard on green technology and national occupational skills standards supported through promotional activities and creation of pool of masters trainers.

Project Duration & Phases

The Green Jobs Malaysia Project was agreed upon on May 2012 and implemented through four phases:

Table 1:

Project Phases
 May 2012- June 2015

PHASE 1 Data gathering, scoping and mapping of green jobs (in consistence with a SAM).	PHASE 2 Construction of a Green Dynamic Social Accounting Matrix (DySAM).
PHASE 3 Capacity development programme (including policy simulation exercises and related study).	PHASE 4 Pilot green skills standards awareness raising and promotion programme.

Results

The Green Jobs Malaysia Project has made significant inroads in raising the capacity of the government, social partners (workers' and employers' organizations) and other stakeholders with regards to charting their transition to a green(er) economy.

Phase 1:

The Project has **mapped out existing green jobs in Malaysia in six key sectors** of the economy namely:

- (1) agriculture, fishery and forestry;
- (2) energy;
- (3) water and waste management;
- (4) solid waste management;
- (5) transport; *and*
- (6) construction,

promoting better understanding of the prevalence and the characteristics of green jobs in Malaysia. Sectoral profiles (covering key trends: sustainability trends; sub-sectors and environment-related employment therein, estimates of green jobs through environmental and decent work criteria) are now available for these sectors and available to all stakeholders.

Table 2:
 Estimates of core environment-related jobs, decent jobs and green jobs

The Green Jobs Mapping Study was completed in April 2013. Download copies of the report at <http://apgreenjobs.ilo.org>.

Green Sector	Total Jobs in the Sector	Core Env. Jobs	Decent Jobs	Green Jobs
Agriculture	1,400,000	122,745	390,708	122,253
Energy	N/A	5,510	35,261	5,510
Water Wastewater	NA	9,960	9,960	9,960
Solid waste	N/A	15,780	15,780	15,780
Transport	312,962	46,577	46,577	46,577
Construction	974488	10,906 – 46,155	552,028	10,906 – 46,155

Source: Based on ILO/IGES (2014).

Phase 2:

The Project has also built a green expanded Social Accounting Matrix and Dynamic Social Accounting Matrix (DySAM) providing a comprehensive set of accounts disaggregated between green, brown and mixed (hybrid) sectors in Malaysia, spanning from 2000-2012.

With this constructed Green DYSAM, planners, policy makers and other stakeholders including the social partners now has a good basis for identifying entry points for further green jobs creation as well as understanding the linkage between environment/climate change-related policies and the labour market. The employment and CO2 satellites/extension of which allow for more comprehensive analysis and policy support modelling.

Moreover, Green Jobs Project Malaysia has tackled the issue of skills needs and gaps on the supply side for green jobs in the key selected sectors and subsectors. It has developed and tested a tool for identifying these skills needs and gaps within DySAM. This entailed audit of relevant skills data as well as preparations of matrices compatible and consistent with the level of disaggregation of the Green DySAM. It further entailed qualitative survey, subsequent application of the results into the matrices, as well as policy simulations in DySAM, allowing for an analysis of needs and gaps in the context of the greening measures.

Phase 3:

The project has taken a capacity-development approach. Green Jobs Foundation Trainings, Training-workshops for green jobs mapping have been undertaken. Furthermore, two levels of training on SAM, and DySAM (Level 1 Training on Input-Output, SAM and DySAM Framework, Modelling and Application and Level 2 Training on Policy Scenarios and Simulations) have also been conducted resulting in built capacities for these tasks and the creation of a pool of national experts from government, social partners, academe and other institutions whom are capable of using and updating the Malaysia DySAM in future years.

The pool is composed of 35 Senior technical officers of various Malaysian ministries & agencies, to cite a few:

- The Ministry of Human Resources (MOHR);
- Ministry of Energy, Green Technology and Water (KETTHA);
- Ministry of Finance;
- The Economic Planning Unit
- Bank Negara Malaysia, and
- Malaysian universities as well as leading research institutions, such as the Institute for Green Environmental Strategies (IGES)

The Green DySAM training materials prepared and delivered under the Project in 2013 and 2014 present a valuable package for the country to continue to expand its pool of experts.

Key training areas include:

Level 1 DySAM training:

- Tools and end Uses: DySAM, SAM/IRSAM, I-O Models
- SAM Impact Analysis: Simulation, Extension, and Expansion
- DySAM Data Requirements

Level 2 DySAM training:

- Key concepts of DySAM-hands-on experience in the construction, expansion/extension
- Development of satellites
- Modelling or policy support scenario simulation
- Vensim, use of the dedicated software for maintenance, updating and policy support simulations and modelling.

Phase 4:

The Project has supported the government and social partners by promoting awareness and greater understanding, hence, better compliance to national competency standards and national occupational skills standards relating to green technology and occupations.

Human Resource Managers, other stakeholders including target and cross sector regulators in Malaysia have become oriented and can explain NCS and NOSS for green skills (400 HR Managers). Pool of Master trainers created on the NCS and NOSS (A total of 40 Master trainers have participated in the Masters Trainers Course for NCS and NOSS for occupations in the following sectors: Energy; Transportation; Building and Waste & Water Management).



GreenDySAM-based Modelling and Policy Support Simulations (*Green Township Scenario Simulation and Application in Organic Agriculture Exports*)

The project tackled a key policy question of the government of Malaysia pertaining to the establishment of “green township” set-up within the context of green-jobs vs. brown-jobs technology measuring impacts on the economy, employment creation and CO2 emissions.

Resulting macro impacts of the green township scenario & contributions:

0.11%	Production growth rate Largest contribution Hybrid-jobs (43%)
0.11%	Factor income growth rate Largest contribution Hybrid-jobs (51%)
0.10%	Institutions income growth rates Largest contribution from Hybrid production (52%)
0.16%	Employment growth rate Largest contribution from Green-jobs production (45%)
0.12%	Activity CO2 emission growth rate Largest contribution from Brown-jobs production, an indication of mainly direct impacts (47%)
0.11%	Household consumption growth rate Largest contribution from Hybrid production, an indication of mainly induced impacts (49%)

A snapshot of the simulation results:

“Malaysia is at early stages of the transition to a green economy with participation rates green-jobs technology still at lowest in the totals, but shows a lot of promise with largest contribution to employment growth rate at macro and meso levels seen in from green-jobs production.”

Green Jobs Programme for Asia and the Pacific
GREEN JOBS MALAYSIA PROJECT

Our Tripartite Project Steering Committee

The project will assist the Malaysian Ministry of Human Resources (MoHR), Ministry of Energy, Green Technology and Water (KeTTHA) and social partners to prepare the labour market for a just transition towards a gender sensitive greener economy and promote job-rich environmentally friendly economic sectors with a trained labour force.

Multi-stakeholder Project Technical Steering Committee

RELEVANT MINISTRIES OF THE GOVERNMENT OF MALAYSIA

Institute of Labour Market Information and Analysis (ILMIA) of Ministry of Human Resources (MOHR);
Ministry of Energy, Green Technology and Water (KeTTHA);
Ministry of Women, Family and Community Development
Ministry of Finance (MOF);
Ministry of Natural Resources and Environment (NRE);
Ministry of International Trade and Industry (MITI);
Malaysian Investment Development Authority (MIDA);
Ministry of Education Malaysia (MOE);
Ministry of Transportation (MOT);
Economic Planning Unit, Prime Minister Office
Bank Negara Malaysia (BNM); and
Performance Management and Delivery Unit (PEMANDU)

SOCIAL PARTNERS

Malaysian Employers Federation (MEF);
Malaysian Trade Union Congress (MTUC); and
Federation of Malaysian Manufacturers (FMM)
Relevant sectoral associations

OTHER RELEVANT GROUPS

Talent Corporation
National University of Malaysia (UM)
University Putra Malaysia (UPM)
Islamic Science University of Malaysia (USIM)
Malaysia Green Technology Corporation (MGTC)

The Green Jobs Programme for Asia and the Pacific

The Green Jobs Programme for Asia and the Pacific, since 2009 encourages governments, employers and workers to collaborate on generating coherent policies and effective programmes that will lead to decent work for all in a greener economy. It collaborates with ILO constituents in Bangladesh, China, Fiji, India, Indonesia, Malaysia, Nepal, Philippines, Sri Lanka and Thailand. Starting 2013, it collaborates more actively with other countries in the region including Mongolia and Pakistan.

The programme mainly aims to:

- Enhance the capacity of ILO constituents to take part in dialogue on green jobs at local, subnational and national levels by giving them access to quality data and information;
- Influence national policies and so contribute to an inclusive growth model that is job-centred, environmentally sustainable, and that promotes decent work; and
- Promote gender sensitive opportunities for green jobs by supporting demonstration activities and national programmes.

The programme works in in a wide range of areas covering (a) Policy Development and Research; (b) Capacity Building and Programme Development; (c) Knowledge Sharing and Cooperation.

Join Our Community of Practice!

Bringing Together stakeholders and professionals to turn the best ideas into practice for a just transition to an inclusive green(er) economy!

at <http://apgreenjobs.ilo.org>



Green Jobs Programme for Asia and the Pacific

Regional Office for Asia and the Pacific
International Labour Organization
United Nations Building, 10th Floor
Rajdamnern Nok Avenue
Bangkok 10200, Thailand

ILO Decent Work Technical Support Team
for East and South-East Asia and the Pacific

www.ilo.org/asia

Contact:

Lorraine Baybay Villacorta

Environment & Decent Work Specialist/
Coordinator, AP Green Jobs Programme

Tel: +66 2 288 2304

Fax: +66 2 280 1735

Email: villacorta@ilo.org

www.apgreenjobs.ilo.org

DECENT WORK

A better world starts here.