GREEN JOBS FOUNDATION TRAINING WORKSHOP

Green Technology Sector
Ministry of Energy, Green Technology and Water, Malaysia
WHERE ARE WE NOW
• The average atmospheric temperature increase from 1850 to 2005 is 0.76°C.
• 4°C is foreseen to be increased by 2100.

Source: Intergovernmental Panel on Climate Change (IPCC)
Most scientists agree that the warming in recent decades has been caused primarily by human activities that have increased the amount of greenhouse gases in the atmosphere.

Asia and the Pacific is facing unprecedented threats due to its development (ESCAP, 2009)
Scarcity of resources

• Vulnerable group (poor) will face difficulties in adapting to climate change

• Economic recession

• Health problems (vector-borne diseases, cardiovascular and respiratory diseases)
THE SOLUTION
Climate Change Mitigation

Climate change mitigation is a more holistic approach where the countries of the world impose activities that would reduce the GHG.

It is driven by global agreements and policy commitment at a global level.
Climate Change Adaptation

Climate change adaptation refers to the local level adaptation measures taken to deal with the impact of climate change.

It is driven by national policy actions and strategies by the government.
Why do we need Green Jobs?

The policies and strategies currently being in place and for the future will have employment consequences and thus green jobs creation will accelerate in the years to come.

The transition into Low Carbon Economy will create large numbers of green jobs across sectors, hence becoming an engine of growth towards sustainable development.
Why do we need Green Jobs?

CLIMATE CHANGE

MITIGATION & ADAPTATION MEASURES

GREEN JOBS

SUSTAINABLE DEVELOPMENT
Benchmarking

Republic of Korea
# Benchmarking

## Republic of Korea

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<td>Re-Skilling Programmes</td>
<td>Under Framework Low Carbon Green Growth 2010</td>
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<td>Vocational training expanded for unemployed</td>
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<td>Specialized vocational training programme for construction workers</td>
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<td>Job sharing Scheme</td>
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<td>Sector Councils for Human Resource Development</td>
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<td>Education Programmes</td>
<td>Stay-in-School programmes</td>
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<td></td>
<td>Employment Skills Development Programmes</td>
<td>Internship Programme Curriculum updated</td>
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Benchmarking

United States of America
## Benchmarking

### United States of America

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<td>Green Jobs Subcommittee under the State of New York</td>
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<td>Employment Skills Development Programmes</td>
<td>Green jobs training under The American Recovery and Reinvestment Act of 2009</td>
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<td>Funding for national &amp; state job training programmes Green Job Act 2007</td>
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<td>Veterans Workforce Investment Programme (VWIP) 2009</td>
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<td>The Occupational Information Network (O*NET)</td>
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<td>YouthBuild Programme</td>
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<td>Education Programmes/Capacity</td>
<td>Education Programmes/Capacity Development Programmes</td>
<td>Green student training programmes under Recovery Act 2009</td>
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<td>Development Programmes</td>
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<td>Women's Bureau (WB)</td>
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Benchmarking

France
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**France**

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<th>Intervention Category</th>
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<td>Legislative Framework on Sustainable Development</td>
<td>Legislation on Green Jobs</td>
<td>Mobilisation Plan for Green Jobs 2009</td>
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<td>National Training Agreement Law 2004</td>
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<td>Consultative &amp; Institutional Mechanisms</td>
<td>State</td>
<td>Regional Training and Employment Observatories</td>
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<td>Social Protection</td>
<td>Extended Social Security Protection</td>
<td>Social Investment Fund (FISO) 2009</td>
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<td>Unemployment Insurance</td>
<td>Forward Employment and Skills Management Scheme (GPEC) under Social Cohesion Law 2005</td>
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<td>Education and Vocational Training</td>
<td>Re-Skilling Programmes</td>
<td>National Association for Training in the Automobile Sector (ANFA)</td>
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<td>Employment Skills Development Programmes</td>
<td>Vocational training entitlement for all employees under fixed-term contracts</td>
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<td>Education Programmes</td>
<td>Under Grenelle 1 Act of 2009 Energy Efficiency of Agricultural Exploitations Plan</td>
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Germany
### Benchmarking

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<td>Legislative Framework on Sustainable Development</td>
<td>Retrofit Programme</td>
<td>In 1998 the Confederation of German Trade Unions (DGB)</td>
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<td>German Economic Stimulus</td>
<td>German Economic Stimulus Package 1 and 2</td>
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Benchmarking

Australia
### Benchmarking

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<td>National Green Jobs Corp in January 2010</td>
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<td>Capacity Development Programmes</td>
<td>Queensland's Green Army</td>
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Benchmarking

India
## Benchmarking

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<td>National Rural Employment Guarantee Scheme (NREGAS)</td>
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Where Are We Now?

Malaysia
Policy actions and Mitigation Measure – Green Technology

The introduction of policy actions and mitigation measures have been undertaken by the government to ensure the goals of sustainable development is achieved.

Green Technology has been identified as a driver of the future economy for the nation that would contribute to overall Green Growth and Sustainable Development.
Tenth Malaysian Plan

- Developing Climate Resilient Growth Strategy
- Climate Mitigation: Reducing Malaysia’s Carbon Footprint
- Creating Stronger Incentives for Investment in Renewable Energy
- Promoting Energy Efficiency to Encourage Productive Use of Energy
- Climate adaptation: Protecting the Nation from the Risks of Climate Change
- Restructuring Solid Waste Management
- Ensuring Equitable and Sustainable Utilization of Resources
- Enhancing Conservation of Nation’s Ecological Assets
New Economic Model (NEM)

HIGH INCOME
Target US$15,000 - US$20,000 per capita by 2020

Rakyat Quality of Life
Enables all communities to fully benefit from the wealth of the country

INCLUSIVENESS

SUSTAINABILITY
Meets present needs without compromising future generations
National Green Technology Policy

**FOUR PILLARS**

**ENERGY**
Seek to attain energy independence & promote efficient utilisation

**ENVIRONMENT**
Conserve and minimise the impact on the environment

**SOCIAL**
Improve the quality of life for all

**ECONOMY**
Enhance the national economic development through the use of technology
National Green Technology Policy

Policy Statement:
Green technology shall be a driver to accelerate the national economy and promote sustainable development.

Strategic Thrusts:
1. Strengthen the Institutional Frameworks
2. Provide a Conducive Environment for Green Technology Development
3. **Intensify Human Capital Development in Green Technology**
4. Intensify Green Technology Research & Innovations
5. Promotion & Public Awareness
National Green Technology Policy

Strategic Thrust 3: Intensify Human Capital Development in Green Technology

Skilled, qualified, competent and productive human resources are crucial to green technology development. This could be achieved through:

- Design and enhancement of training and education programmes to improve human resource capacity related to green technology;
- Provision of financial and fiscal incentives for students to pursue green technology disciplines at undergraduate and postgraduate levels;
- Implementation of retraining programme and apprenticeship scheme to enhance competency of semi-skilled labour to meet the demands of the green technology industry;
- Formulation of grading and certification mechanism for competent personnel in green technology; and
- Exploitation of brain gain programmes to strengthen local expertise in green technology.
Asia Green Jobs Index

Index scores range from 0-4; a higher score means more favorable conditions for green jobs

Source: Asia Business Council
Green Job Enablers VS Green Job Market Demand

Green job enablers (combined labor availability and job policies score) is plotted against green job market demand (combined job postings and market potential score).

Source: Asia Business Council
Skills Development

• The OA was approved by the Ministry of Human Resources (MOHR) in December 2010.

• It focused on four (4) main sectors:
  i. Energy;
  ii. Building;
  iii. Water and Waste Management; and
  iv. Transportation.

• Seventy one (71) job titles from the green technology sector were identified.

• Development of the National Occupational Skills Standards (NOSS) and the National Competency Standards.
## EPP 4: Jump-Starting a Vibrant Green Technology Industry

### Overview
In line with global trends, Malaysia has already taken steps to grow the green technology industry vide various measures including policy and legislation, incentives & investments.

### EPP Driver
Ministry of Energy, Green Technology and Water, Malaysia

### Key Involved Parties
- Malaysia Green Technology Corporation
- MIDA
- MoF
- SIRIM
- TNB
- KPKT

### Description
- The green technology industry is still relatively undeveloped in Malaysia due to industry wide constraints such as lack of demand for green technology products and services, i.e. no incentive by businesses or consumers to invest in energy efficiency products and services and lack of supply of products and services in the domestic market.

- The EPP aims to address the shortcomings vide the following growth levers:
  1. Focus on increasing demand through various government initiatives;
  2. Improving supply of green services by improving ESCOs capabilities and develop differentiation in targeted markets & technologies; and
  3. Improving industry governance by improving & ensuring enforcement of current legislation and develop legislation in line with leading practices.

### Key Success Measure

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<tbody>
<tr>
<td>GNI</td>
<td>RM515m</td>
<td>RM672m</td>
<td>RM1.76b</td>
<td>RM7.2b</td>
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<tr>
<td>Jobs</td>
<td>3,000</td>
<td>4,000</td>
<td>8,000</td>
<td>48,000</td>
</tr>
</tbody>
</table>
Tracking Mechanism (2011)

The **3,000 green jobs** were be tracked and calculated via three (3) channels:-

- Number of workers from projects with Green Certificate issued under Green Technology Financing Scheme (GTFS);

- Number of workers involved in production of eco labeled products issued by Standard and Industrial Research Institute of Malaysia (SIRIM); and

- Number of workers in Small Renewable Energy Power Programme (SREP) and Renewable Electricity Purchase Agreement (REPA) signed between entrepreneur and utility authorities.

A Total of 3800 jobs were tracked in 2011 through the above mechanism.
The **4,000 green jobs** (for short term purpose) are being tracked and calculated via these channels:-

- Number of workers from projects with Green Certificate issued under the Green Technology Financing Scheme (GTFS);

- Number of workers involved in production of eco labeled products issued by Standard and Industrial Research Institute of Malaysia (SIRIM);

- Number of workers in Renewable Energy Industry registered with the Sustainable Energy Development Authority (SEDA)

- Green companies registered with MIDA and MATRADE
DRIVERS OF GREEN JOBS

1. Government actions
2. A green investment strategy (investment creates jobs)
3. R&D and Technology Transfer
4. International cooperation
5. Jobs training and skills development
CHALLENGES

1. Inadequate awareness on low carbon economy
2. Lack of highly skilled workers
3. Brain drain
4. Labour legislation does not meet current market requirement
5. Lack of coordinated system in the collection analysis & dissemination of data
6. Political will
THANK YOU
Questions are guaranteed in life; Answers aren't.