Malaysian Roadmap and Challenges on Implementation of the Intended Nationally Determined Contribution (INDC)



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### Paris Agreement

(Source: http://unfccc.int/paris\_agreement/items/9444.php)

### Parties Ratified

• 146 parties to UNFCCC ratified Paris Agreement

Malaysia

- Signed 22 April 2016
- Ratified 16 Nov 2016
- Entry into Force- 16 Dec 2016

# Intended Nationally Determined Contribution (INDC)

Paris Agreement



Malaysia Implementation through INDC



Earlier actions:

Ninth Malaysia Plan (2005-2010)

Ten Malaysia Plan (2011-2015)

Current actions:

Eleventh Malaysian Plan (2016-2020)

### Malaysian Intended Nationally Determined Contribution (INDC)

Source: http://www4.unfccc.int/Submissions/INDC/Published%20Documents/Malaysia/1/INDC %20Malaysia%20Final%2027%20November%202015%20Revised%20Final%20UNFCCC.pdf)

Malaysian submitted INDC - 1 January 2016



Reduce GHG emissions intensity of GDP by 45% relative to emissions intensity of GDP in 2005



1) 35% on unconditional basis

2) 10% conditioned upon receipt of climate finance, technology transfer and capacity building from developed countries

### Ninth Malaysia Plan (2005-2010)

(Source: http://www4.unfccc.int/Submissions/INDC/Published%20Documents/Malaysia/1/INDC %20Malaysia%20Final%2027%20November%202015%20Revised%20Final%20UNFCCC.pdf)

Initiatives to increase use of non-fossil fuel energy

National Biofuel Policy 2006 - development and use of biofuels

National Biofuel Industry Act 2007 - regulates industry

End 2014 - introduce bio-diesel B7 Program

### Tenth Malaysia Plan (2011-2015)

Strategies to reduce emissions of GHG

Sustainable growth:

Renewable Energy Policy an Action Plan (2010)

Renewable Energy Act 2011

- Introduction of Feed-in-Tariff (FIT)

Establishment Central Forest Spine (CFS) and Heart of Borneo (HOB)

- Sustainable forest management and use of natural resources

### Eleventh Malaysia Plan Initiatives (2016-2020)

(Source: http://www4.unfccc.int/Submissions/INDC/Published%20Documents/Malaysia/1/INDC%20Malaysia%20Final%2027%20November%202015%20Revised%20Final%20UNFCCC.pdf)

### Green growth for sustainability and resilience

Strengthening environment for green growth

Adoption of sustainable consumption and production

Conserving natural resources and strengthening resilience against climate change and disasters

### Challenges in implementation INDC

Land use, Land-use change and forestry (LULUCF) Legacy issues Technology Cost

> Institutional Framework and Capacity

Challenges in implementation

### Technology Cost

(Source: http://www4.unfccc.int/Submissions/INDC/Published%20Documents/Malaysia/1/INDC%20Malaysia%20%2027%20November%202015%20Revised%20Final%20UNFCCC.pdf)



High capital cost railed based mass transport systems



Renewable energy cost higher than conventional energies

Electrification transportation limited by current mix fuel

### Institutional Framework and Capacity

(Source: http://www4.unfccc.int/Submissions/INDC/Published%20Documents/Malaysia/1/INDC%20Malaysia%20Final%2027%20November%202015%20Revised%20Final%20UNFCCC.pdf)

Climate change a cross cutting issue and institutional framework to address them is fragmented

It's the consequential co-benefit outcome of agencies core responsibilities

Long term commitment by all is critical and its result is time taken

New competencies and skills need to be developed

### Land use, land-use change and forestry (LULUCF) Legacy Issues

(Source: http://www4.unfccc.int/Submissions/INDC/Published%20Documents/Malaysia/1/INDC

%20Malaysia%20Final%2027%20November%202015%20Revised%20Final%20UNFCCC.pdf)

# Degraded forest

 High cost in restoration and nurturing

# Drained peatlands

- Some peatlands unmanaged and susceptible to wildfires
- "re-wet" the areas expensive

### Adaptation

Source: http://www4.unfccc.int/Submissions/INDC/Published%20Documents/Malaysia/1/INDC %20Malaysia%20Final%2027%20November%202015%20Revised%20Final%20UNFCCC.pdf)

Adaption to climate change to build resilience



Tenth Malaysian Plan -

RM51 billion to enhance against climate change



National adaptation plan to provide greater coordinated implementation

### Addressing Flood Risks

Source: http://www4.unfccc.int/Submissions/INDC/Published%20Documents/Malaysia/1/INDC%20Malaysia%20Final%2027%20November%202015%20Revised%20Final%20UNFCCC.pdf)

Average annual loss from floods - RM915 million

2004-2014 -invested RM9.3 billion on flood mitigation

11 Malaysia Plan - enhancement of flood mitigation program and strengthening of disaster risk management and resilience of infrastructure

### Water Security

Source: http://www4.unfccc.int/Submissions/INDC/Published%20Documents/Malaysia/1/INDC %20Malaysia%20Final%2027%20November%202015%20Revised%20Final%20UNFCCC.pdf)

Tenth Malaysia Plan  Over RM 12 billion spent on improving water sector infrastructure (over RM5.6 billion - developing water supply for rural area)

Eleventh Malaysian Plan

- Strengthen regulatory framework of water services industry
- Expand water supply network and treatment capacity infrastructure
- Increase efficiency water supply services

### **Food Security**

- National Agro-food Policy (2011-2020) and the National Commodity Policy (2011-2020) regulates Agriculture sector in Malaysia
- Objective is to increase food production and exports of industrial commodities.
- ► Tenth Malaysia Plan- RM 5.1 billion allocated to improve agriculture and agro-based industries in Malaysia.
- ► Eleventh Malaysia Plan further expand implementation of good agricultural practices, intensifying research and development for improving agriculture production.
- New granary areas and adequate and efficient irrigation and drainage infrastructure will be developed to increase the production of rice.
- Source: http://www4.unfccc.int/Submissions/INDC/Published%20Documents/Malaysia/1/INDC%20Malaysia%20Final%2027%20November%202015%20Revised%20Final%20UNFCCC.pdf)

### **Protecting Coastlines**

- Longer term, Integrate Shoreline Management Plans (ISMPs) have been developed and implemented for specific areas.
- National Coastal Vulnerability Index to sea-level rise is being developed.
- ▶ Detailed sea level rise studies conducted at some of the vulnerable coastal areas to project future vulnerabilities in a 20-year sequence from 2020 to 2100.
- (Source: http://www4.unfccc.int/Submissions/INDC/Published%20Documents/Malaysia/1/INDC%20Malaysia%20Final%2027%20November%202015%20Revised %20Final%20UNFCCC.pdf)

#### Health

► Tenth Malaysia Plan - Malaysia spent over RM 9 billion on health sector, with over RM 1.5 billion being for adaptation of the health sector to climate change.

Climate-related disasters are posing huge challenges to the public disaster management systems

(Source: http://www4.unfccc.int/Submissions/INDC/Published%20Documents/Malaysia/1/INDC %20Malaysia%20Final%2027%20November%202015%20Revised%20Final%20UNFCCC.pdf)

United Nations Development Programme (UNDP) - Malaysia Recruitment of Consultant to Develop a Roadmap for Implementation of INDC

- Recruitment of consultant to develop a roadmap is another move in the implementation of INDC in Malaysia
- ► UNDP in consultation with Ministry of Natural Resources and Environment (MNRE) along with the stakeholders at national and local levels formulated roadmap on the implementation of INDC
- Initiative in collaboration with the UNDP/GEF Third National Communications and Biennial Update Report (TNC/BUR) project in partnership with the Ministry of Natural Resources and Environment (MNRE)

https://uncareer.net/vacancy/consultant-develop-roadmap-implementation-intended-nationall

United Nations Development Programme (UNDP) - Malaysia Recruitment of Consultant to Develop a Roadmap for Implementation of INDC

► Funded by UK Prosperity Fund 2016, to be implemented by UNDP Malaysia in partnership with MNRE.

Project prioritize emissions reduction measures for Malaysia in the form of an effective and workable roadmap in achieving the INDC target

<u>Source</u>:(https://uncareer.net/vacancy/consultant-develop-roadmap-implementation-intended-nationall

United Nations Development Programme (UNDP) - Malaysia Recruitment of Consultant to Develop a Roadmap for Implementation of INDC

- ► UNDP Malaysia recruited consultant to formulate a roadmap by identifying key sectors and subsectors that is significant to GHG emission reduction in meeting the INDC target based on UNFCCC outcomes and IPCC guidelines are identified to help Malaysia meet obligation under Paris agreement
- Assignment expected to end by 31 May

<u>Sourcce: (https://uncareer.net/vacancy/consultant-develop-roadmap-implementation-intended-nationall)</u>



- Industry Awareness Programme on Climate Change organized by Trade and Industry Related Emerging Issues Division, Ministry of International Trade and Industry (MITI) on 6 April 2017
- Programme supported by Ministry of Natural Resources and Environment (NRE) and the United Nations Development Programme (UNDP) Malaysia through the Intended Nationally Determined Contribution (INDC) Roadmap Project funded by the United Kingdom Prosperity Fund.
- ▶ 157 participants from the government agencies, business councils, foreign and national chambers, and industries were present.

Source: http://www.miti.gov.my/index.php/pages/view/4124 retrieved 22/5/2017

- ► Programme aimed at creating awareness to ensure manufacturing industries share responsibilities and compliance to Malaysia's commitments under the Paris Agreement and the United Nations Framework Convention on Climate Change (UNFCCC).
- ▶ Also aimed to reduce Greenhouse Gas (GHG) emissions down to 45% by 2030.
- The event also looked to identify industries constraints and capacity building needs to implement the relevant climate change mitigation and adaptation initiatives.

- ▶ Under UNFCCC :
- reducing Greenhouse Gas (GHG) emissions
- sources and projection of GHG emissions
- various green industrial policies implemented by the government to mitigate climate change
- tax incentives offered for implementing green technology in industries.
- Group discussion held to enquire and convey industries constraints, challenges and capacity building needs to undertake climate change initiatives.

#### **CONFERENCES**



INTERNATIONAL CONFERENCE FOR ENVIRONMENTAL RESEARCHERS AND TEACHERS 2017, FACULTY OF LAW, UNIVERSITI TEKNOLOGI MARA, MALAYSIA

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### **THANK YOU**

