

**United Nations Development Programme
Country: Malaysia
Project Document (version : 17 Dec 2009)**

Project Title	Economics of Climate Change
Expected CP Outcome(s): <i>(Those linked to the project and extracted from the CPAP)</i>	Malaysia has improved environmental stewardship through sustainable energy development and environmental management and a good understanding of policy options to address and manage climate change impacts
Expected Output(s): <i>(Those that will result from the project and extracted from the CPAP)</i>	<ol style="list-style-type: none"> 1. Improved capacity of stakeholders in environmental management, including water management, planning and implementing integrated approaches that also respond to the needs of the poor. 2. Improving data management system of GHG emissions and ODS consumption 3. Non-CPAP Outputs: Providing policy inputs on economic costs and benefits of climate change adaptation and mitigation measures
Executing Agency:	Economic Planning Unit
Implementing Partner:	Economic Planning Unit / Ministry of Natural Resources and Environment

Brief Description

The aim of the project is to undertake a detailed analysis on the economic costs and benefits of climate change adaptation and mitigation measures with the view of enabling policy and decision makers in Malaysia to institute targeted interventions to address climate change impacts. It will be divided into three components i) Development of Economic Models ii) Database and iii) Policy Options. The economic models will assist the government in formulating coherent analysis especially in undertaking suitable mitigation and adaptation measures. The options will be also ranked in order of priority in ensuring effective implementation and strengthen existing interdependencies and coordination between various ministries and agencies at the federal and state level to address climate change issues from a multi-sectoral point of view

Programme Period:	Two years
Key Result Area (Strategic Plan):	Towards Improved Quality of Life through Sustainable Environmental Management
Atlas Award ID:	TBD_____
Start date:	TBD_____
End Date	TBD_____

2010 AWP budget:	USD 151,000
2011 AWP budget:	USD 199,000
Total resources required:	USD 350,000
Total allocated resources:	
TRAC	USD 140,000
Government CS Government	USD 210,000
GMS fee 6%	USD 12,600

Agreed by Government of Malaysia –
Economic Planning Unit:

Agreed by UNDP:

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ABBREVIATIONS

ADB	Asian Development Bank
ASEAN	Association of Southeast Asia Nations
APR	Annual Progress Report
AWP	Annual Work Plan
BHC	British High Commission
CDR	Combined Delivery Report
CP	Country Programme
CPAP	Country Programme Action Plan
DOS	Department of Statistics
ENRES	Environment and Natural Resources Economics Section
EPU	Economic Planning Unit, Prime Minister's Department
GDP	Gross Domestic Product
GHG	Green House Gas
IT	Information Technology
MEGTW	Ministry of Energy, Green Technology and Water
MHLG	Ministry of Housing and Local Government
MITI	Ministry of International Trade and Industry
MNRE	Ministry of Natural Resources and Environment
MOA	Ministry of Agriculture
MOF	Ministry of Finance
MOHE	Ministry of Higher Education
MOSTI	Ministry of Science, Technology and Industry
MOT	Ministry of Transport
MoTour	Ministry of Tourism
NC2	Second National Communication Project
NEX	National Execution
NPD	National Project Director
NSC	National Steering Committee
NSCCC	National Steering Committee meeting on Climate Change
ODA	Official Development Assistance
ODS	Ozone Depleting substances
SBAA	Standard Basic Assistance Agreement
SCR	Security Council Resolutions
TWC	Technical Working Committee
UN	United Nations
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

I. SITUATION ANALYSIS

Climate change is referred as any change in the climate that over the time will directly and indirectly affect human beings and their activities as well as natural systems and processes. Warming of climate will affect rainfall, ocean warming and wind patterns as well as bring about extreme weather patterns (including drought, floods, heat waves and tropical cyclones) throughout the world. These impacts of climate change if not properly addressed, are expected to undermine development, affect human well-being, and threaten the security and productivity of natural resources. Thus, in recognising the climate change as a global challenge, Malaysia has ratified the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol in 1994 and in 2002 respectively as a Non-Annex I Party.

After the ratification of the UNFCCC, Malaysia has established a National Steering Committee on Climate Change (NSCCC) in 1995 with at least ten Government ministries and agencies represented in the committee together with other stakeholders including the business and civil society groups to guide national responses on climate change issues. In fulfilling one of the obligations under the Convention and Protocol, Malaysia submitted its Initial National Communication comprising the national inventory of greenhouse gases (GHGs) and the assessment of the possible impacts of climate change as well as suggestions for possible initiatives. It detailed the policies and plans in place that represent the national sustainable development agenda of the country. As a Non-Annex I Party to the Convention and Protocol, Malaysia is not required to make any commitment towards reducing emissions of GHGs, however, this does not preclude the nation from taking its own initiatives in combating the adverse effects of climate change. In fact, Malaysia has taken the necessary steps to tackle the challenges brought about climate change on a sectoral basis which are described in the Ninth Malaysia Plan but the mitigation and adaptation measures are yet to be fully incorporated into the national development planning.

It is hard to predict accurately the impact of climate change because of many uncertainties concerning the ways in which we measure climatic changes. In Malaysia, forecasts have been made based on climate modeling 14 GCM, which shows Malaysia could experience temperature changes from +0.7 °C and +2.6 °C, and precipitation changes from -30% to +30%. In this regard, serious precaution measures need to be undertaken by Malaysia due to the warming trends, which has increased 0.18 °C per decade from 1951 to 1996, and the rise of the sea level about 1.3 mm/year, based on 20 years record. A substantial increase in monthly rainfall over the north east coastal region and decrease in monthly rainfall in west coast of Peninsular Malaysia were revealed in a study undertaken in 2006. Thus, due to its long coastlines, high concentration of population and economic activity in coastal areas and at least a third of the populations' dependency on agriculture sector, Malaysia is vulnerable to impacts of climate change.

While the energy sector contributes significantly to emissions of GHG, it is also one of the areas that will be affected by climate change in terms of the production and consumption. Over the years, Malaysia has experienced rapid GHG emissions generation compared to many other developing countries in the region. According to the UNDP Human Development Report 2007, over a 15 year period, Malaysia recorded GHG emissions growth of about 212 per cent, making it the third highest among ASEAN countries with about 7 kg on a per capita basis, though at a global level Malaysia's contribution is only around 0.7 per cent. Under the current climate change framework, as a Non-Annex 1 Party, Malaysia is not subjected to any mitigation measures. However, this scenario may change in the future. The pressure now is on developing countries especially the rapidly developing nations to take some commitments for mitigating GHG emissions in the future. This poses major challenges for the developing countries such as Malaysia particularly in-terms of ensuring that the economic development needs and progress are sustained in the long term while at the same time steering the economy towards a low-carbon or climate friendly development path.

In this respect, the Economic Planning Unit proposes to undertake a study on "Economics of Climate Change for Malaysia". The aim of the study is to undertake a detailed analysis on the economic costs and benefits of climate change adaptation and mitigation measures. The study is expected to provide a scientific/economic knowledge that enables the policy and decision makers in Malaysia to institute targeted interventions to address climate change impacts. This project will be based on the findings of the Second National Communication (NC2) project, a study which is currently on-going and implemented by the Ministry of Natural Resources and Environment as one of Malaysia's obligation under the UNFCCC. Through this study, data from the NC2 is to be transformed into economic data/information which will then be used as a basis for Malaysia to take

mitigation and adaptation measures in significant and vulnerable sectors. Such information is needed since climate change is a cross-sectoral issue and careful assessment and detail information is crucial to ensure Malaysia is able to come out with proper policy response and strategies to address climate change. In addition, the information generated from the economics of climate change could be used to assist the NSCCC in identifying appropriate options for Malaysia to take as well as in developing Malaysia's position in the international forum.

II. STRATEGY

Implementing Partner: EPU

The Economic Planning Unit, Prime Minister's Department is the central planning agency responsible to formulate the development plans for the nation and to enhance Malaysia's socio-economic development towards achieving a developed-nation status and improve the quality of life of all Malaysians. One of its objectives is to promote balanced and sustainable development through effective planning including formulation and evaluate policies and strategies relating to sustainable development, environment and natural resource management as well as analyse current policies and strategies with a view to ensuring the optimum utilisation of resources, promoting sustainable consumption and production and protecting the environment.

Although there are a number of studies done by the Ministry of Natural Resources and Environment (MNRE) on climate change, these studies are more on the technical aspects of climate change. In Malaysia so far, there are no studies done on the economics of climate change. Thus, the Government of Malaysia now wishes to build on these studies by analysing the economic impacts to Malaysia and examining the costs and benefits of adaptation and mitigation measures to vulnerable and significant sectors. The findings of this study should also be able to guide Malaysia to making appropriate commitments in reducing the GHGs emission in the future.

Enabling Partner: UNDP

According to the Country Programme Action Plan (CPAP), UNDP is committed to *Supporting Environmental Stewardship through Sustainable Energy Development and Environmental Management* - With respect to environmental management, the programme will continue to support initiatives that will contribute towards ensuring sustainability. To this end, the programme will focus on three strategies which include, the enhancement of environmental management of biodiversity and natural resources; reducing greenhouse gas(GHG) emissions and ozone depleting substances (ODS) consumption; and the incorporation of environmental considerations into the planning and development of non-environmental agencies. UNDP will provide the key necessary resources and technical expertise especially with respect with the techno economic analysis and policy recommendations.

Other partners: Asian Development Bank (ADB) and British High Commission (BHC)

ADB which recently produced the Regional Synthesis Report on Economics of Climate Change, will extend their collaboration with the Government of Malaysia in the above. BHC has been a strong advocate for climate change initiatives, including the work of the Stern's review, will too assist in the implementation of the project. Both contributions will come in the form of technical assistance, stock taking exercise, model development and peer-review exercise.

Sustainability

The main objective of the study is to assess the costs and benefits for Malaysia if Malaysia was to take adaptation and mitigation measures in specific sectors. With the project divided into three components, i.e. development of economic models; development of database; and policy options, the outcome of the study will serve the Government in formulating coherent analysis especially in undertaking suitable mitigation and adaptation measures with regards to the climate change. The economic model is specifically meant to assist relevant agencies and ministries to make informed decisions on the suitable and appropriate measure to be implemented later on. The results of the project can be used not only as basis to prescribe any mitigation and adaptation measures but also for Malaysia's in positioning herself in any commitment under the UNFCCC. As for the policy options, it will help in identifying the appropriate response to climate change i.e. adaptation and mitigation and making sure the measures taken are in line with national priority.

Project components

The project will consist of three components as follows:

Component 1: Development of Economic Models and Impact Study

Component 2: Development of Database

Component 3: Policy Options

Component 1: Economic Models Review and Impact Study

Conduct comparative analysis of the different climate change impact assessment models and review existing studies on economic models for climate change analysis to determine their feasibility and appropriateness in Malaysian context. Based on this exercise, the appropriate economic model for climate change will be identified or developed and it will be used in the analysis of climate change to determine the economic costs and benefits of climate change adaptation and mitigation measures for vulnerable and significant sectors in Malaysia, including the socio economic costs. It will involve projection analysis, scenario setting and targets. Detailed impact study of CC to various economic sectors / sub-sectors will be provided and analyzed. Relevant baseline data from the NC2 project will be used for the analysis with the assessment period for year 2030 or 2050 or beyond and focus of the study shall be on the following sectors:

- a) Adaptation: Water resources; infrastructure; food security
- b) Adaptation/Mitigation: Land-use, Land-use change and Forestry; Agriculture
- c) Mitigation: Energy, Transport, Industry, Manufacturing

The findings of the analysis will then be translated into key macro economic indicators and will be an input into Component 3 to support the implementation of strategies identified.

Component 2: Stocktaking and Development of Database

Under the NC2 project, a database on GHGs emission for a few sectors has been developed. However, for the purpose of conducting economic analysis for this study, more baseline data, especially economic data will be needed. Among activities under this component is to take stock and review the on-going analysis by various agencies especially on climate change impacts as well as different sector of economies. From here, the gaps will then be identified. Based on the findings, a database encompassing spatial, sectoral and temporal data on climate change that could be used for examining policy options will be developed. To analyse the economic impacts and implications, new information will be required as it is not envisaged that the NC2 project would have collected sufficient or adequate economic data. In particular, the NC2 project is focussed on scientific data on a sectoral basis, but cross-sectoral economic data will be needed if the analysis is to be comprehensive.

Component 3: Policy Options

The objective of component 3 is to provide and recommend policy options and economic measures such as fiscal incentives, regulations and other means to promote the implementation of the strategies. To come up with policy options, the economics model developed will be used to analyse the costs and benefits of undertaking adaptation and mitigation measures as well as the cost of not taking any actions in Malaysian context based on worst case and best case projection path. The findings will then be translated into key performance indicators such as GDP, poverty rate and others. Then, a methodology to rank the climate adaptation and mitigation strategies needs to be formulated. Once the policy options as well as adaptation and mitigation strategies are identified and developed, it will then be ranked based on the most effective strategies or least cost options. The strategies identified will be recommended for implementation by various ministries and agencies at the federal and state level to address climate change issues from a multi-sectoral point of view as well as to strengthen existing interdependencies and coordination between them.

III. RESULTS AND RESOURCES FRAMEWORK

Intended Outcome as stated in the Country Programme Results and Resource Framework:

Outcome 3:

Supporting Environmental Stewardship through Sustainable Energy Development and Environmental Management

Outcome indicators as stated in the Country Programme Results and Resources Framework, including baseline and targets:

1. Improved capacity of stakeholders in environmental management to plan and implement integrated approaches that also respond to the needs of the poor.
2. Improved data management system of GHG emissions and ODS consumption
3. non-CPAP Outputs: Provided economic costs and benefits of climate change adaptation and mitigation measures

Applicable Key Result Area (from 2008-11 Strategic Plan):

Partnership Strategy

EPU will be the implementing agency while EPU/MNRE is the executing agency. Other key stakeholders from relevant national and international agencies, non-governmental organizations and experts from other institutions will provide technical inputs through various platforms including the Technical Working Committee and National Steering Committee.

Project title and ID (ATLAS Award ID): TBC. Project titled: Economics of Climate Change

INTENDED OUTPUTS	OUTPUT TARGETS	INDICATIVE ACTIVITIES	RESPONSIBLE PARTIES	INPUTS
<u>C1: Development of Economic Model and Impact Study</u>	<p>1.1 A report on comparative analysis studies of various economic models</p> <p>1.2 An economic model to assist in the mainstreaming of activities to address climate change issues in Malaysia</p> <p>1.3 Impact study report on the economic costs and benefits of climate change adaptation and mitigation measures and results/findings for reviews/assessments undertaken</p>	<ul style="list-style-type: none"> - Review and conduct a comparative analysis of different models of climate change impact assessment - Review existing studies and economic models for climate change analysis to determine their feasibility and appropriateness in Malaysian context - Identify a range of suitable climate change models as basis of the study - Recommend an appropriate economic model(s) or develop one - Compile relevant baseline data and determine the assessment period (2030 or 2050 or beyond) 	Project Manager Consultants	International Consultants Local Consultants Workshops Travel Miscellaneous

Project title and ID (ATLAS Award ID): TBC. Project titled: Economics of Climate Change				
INTENDED OUTPUTS	OUTPUT TARGETS	INDICATIVE ACTIVITIES	RESPONSIBLE PARTIES	INPUTS
		<ul style="list-style-type: none"> - Determine the vulnerable and significant sectors to be prioritised in the economic analysis. Focused sectors may include: <ul style="list-style-type: none"> - Adaptation: Water resources; infrastructure; food security - Adaptation/Mitigation: Land-use, Land-use change, Forestry, Agriculture - Mitigation: Energy, Transport, Industry, Manufacturing - Apply the model to determine the economic costs and benefits of climate change adaptation and mitigation measures for vulnerable and significant sectors in Malaysia, including the socio economic costs 		
C2: Development of Database	2.1 Database on GHGs emissions for the significant sectors available 2.2 Linking the database to existing national data framework such as DOS	<ul style="list-style-type: none"> - Take stock and review the on-going analysis by various agencies in different sectors of economies - Identify and analyse the gaps - Develop a database encompassing spatial, sectoral and temporal data on climate change 	Project Manager Consultants	International Consultants Local Consultants Workshops IT equipment Travel Miscellaneous
C3: Policy Options	A report on Comparative analysis of various policy options including policy strategies and options for Malaysia The findings from the economic analysis will be translated into key macro economic indicators which will be	<ul style="list-style-type: none"> - Consultation meetings - Peer-review exercise - Develop the comparative analysis of various options proposed - Develop the rating mechanism of each options 	Project Manager Consultants	International Consultants Local Consultants Workshops Travel Miscellaneous

Project title and ID (ATLAS Award ID): TBC. Project titled: Economics of Climate Change				
INTENDED OUTPUTS	OUTPUT TARGETS	INDICATIVE ACTIVITIES	RESPONSIBLE PARTIES	INPUTS
	developed later.			

IV. ANNUAL WORK PLAN

Year: 2010

EXPECTED OUTPUTS <i>And baseline, associated indicators and annual targets</i>	PLANNED ACTIVITIES <i>List activity results and associated actions</i>	TIMEFRAME				RESPONSIBLE PARTY	PLANNED BUDGET	
		Q1	Q2	Q3	Q4		Budget Description	Amount (USD)
Output 1								
<p><u>Development of Economic Model</u></p> <p><i>Baseline:</i> 1. Economic model are scattered and there is no acceptable model 2. Universities and researchers produce several models</p> <p><i>Indicators:</i> 1. A CC economic model is produced and accepted by EPU 2. The model will be inline and synchronized with international best practices.</p> <p><i>Targets:</i> 1. One model produced. 2. The model will pass the internationally recognized model.</p> <p><i>Related CP outcome:</i> Supporting Environmental Stewardship through Sustainable Energy Development and Environmental Management</p>	<p><i>Activity Results::</i> CC Economics model developed</p> <p><i>Associated Actions:</i> 1. Recruitment and appointment of project manager 2. Inception Report to produce 3. Appointment of consultants/consultancy company 4. Formulate research methodology 5. Collect, review and analyse baseline 6. At least one stakeholder workshop to discuss with stakeholders. 7. Review various model 8. Develop the right model with inputs form stakeholders</p>							
							Project Manager	48,000
							International Consultants	28,000
				X	X		Travel (Airfare & TE)	3,500
					X		Travel (DSA)	8,500
				X	X		Travel (Monitoring)	1,500
					X		Workshops	10,500
						X	Information technology equipment	3,000
						X	Misc.	2,000
					EPU			

Output 2								
<p>Development of Database</p> <p><i>Baseline:</i></p> <ol style="list-style-type: none"> 1.Database available in NC2 projects 2.Database to be linked to institutional mechanism <p><i>Indicators:</i></p> <ol style="list-style-type: none"> 1. NC2 database will be used and refined in the CC Economic model 2. Linkages with institutions established <p><i>Targets:</i></p> <ol style="list-style-type: none"> 1. Database developed 2. Linkages established <p><i>Related CP outcome:</i> Supporting Environmental Stewardship through Sustainable Energy Development and Environmental Management</p>	<p><i>Activity Results:</i> Development of Database</p> <p><i>Associated Actions:</i></p> <ol style="list-style-type: none"> 1. Appointment of consultants /consultancy company 2. Collect, stock take, review and analyse NC2 and other available data 3. At least one stakeholder workshop 4. Develop the database with inputs from stakeholders 		X	X	X	EPU	<p>Local Consultants</p> <p>Workshops</p> <p>IT Equipment</p>	<p>5,000</p> <p>10,500</p> <p>10,000</p>
Output 3								
<p>Development of Policy Options and Recommendation</p> <p><i>Baseline:</i></p> <ol style="list-style-type: none"> 1. Policy options on CC has yet to be developed <p><i>Indicators:</i></p> <ol style="list-style-type: none"> 1. Draft policy option completed 	<p><i>Activity Results:</i> Development of Comparative Policy options</p> <p><i>Associated Actions:</i></p> <ol style="list-style-type: none"> 1. Appointment of consultants /consultancy company 2. At least one stakeholder workshop including peer-review exercise 3. Develop a report on a 		X	X	X	EPU	<p>Local Consultants</p> <p>Workshops</p>	<p>10,000</p> <p>10,500</p>

<p>Targets: 1. Comparative Study completed</p> <p>Related CP outcome: Supporting Environmental Stewardship through Sustainable Energy Development and Environmental Management</p>	<p><i>series of policy options / comparative study with techno-economic analysis of each measures and costs of inaction</i></p>				X			
<p>TOTAL (2010) USD</p>								<p>151,000</p>

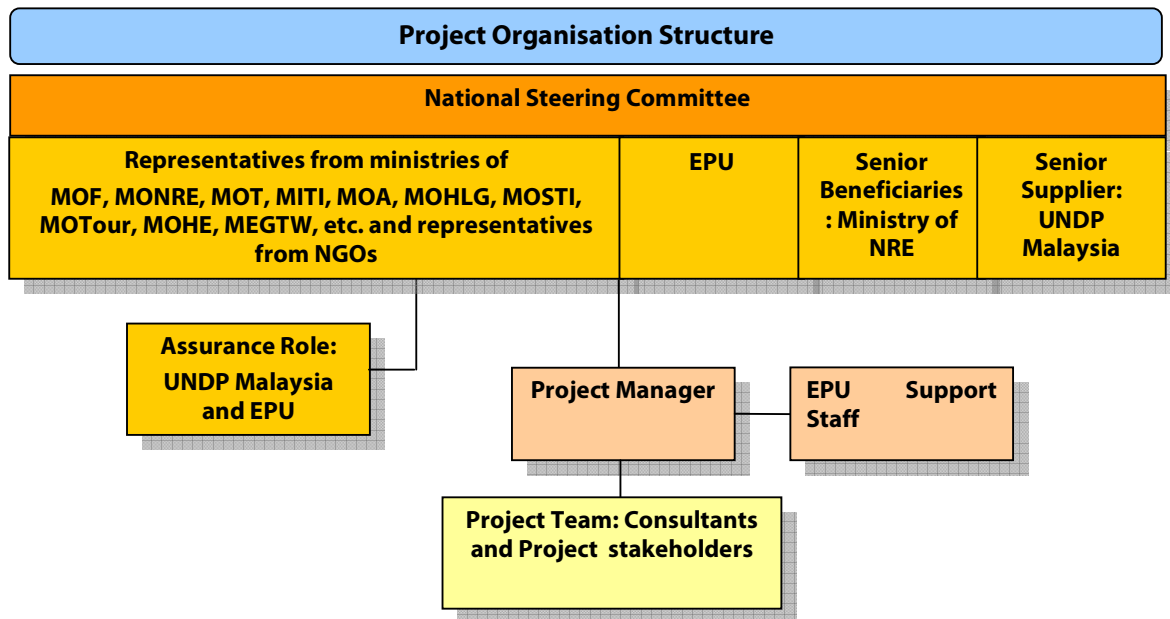
AWP: 2011

EXPECTED OUTPUTS <i>And baseline, associated indicators and annual targets</i>	PLANNED ACTIVITIES <i>List activity results and associated actions</i>	TIMEFRAME				RESPONSIBLE PARTY	PLANNED BUDGET	
		Q1	Q2	Q3	Q4		Budget Description	Amount (USD)
Output 1								
<p><u>Development of Economic Model</u></p> <p><i>Baseline:</i> 1. Economic model are scattered and there is no acceptable model 2. Universities and researchers produce several models</p> <p><i>Indicators:</i> 1. A CC economic model is produced and accepted by EPU 2. The model will be inline and synchronized with international best practices.</p> <p><i>Targets:</i> 1. Impact Study Completed 2. Test-run and model produced</p> <p><i>Related CP outcome:</i> Supporting Environmental Stewardship through Sustainable Energy Development and Environmental Management</p>	<p><i>Activity Results::</i> CC Economics model developed</p> <p><i>Associated Actions:</i> 1. At least one stakeholder workshop 2. Impact Study Completed</p>	X				EPU	Project Manager	48,000
							International Consultants	28,000
							Travel (Airfare & TE)	3,500
			X				Travel (DSA)	8,500
							Travel (Monitoring)	1,500
							Workshops	10,500
							Misc.	2,000
Output 2								
<p><u>Development of Database</u></p> <p><i>Baseline:</i></p>	<p><i>Activity Results:</i> Development of Database</p>					EPU	Local Consultant	5,000

<p>1. Database available in NC2 projects</p> <p>2. Database to be linked to institutional mechanism</p> <p><i>Indicators:</i></p> <p>1. NC2 database will be used and refined in the CC Economic model</p> <p>2. Linkages with institutions established</p> <p><i>Targets:</i></p> <p>3. Database developed</p> <p>4. Linkages established</p> <p><i>Related CP outcome:</i> Supporting Environmental Stewardship through Sustainable Energy Development and Environmental Management</p>	<p><i>Associated Actions:</i></p> <p>1. At least one stakeholder workshop</p> <p>2. Develop the database with inputs form stakeholders</p> <p>3. Linking the database to national inventory system</p>		X	X				<p>Workshops</p> <p>IT Equipment</p>	<p>15,000</p> <p>8,000</p>
Output 3									
<p>Development of Policy Options</p> <p>Baseline:</p> <p>1. Policy options on CC has yet to be developed</p> <p><i>Indicators:</i></p> <p>1. Comparative studies on various options completed</p> <p><i>Targets:</i></p> <p>1. A report on suitable policy options proposed including mechanism proposed</p> <p>Related CP outcome:</p>	<p><i>Activity Results:</i> <i>Development of Policy Options</i></p> <p><i>Associated Actions:</i></p> <p>1. At least one stakeholder workshop including peer-review exercise</p> <p>2. Preparation on the reports on suitable policy options and rating mechanism</p>		X	X	X		EPU	<p>International Consultants</p> <p>Travel (Airfare & TE)</p> <p>Travel (DSA)</p> <p>Local Consultant</p> <p>Workshops</p>	<p>28,000</p> <p>3,500</p> <p>8,500</p> <p>10,000</p> <p>10,500</p>

Supporting Environmental Stewardship through Sustainable Energy Development and Environmental Management							Publication	8,500
TOTAL (2011)								199,000
GRAND TOTAL								350,000

V. MANAGEMENT ARRANGEMENTS



The project will be governed by the National Steering Committee (NSC) and the Technical Working Committee (TWC). The details of the above structure will be further discussed in the inception period.

National Steering Committee (NSC)

A National Steering Committee will provide guidance and direction to the project implementation process according to the established detailed work plan monitoring tool. The Committee will be composed of representatives from EPU, MNRE, UNDP Malaysia, and other relevant stakeholders to be identified. The TORs of the NSC shall be agreed among the stakeholders within the first six months of the project. The Chairperson of the NSC is the Deputy Director-General (DDG) of EPU.

Technical Working Committee (TWC)

A technical working committee will be established to handle all technical matters relating to the project and will be chaired by the Director of EPU ENRES. The members of the TWC will consist of representatives from MNRE, UNDP and other relevant stakeholders to be determined by the National Steering Committee.

National Project Director (NPD)

The National Project Director will be responsible for coordinating project activities among the main parties to the project. Among these responsibilities are ensuring that the project document and project revisions requiring Government’s approval are verified by EPU and processed through the Government co-ordinating authority in accordance with established procedures and providing direction and guidance on project-related issues. The NPD of the project is the Deputy Director of ENRES.

Consultants and Technical Support

Technical support will be provided by local and international professionals with extensive experience working in relevant areas as required by the project. The UNDP global knowledge network will provide valuable inputs through best practices and lessons learned from similar experiences in other countries.

Project Assurance

The Project Assurance role supports the Project Board by carrying out objective and independent project oversight and monitoring functions. This role ensures that appropriate project management milestones are managed and completed. A UNDP Programme Officer will hold the Project Assurance together with a representative from the Corporate and International Cooperation Section, EPU, representing the Malaysian Government.

Project Manager

The Project Manager will manage the project on behalf of the NSC and the TWC in close coordination within the Term of Reference agreed to by the NSC and the TWC. The Project Manager is responsible for day-to-day management and decision-making for the project together with an identified officer of the implementing agency. The Project Manager ensures that the project produces the results specified in the project document to the required standard of quality and within the specified constraints of time and cost.

The Project manager will be recruited and will report administratively and programmatically to both the NPD and UNDP. The person will prepare progress reports in timely and required manner, and provide the information needed to agree disbursement of funds. The TOR of the project manager shall be agreed among the stakeholders as soon as the project commences.

Financial Management

Based on the approved AWP, UNDP will provide required financial resources to the Implementing Partner to carry out project activities during the annual cycle. Under the Harmonized Approach to Cash Transfer (HACT), the following modalities may be used :

- Direct cash transfers to the Implementing Partner, for obligations and expenditures to be made by them in support of activities;
- Direct payments to vendors and other third parties, for obligations incurred by the Implementing Partner;
- Reimbursement to the Implementing Partner for obligations made and expenditure incurred by them in support of activities

The FACE form as per Annex X should be used for all of the above cash disbursements as well as for expenditure reporting.

The Implementing partner and Project Manager will work closely with UNDP to monitor the use of the financial resources and are accountable for

- Managing UNDP's/ CS resources to achieve the expected results
- Maintaining an up to date accounting system that contains records and controls to ensure the accuracy and reliability of financial information and reporting. Expenditures made should be in accordance with the, Annual Work Plans and budgets.

At the end of a quarter/year UNDP prepares a Combined Delivery Report (CDR) which records all disbursements made under the project for verification. The Implementing Partner and UNDP should sign this CDR.

A project revision shall be made when appropriate; to respond to changes in the development context or to adjust the design and resources allocation to ensure the effectiveness of the project provided that the project remains relevant to the Country Programme. A project revision shall be supported by the record of an approval decision made by the project NSC, and an updated and signed AWP.

UNDP Support Services

In addition, UNDP may/ shall provide the following services:

- a) identification and recruitment of project personnel;
- b) procurement of goods and services including project vehicle
- c) Identification of training activities and assistance in carrying them out

The above will be carried out based on UNDP policies and procedures following the principles of best value for money, fairness, integrity, transparency, and effective competition.

UNDP will charge for the support services provided as follows:

- a. 6% cost recovery for the provision of general management support (GMS) for activities funded under Government Cost sharing
- b. Direct cost for implementation support services (ISS) for activities under TRAC funding.

In-Kind Contribution

In addition to the financial resources through UNDP, the implementing partner will provide the following in-kind contribution:

- Assist in gaining access to all relevant data and information required to for the project that is accessible for public viewing;
- Office space (i.e. room/workspace) for the Project Manager, consultants and experts at EPU
- Use of office support facilities by the Project Manager, consultants and experts (e.g. fax machine, stationary, Xerox machine, telephone), and secretarial support where applicable;
- Facilities for convening meetings, workshops and seminars.

Any reimbursable expenses can be borne by the project fund as agreed Annual Work Plan (AWP).

VI. MONITORING FRAMEWORK AND EVALUATION

The project activities will be closely monitored by UNDP. In compliance with UNDP regulations, the following will be conducted:

a) Project Monitoring and Review Meetings

- **National Steering Committee Meetings**
The National Steering Committee (NSC) will meet after the receipt of each project report or at least twice a year, whichever is greater and address project issues raised by the Project Manager, review project progress reports and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to the project document. A final NSC meeting should also be held at the end of project completion to agree to and endorse the final findings and outcomes of the project and to make recommendations towards project closure.
- **Technical Working Committee (TWC) Meetings**
The Technical Working Committee (TWC) will meet as regularly as required to assist the NSC in monitoring and advising the technical implementation of the project and its activities. The TWC acts as the technical advisors to the NSC, and regularly reviews the progress of all project components.
- **Annual Project Review Meeting**
This internal review meeting will be chaired by EPU during the fourth quarter of the year to assess the performance of the project based on the Annual Work Plan (AWP) submitted at the beginning of the calendar year as well as the Annual Progress Report submitted during the fourth quarter of each calendar year. The review will involve all key project stakeholders and the Implementing Partner, and will focus on the extent to which progress have been made towards achievement of the outputs and that they remain aligned to appropriate outcomes as outlined in the project document. This review should update output targets and results achieved. In the last year of the project, the review will be a final assessment.
- **Final Project Review Meeting**
A Final Project Review meeting will be conducted towards the end of the project completion. Its purpose is to assess the performance and success of the project. It should look at sustainability of the results, including the contribution to related outcomes (and the status of these outcomes) and capacity development. It will also review lessons learned and recommendations that might improve design and implementation of other UNDP-funded projects. The meeting will discuss the Final Project Review Report that should be submitted two weeks prior to the Final Project Review Meeting.

b) Progress Reporting Documents

- **Mid Year Progress Report**
A Mid Year Progress Report shall be prepared by the Project Manager and shared with the NSC by 30 June of each project year. As a minimum requirement, the Mid Year Progress Report shall utilize the standard template for the Annual Project Report (APR) covering a six month period.
- **Annual Progress Report (APR)**
An Annual Progress Report shall also be prepared by the Project Manager and shared with the NSC by the end of the last quarter of each year. The Annual Progress Report shall highlight risks and challenges, the summary of results achieved, and lessons learnt of the project for that reporting year.
- **Final Project Review Report**
This document which is prepared by the implementing partner is a structured assessment of progress based on the chain of results initially defined in the Project Document and Annual Work plan (AWP) and will include information on financial allocations of expenditure. It may be supplemented by additional narrative to meet specific reporting needs of stakeholders, especially the donor(s). The following should be submitted together with the report:
 - Lessons learnt log - summarizing the information captured throughout the implementation of the project
 - Minutes of NSC meetings

- Minutes of TWC meetings
- Annual signed CDRs
- Statements of cash position (if applicable)
- Statements of assets and equipment

This report will be discussed at the Final Project Review meeting mentioned above.

- **Final Project Evaluation**
Project evaluation assesses the performance of a project in achieving its intended results. It yields useful information on project implementation arrangements and the achievement of outputs. It is at this level that direct cause and attribution can be addressed given the close causal linkage between the intervention and its effect or output. Project evaluation provides valuable information to support informed decision-making and serves to reinforce the accountability of project managers. Depending on the purpose, project evaluations can be commissioned by the management at any time during the project cycle: at mid point, just before or after completion. They should ideally take place around the time of completing a project to determine the future of the project (e.g. continuation or termination of the project), to decide whether the concept should be scaled up or replicated elsewhere, and/or to generate lessons that are of strategic significance for the organization. The evaluation should be conducted by an independent consultant.

c) Financial Monitoring and Quality Assurance

- **Combined Delivery Reports**
The Combined Delivery Report (CDR) is the report that reflects the total expenditures and actual obligations (recorded in Atlas) of a Project during a period. This report is prepared by UNDP using Atlas and shared with the implementing partner on a quarterly basis and at the end of each year. The Implementing Partner is required to verify each transaction made and sign the quarterly issued CDR report. Statements of cash position as well as assets and equipments should also be submitted together with the CDR on a yearly basis.
- **Audit**
Audit is an integral part of sound financial and administrative management, and of the UNDP accountability framework. The project will be audited at least once in its lifetime and in accordance with the threshold established for the annual expenditures by the Office of Audit and Investigations (OAI). The audit provides UNDP with assurance that resources are used to achieve the results described and that UNDP resources are adequately safeguarded. The selection of an Audit Firm shall be through a competitive Request for Proposals, in consultation with the Implementing Partner and EPU or if possible shall be performed by the National Audit Authority. UNDP procedures must be followed as per the specific Terms of Reference for Audits of NEX/NIM Projects.

The audit is expected to provide assurance related to the following broad areas ::

- Project progress and rate of delivery (PP)
- Financial management (FM)
- Procurement of goods and /or services (PR)
- Human resource selection and administration (HR)
- Management and use of equipment and inventory (EQ)
- Record-keeping systems and controls (R)
- Management structure (MS)
- Auditors' comments on the implementation status of prior year audit

VII. LEGAL CONTEXT

The project document shall be the instrument envisaged in the Supplemental Provisions to the Project Document, attached hereto.

The term “Government Co-Operating Agency” mentioned in the Supplemental Provision shall mean the executing agency/implementing partner to the project as stated in the cover page of this document.

Consistent with the above Supplemental Provisions, the responsibility for the safety and security of the executing agency/ implementing partner and its personnel and property, and of UNDP’s property in the executing agency’s custody, rests with the executing agency/ implementing partner.

The executing agency/ implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via <http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm>

ANNEX I: Project Budget

As per AWP.

ANNEX II: Risks and Mitigation

Description	Type	Impact & Probability	Mitigation Measures
The value of US Dollars foreign exchange against the Ringgit may reduce during the project cycle.	Financial	Probability: Low Impact: Medium	There will be a need to regularly monitor the exchange rate to ensure that it does not affect the budget of the project. If there are major changes, the budget will be adjusted accordingly and approved by the NSC.
There may be slight impact on the projections due to inaccuracy and unavailability of data.	Others	Probability: Medium Impact: Medium	The project will consult closely with relevant agencies on the accuracy and availability of baseline data.
Difficulties to implement policy options and strategies recommended	Regulatory	Probability: Medium Impact: High	There will be a need to inform and convinced relevant stakeholders to take up the recommendations.
Gaps in terms of baseline data may still exist.	Others	Probability: Medium Impact: High	There will be a need to consult relevant agencies in identifying the gaps and address it.

ANNEX III: UNDP ANNUAL WORK PLAN MONITORING TOOL

Together with project issue/ risk logs, the following AWP Monitoring Tool should be used for the project review purpose.

Expected Outputs and Indicators: List all CP outputs and indicators, including annual targets

Planned Activities: List all the activities including monitoring and evaluation activities, including evaluations, field monitoring visits, technical backstopping missions, and audits to be undertaken during the year towards stated CP outputs

Expenditures: List actual expenditures against activities complete

Results of Activities: For each activity, state the results of the activity

Progress towards Achieving CP Outputs: Using data on annual indicator targets, state progress towards achieving the CP outputs. Based on the updated project issue/risk logs, comment on factors that facilitated and/or constrained achievement of results including:

- Whether risks and assumptions as identified in the CP M&E Framework materialized or whether new risks emerge
- Internal factors such as timing of inputs and activities, quality of products and services, coordination and/or other management issues

CP Component _____
 Implementing Partner _____

EXPECTED OUTPUTS AND INDICATORS including annual targets	PLANNED ACTIVITIES <i>List all the activities including monitoring and evaluation activities to be undertaken during the year towards stated CP outputs</i>	EXPENDITURES <i>List actual expenditures against activities completed</i>	RESULTS OF ACTIVITIES <i>For each activity, state the results of the activity</i>	PROGRESS TOWARDS ACHIEVING OUTPUTS Using data on annual indicator targets, state progress towards achieving the CP outputs. Where relevant, comment on factors that facilitated and/or constrained achievement of results including: <ul style="list-style-type: none"> ▪ <i>Whether risks and assumptions as identified in the CP M&E Framework materialized or whether new risks emerged</i> ▪ <i>Internal factors such as timing of inputs and activities, quality of products and services, coordination and/or other management issues</i>
OUTPUT 1: INDICATOR 1.1 WITH TARGET FOR THE YEAR: INDICATOR 1.2 WITH TARGET FOR THE YEAR: INDICATOR 1.3 WITH TARGET FOR THE YEAR:				
OUTPUT 2: INDICATOR 2.1 WITH TARGET FOR THE YEAR: ETC.				

ANNEX IV: TERMS OF REFERENCE: National Steering Committee (NSC)

The National Steering Committee (NSC) will monitor the conduct of the project and provide strategic guidance to the project team on the implementation of the project. The NSC will be chaired by the Director of ENRES

Members of the NSC may include EPU, MNRE, MEGTW, MOF, DOS and other related agencies. The NSC will meet after the receipt of each project report or at least twice a year, whichever greater. The NSC will have the following duties and responsibilities:

- Provide policy guidance on matters pertaining to the implementation of the project;
- Monitor and evaluate the implementation of the project towards fulfilment of the objectives stated in the project document;
- Review, approve and endorse proposed work plan and budget;
- Initiate remedial actions to overcome all constraints in progress of the project;
- Review and approve relevant changes to the project design;
- Coordinate the roles of the various organizations involved in the execution of the project and ensure harmony with related activities;
- Advice on the long term sustainability strategy of the project;
- Review and approve all related reports to the projects.

ANNEX V: TERMS OF REFERENCE: Technical Working Committee (TWC)

The Technical Working Committee (TWC) will assist the NSC in monitoring the conduct of the project and providing technical guidance on the implementation of the project. The TWC will act as technical advisors to the NSC. The TWC will be chaired by the Deputy Director of ENRES / Undersecretary NRE and the EPU ENRES / CEMD NRE will act as Secretariat to the TWC. The members of the TWC will consist of representatives from the EPU, MNRE, MEGTW, UNDP and other relevant stakeholders to be determined by the NSC.

The TWC will be specifically responsible for:

- Provide guidance and decisions on matters pertaining to the technical aspects of the project such as the data collection exercise, finalizing inputs and outputs parameters, type of models to be used, the training strategy, the development of the models to ensure that they meet with the objectives set in the project document and with international good practices and standards ;
- Monitor and evaluate the technical implementation of the project towards fulfilment of the objectives stated in the project document;
- Review and comment on the proposed technical work plan and budget; and
- Regular monitoring of the progress of the project and recommend approved technical reports to the NSC
- Review policy recommendations to be endorsed in the NSC

ANNEX VI: TERMS OF REFERENCE: National Project Director

National Project Director is a staff member of the Government of Malaysia's implementing agency of a UNDP-supported project and in this case will be the Deputy Director of ENRES EPU. His/her main responsibility is to coordinate project activities among the main parties to the project: the Government co-ordinating authority, the consultant, and UNDP.

Specifically, he/she works in close collaboration with the Project Manager, EPU as well as UNDP and his/her responsibilities include:

- Ensuring that the project document and project revisions requiring Government's approval are processed through the Government co-ordinating authority , in accordance with established procedures;
- Preparing work plans in discussion with the Project Manager, EPU UNDP and consultants;
- Mobilizing national institutional mechanisms for smooth progress of project;
- Reviewing project status reports;
- Providing direction and guidance on project-related issues;
- Providing advice and guidance to the project team.
- Recommends financial transaction for approval by the NPD

ANNEX VII: TERMS OF REFERENCE: Project Manager

The Project Manager will be primarily focused on the administrative, financial and operational aspects of the project. The project manager's role is to manage and coordinate the implementation of various project activities in ensuring quality and timeliness of activities and delivery of outputs. He/She will be based at EPU / MNRE.

The specific tasks of the Project Manager are:

- Provide direction for the project based on the project document and decisions made by the TWC and NSC
- Manage and coordinate the implementation of project activities to ensure the maintenance of quality and timeliness, and delivery of outputs
- Liaise and work closely with the project partners and beneficiaries
- Report regularly to the NSC and TWC on the project's progress
- Maintain close contact with designated focal points from UNDP and other stakeholders, indicating any estimated changes to the work plan, and proposing a budget revision when appropriate
- Ensure that the requisite allocations are available in accordance with the agreed budget and established schedules of payment, if any, in consultation with EPU and UNDP
- Coordinate and facilitate the work of multiple component teams engaged in the implementation of project activities
- Work closely with UNDP and EPU in drafting and preparation of relevant Terms of Reference for consultants.
- Monitor the project funds and resources. Prepare progress and financial reports of the project when required.
- Maintain an up-to-date accounting system to ensure accuracy and reliability of financial reporting
- Be responsible for the delivery of the project results and final outputs
- Establish a monitoring plan for activities implemented by project consultants
- Be actively involved in the preparation of relevant knowledge products (including publications and reports)
- Where necessary and upon advice by UNDP, perform the function of ATLAS External User, creating requisitions and vouchers, and other relevant ATLAS processes

Duration: Two years

Reports to: National Project Director, under the guidance of UNDP and EPU

Qualifications and skills:

1. Masters degree or equivalent in Economics, Environmental Science or a related discipline. Work experience in lieu of formal qualifications will also be considered.
2. At least 10 years experience working and has a **deep understanding in various climate change economic models** especially in adaptation and mitigation sector is highly appreciated.
3. Experience in policy development is highly Knowledgeable in UNFCCC subject matters especially relating to GHG inventories and impact studies.
4. Project management experience will be an asset. Candidate must be able to multitask and work independently
5. Be proactive, energetic, committed and innovative
6. Have good interpersonal skills, diligent, open-minded and dedicated. Flexible and mature person
7. Excellent writing and organization skills. Strong command of English and Bahasa Malaysia.

ANNEX VIII: Project Annual Report Template

DATE:
Award ID:
Description:
Implementing Partner:
Period Covered:

1. Project Issues:

Status of Project Risks:	Open Project Issues:
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2. Project Performance

OUTPUT 1:						
ID						
Description:						
YYYY target:						
YYYY Achievement:						
Activity ID:						
Deliverable Description:						
Start and End Date:						
% Progress to date						
Quality Criteria		Date	Results of Activities			
			User Perspective	Resource Status	Timeliness	
Financial						
Account	Fund	Donor	R. Party	Budget	Expenditure	Balance
OUTPUT 2:						
Project ID						
Description:						
YYYY Target:						
YYYY Achievement						
Activity ID:						
Deliverable Description:						
Start and End Date:						
% Progress to date						
Quality Criteria		Date	Results of Activities			
			User Perspective	Resource Status	Timeliness	
Financial Summary						
Account	Fund	Donor	R. Party	Budget	Expenditure	Balance

3. Lessons Learned

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