



REPUBLIC OF THE PHILIPPINES
Department of Budget and Management
Climate Change Commission

JOINT MEMORANDUM CIRCULAR

No. 2015-01
March 24, 2015

FOR : All Heads of Departments, Agencies, Bureaus, Offices, Commissions, State Universities and Colleges, Government-Owned and Controlled Corporations, and Other Instrumentalities of the National Government and all Others Concerned

SUBJECT : **Revised Guidelines for Climate Change Expenditure Tagging (CCET) amending JMC No. 2013-01**

1. OBJECTIVE

The Government of the Philippines has demonstrated leadership and strong commitment in implementing a comprehensive reform agenda to respond to climate change (CC). With the goal of using the budget process to plan, prioritize, and monitor CC expenditure, the Government has mobilized the National Budget Preparation Process to tag climate change expenditures using a common policy-based typology and guidelines. The Government also developed the Risk Resiliency Program (RRP), a program that constitutes a major part of the overall climate change expenditure.

Building on the lessons learned during the 2015 budget process, coupled with the developments in the budgeting system introduced by the DBM, e.g, the implementation of the Unified Accounts Code Structure (UACS) to strengthen the process for tracking, monitoring, and reporting of CC expenditures, and performance-informed budget-outcome based starting 2015, and the revision in the climate change typologies, the previously issued Joint Memorandum Circular No. 2013-01 dated December 27, 2013 is hereby amended.

To be consistent with outcome-based budgeting of the DBM, performance indicators specific to climate change expenditures shall also be formulated in sync with the National Climate Change Action Plan.

2. PURPOSE

To track, monitor and report climate change programs, projects and activities to enable oversight and line department managers to monitor climate change-related expenditures; and

To define and clarify responsibilities of national government agencies, the Department of Budget and Management (DBM), and the Climate Change Commission (CCC) relative to the climate change expenditure tagging at the various stages of the budgeting process.

3. DEFINITION OF TERMS

3.1. Climate Change – a change in climate that can be identified by changes in the mean and/or variability of its properties and that persists for an extended period typically, attributed directly or indirectly to human activity that alters the composition of the global atmosphere and is in addition to natural climate variability observed over comparable time periods.

3.2. Climate Change Adaptation – an activity should be classified as adaptation-related if it intends to reduce the vulnerability of human or natural systems to the impacts of climate change and climate-related risks, by maintaining or increasing adaptive capacity and resilience. Climate change adaptation includes the following responses:

3.2.1. Measures that address the drivers of vulnerability. Vulnerability is the result of the magnitude of exposure of humans and ecosystems to climate-related hazards. Some of the drivers of vulnerability are poverty, lack of economic assets and lack of knowledge on the risks since they limit the capacity of the exposed population to cope properly to climate change. Some of the expenditure programs that fall under this category include poverty reduction, income and livelihood diversification, and health programs that are specifically designed to respond to climate change risks and variability.

3.2.2. Measures that directly confront climate change impacts. These types of expenditures are those that directly address the impacts or potential impacts of climate change variability, such as infrastructures that incorporate climate change risks in their design and/or their implementation to minimize impacts from climate change risks.

3.2.3. Measures that build resilience to current and future climate risks. Building resilience means increasing the capacity of the social or ecological system to reach or maintain an acceptable level of functioning or structuring while undergoing changes. Expenditure programs under this category shall include but not be limited to reducing land degradation, reforestation programs, climate resilient crop varieties or farming techniques, effective early warning systems and other investments specifically designed to respond to projected climate changes and variability.

3.3. Climate Finance – financing used to fund climate change expenditures.

- 3.4. Climate Information – includes baseline observed data, climate trends, variability and higher order statistics, extremes, inter-annual variability, and inter-decadal variability, for both the past and projected future climate. It also includes associated information to interpret and use these data.
- 3.5. Climate Change Mitigation – an activity should be classified as climate change mitigation if it aims at reducing greenhouse gas emissions (GHG), directly or indirectly, by avoiding or capturing GHG before they are emitted to the atmosphere or sequestering those already in the atmosphere by enhancing “sinks” such as forests. Climate change mitigation includes the following responses
 - 3.5.1. Measures to reduce greenhouse gas (GHG) emissions such as but not limited to improved energy efficiency, renewable energy projects, reforestation/ improved forest management, and improved transport systems.
- 3.6. Climate-Related Risks – are risks variables in the climate/weather system that affect human life adversely. This relates to extreme values of the climate or weather variables: high wind speed (storm), high river water staged (flood), low water stages (drought). This also includes slow onset (changes in temperature and precipitation leading to drought).
- 3.7. Outcomes - are the likely or achieved short-term and medium-term effects of an intervention's outputs. These are the observable behavioral and institutional changes, usually as the result of coordinated short-term investments in individual and organizational capacity building for key development stakeholders.¹ In the context of the National Climate Change Action plan, these are immediate outcomes defined along the seven thematic areas whose interrelated result areas contribute to the NCCAP's ultimate outcomes of “enhanced adaptive communities, resilience of natural ecosystems and sustainability of built environment to climate change and successful transition towards climate smart development”.
- 3.8. P/A/Ps - refers to programs (GAS, STO, operations)/activities and projects of the agency.
- 3.9. Preparatory activities – are climate change-related activities which shall include but not be limited to vulnerability and impact assessment studies, climate change and variability researches, climate modeling, capacity building, policies, other related activities.
- 3.10. Resilience – the ability of social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning and capacity for self-organization and to adapt to stress and change.
- 3.11. Risk – the concept combines the magnitude of the impact (a specific change in a system caused by its exposure to climate change) with the probability of its occurrence (IPCC 4th Assessment Report, Working Group II, Appendix I)
- 3.12. Vulnerability – the degree to which geo-physical, biological and socio-economic systems are susceptible to, unable to cope with the adverse impacts of climate change.

¹ 2011-2016 Philippine Development Plan Results Matrices

- 3.13. Unified Accounts Code Structure (UACS) – is a government-wide system established to aid in reporting financial transactions of the National Government of the Republic of the Philippines. The UACS provides a framework for identifying, aggregating, and reporting financial transactions in budget preparation, execution, accounting, and auditing.

4.0 GUIDELINES

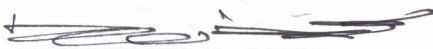
- 4.1 All climate change related strategies and investments of the government shall be identified as adaptation and mitigation as defined in Sections 3.2 and 3.5 of this JMC.
- 4.2 Agencies shall be guided by the Quality Review and Assurance (QAR) Guidelines (Annex A) developed by the CCC, which shall be accomplished by the Agencies in the evaluation and finalization of the P/A/Ps that will be tagged based on the CC typology. The QAR shall provide for the basis for tagging, analysis of proposed P/A/Ps and relationship of contributing factors toward the attainment of NCCAP outcomes.
- 4.3 To classify climate change related-expenditures to be tagged in the Online Submission of Budget Proposal (OSBP), NEP and GAA, the following shall be undertaken:
 - 4.3.1 National Government Agencies, SUCs and GOCCs shall review/examine the P/A/Ps technical documents if it qualifies as an adaptation or mitigation response based on the guided questions included in Annex A;
 - 4.3.2 For P/A/Ps that qualify as adaptation or mitigation, the entire P/A/P budget shall be tagged as CC expenditures, if one of the main objectives of the P/A/P is to address CC. Otherwise, only the budgets for those components of the P/A/P that directly address CC, based on the CC typology (Annex B), will be included as CC expenditure;
 - 4.3.3 NGAs, SUCs, and GOCCs will tag the identified CC expenditures based on the CC typology, which will be included in the BP Form 201-F or DBM Form 712 as part of their online submission of budget proposed (OSBP).
- 4.4 Agencies who do not have any P/A/Ps that can be tagged as either climate change adaptation or mitigation can tick 'No Climate Change Expenditure' in their respective BP Form 201-F or DBM Form 712;
- 4.5 The Help Desk will provide support and assistance to NGAs, SUCs, and GOCCs in climate change expenditure tagging. For technical and system inquiries, Help Desk can be reached through phone at (02) 735-3144 or email at helpdesk@climate.gov.ph.


5.0 ROLES AND RESPONSIBILITIES

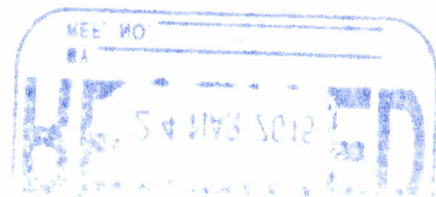
- 5.1 Departments, Agencies, Bureaus, Offices, Commissions, State Universities and Colleges, Other Instrumentalities of the National Government and all Others Concerned shall:
 - 5.1.1 Identify and tag climate change expenditures based on Climate Change Typologies (Annex B);
 - 5.1.2 Establish and document the baseline for identified climate change P/A/Ps. The baseline cost is the total cost of a P/A/P in the absence of any climate proofing action.
 - 5.1.3 Submit to the DBM through the OSBP, the climate change expenditures as prescribed in the National Budget Call (NBC);
 - 5.1.4 After submission of the climate change expenditures to the OSBP, submit to the CCC through email (helpdesk@climate.gov.ph) the agency's duly accomplished QAR Form for evaluation;
 - 5.1.5 Set up an internal quality review process to ensure P/A/Ps are identified based on their objectives using a standardized Quality Review and Assurance (QAR) (Annex A) with support of the CCC;
 - 5.1.6 Submit to DBM the BP Form 201-F or Form 712 consistent with the National Expenditure Program (NEP) and the General Appropriations Act (GAA) within two (2) weeks upon submission to Congress and effectivity of the GAA, respectively; and,
 - 5.1.7 Propose and seek the approval of the CCC for new typologies.
- 5.2 The Department of Budget and Management (DBM) shall:
 - 5.2.1 Ensure that the submission of the concerned Departments, Agencies, Bureaus, Offices, Commissions, State Universities and Colleges, Other Instrumentalities of the National Government and all Others Concerned is consistent with the above Section 5.1.3;
 - 5.2.2 Establish, together with the CCC, a Help Desk to provide support to agencies consistent with functions stated in Section 4.5;
 - 5.2.3 Provide the CCC generated BP Form 201-F (for NGAs and SUCs) or DBM Form 712 (for GOCCs) and other pertinent data needed in order to take stock of, monitor, and analyze national climate change expenditure;
 - 5.2.4 Ensure readiness of the tagging systems, consistent with the UACS.
- 5.3 The Climate Change Commission (CCC) shall:
 - 5.3.1 Streamline the typology consistent with the UACS.

- 5.3.2 Evaluate agency proposal of climate change components against the existing typology and duly accomplished QAR Form;
- 5.3.3 Review and approve new typology proposals of the agencies consistent with the UACS;
- 5.3.4 Attend and participate in the Technical Budget Hearings (TBH) of concerned agencies, when necessary; and
- 5.3.5 Together with DBM, strengthen NGAs', SUCs' and GOCCs' capacity to undertake CCET.

6.0 For immediate compliance.


FLORENCIO B. ABAD
Secretary
Department of Budget and Management *sbp*


MARY ANN LUCILLE L. SERING
Secretary
Climate Change Commission *ms*



Annex A – CCET and QAR Guidelines

Overview

The Philippines has led the development of a standardized CC typology and coding structure for use in the planning, budgeting, monitoring, and reporting of public CC expenditures. On December 27, 2013, the Climate Change Commission (CCC) and the Department of Budget and Management (DBM) issued as Joint Memorandum Circular (JMC) 2013-01 mandating government agencies to track their climate change expenditure in their respective 2015 budget submissions using a common framework more popularly known as “Climate Change Expenditure Tagging (CCET)”.

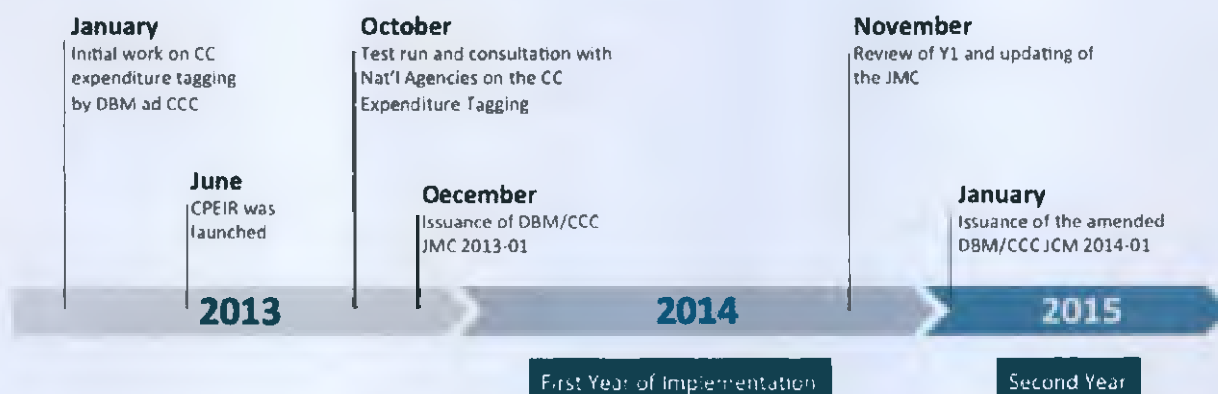


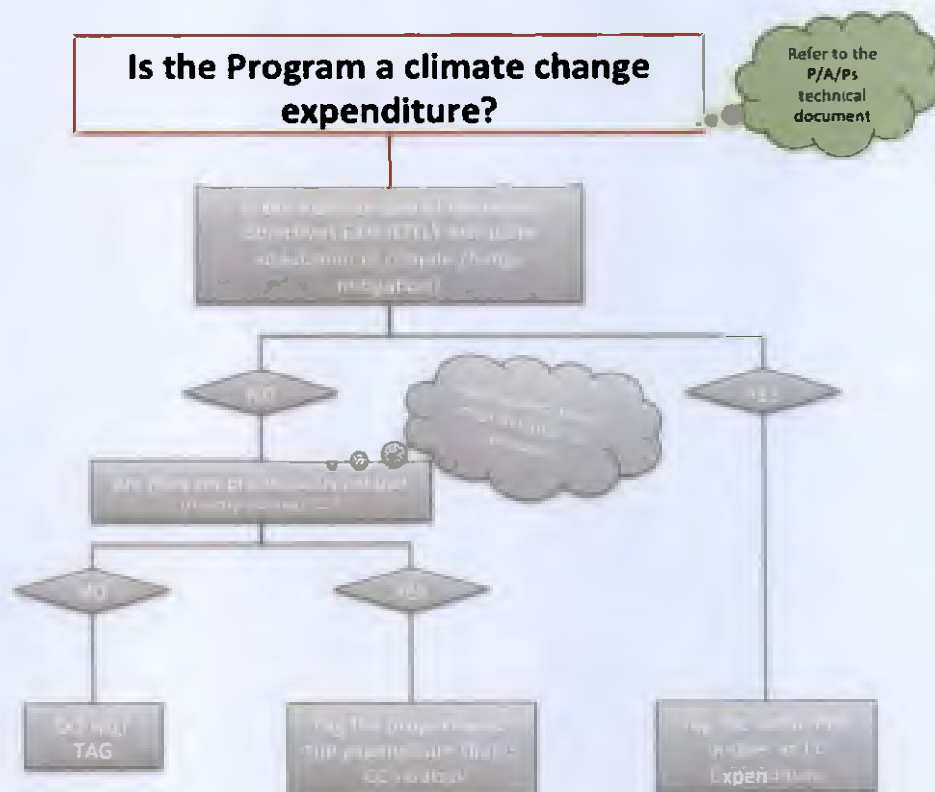
Figure 1 Development of the CC Expenditure Tagging

Alongside the submissions of BP Form 201F (for NGAs and SUCs) and DBM Form 712 (for GOCCs), ensuring the quality of the submissions is an integral part of the CC expenditure tagging. Documentation of the basis for the tagging decisions increases transparency and credibility of the CC expenditure reported by the Government.

This Annex provides two guidance processes entwined: (1) Step-by-step guide in identifying climate change expenditure, including details of the Help Desk; and a (2) Standardized Quality Review and Assurance guide to systematically document and ensure quality of the climate change expenditure data.

Step-By-Step: Identification of Climate Change Expenditure

Step 1: Identify P/A/Ps with climate-related adaptation and mitigation expenditures.



Using the technical document of the P/A/P, identify on whether it is adaptation or climate change mitigation (Refer to Box 1). Answer can be (i) adaptation, (ii) mitigation, (iii) both, or (iv) none.

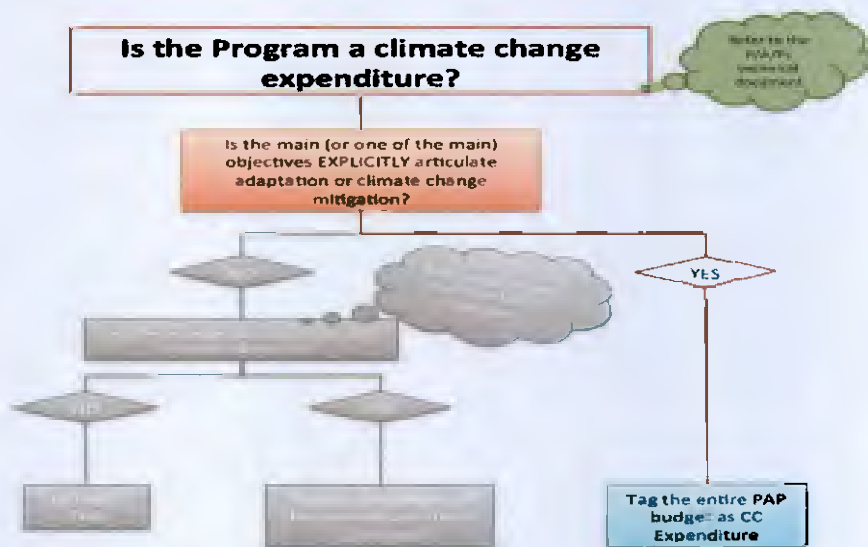
BOX 1: Defining Climate Finance

ADAPTATION: An activity should be classified as adaptation-related if it intends to reduce the vulnerability of human or natural systems to the impacts of climate change and climate-related risks, by maintaining or increasing adaptive capacity and resilience.

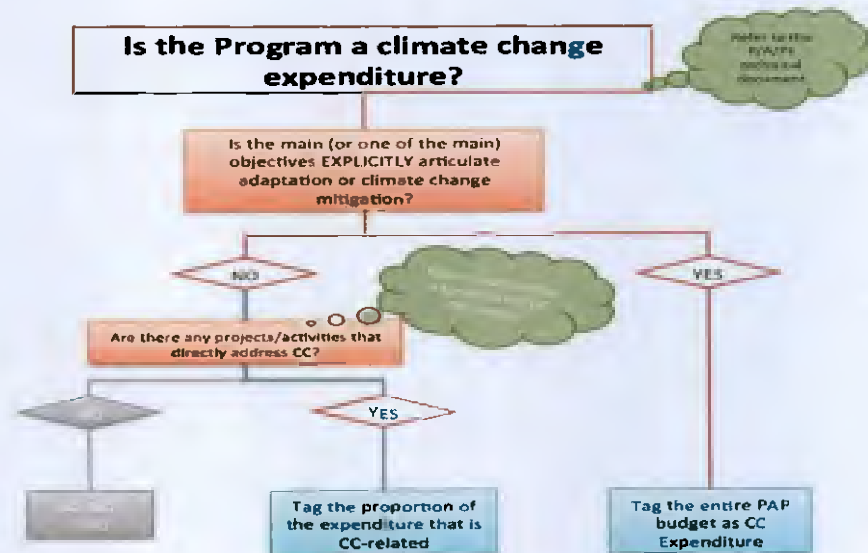
MITIGATION: An activity should be classified as climate change mitigation related if it contributes to the objectives of stabilization of greenhouse gas (GHG) concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system by promoting efforts to reduce or limit GHG emissions or to enhance GHG sequestration.

Annex A – CCET and QAR Guidelines

Step 2: For P/A/Ps with adaptation or mitigation, the entire P/A/P budget shall be tagged as CC expenditures, if THE MAIN OBJECTIVE OR ONE OF THE MAIN OBJECTIVES OF THE P/A/PS is to address climate change.




If the P/A/P's objective do not explicitly articulate addressing climate change, identify only the components of the P/A/Ps that directly address climate change based on the CC typologies (Refer to Annex B). Include only the expenditure of the identified CC component/s.




Annex A – CCET and QAR Guidelines

Step 3: NGAs, SUCs, and GOCCs tag the identified CC expenditures based on the CC typology and report them on BP Form 201F/ DBM Form 712 as part of their online submission of budget proposed (OSBP).

In the BP Form 201F/ DBM Form 712, the Agencies need to identify the PAP by using the UACS codes and CC typologies created for this purpose. Referring to Annex B (CC Typologies), the Agencies can categorize their CC-related PAPs into: (i) adaptation or climate change mitigation; (ii) sector; (iii) instrument; and (iv) activity-level typology.

UACS Code		Program/Activity/Project	2018 Within the Ceiling					2018 Above the Ceiling					TOTAL	Activity Level Typology
Sector/ Horizontal Outcome	PAP		PS	MOE	Fin Ex	CO	SUB TOTAL	PS	MOE	Fin Ex	CO	SUB TOTAL		
		Operations												
		MFO 1: Technical Advisory Services												
267-02	0000 0000 01	Trainings on weather forecasting and climate modeling	1	1		1	3	2	2		2	6	9	A713-01
185-01	0000 0000 02	Training on weath accounting or ENRA	0	0		0	0	1	1		1	3	3	A313-02
		TOTAL CLIMATE CHANGE OBLIGATIONS											11	
 No Climate Change Expenditure		Prepared by: <i>Alvin</i> Budget Officer	Approved by: <i>Ronald Reagan</i> Chief Accountant											

Agencies who do not have any P/A/Ps that can be tagged as either adaptation or climate change mitigation should tick the “No Climate Change Expenditure” in the BP Form 201F, and shall still be submitted to the DBM.

UACS Code		Program/Activity/Project	2018 Within the Ceiling					2018 Above the Ceiling					TOTAL	Activity Level Typology
Sector/ Horizontal Outcome	PAP		PS	MOE	Fin Ex	CO	SUB TOTAL	PS	MOE	Fin Ex	CO	SUB TOTAL		
		A. Regular Programs												
		I. General Administration and Support												
		TOTAL CLIMATE CHANGE OBLIGATIONS												
 No Climate Change Expenditure		Prepared by: <i>Alvin</i> Budget Officer	Approved by: <i>Ronald Reagan</i> Chief Accountant											

Annex A – CCET and QAR Guidelines

Step 4: In cases of revisions in the Budget Proposals, BP Form 201F or DBM Form 712 shall be updated accordingly.

Step 5: The CC expenditure tagging will be done in three phases: during the Budget Preparation, once the National Expenditure Plan (NEP) is proposed to Congress, and once the General Appropriations Act (GAA) is approved.



Quality Review and Assurance Guidelines

Ensuring the quality of the climate change (CC) expenditure data is a key part of the budget review process. Having a documentary basis for the tagging decisions increases the transparency and credibility of the CC expenditures reported by the Government. For FY 2015, the Climate Change Commission (CCC) set up an interim system to ensure the quality of the collected data and to strengthen the uptake of the data in the budget planning, prioritization, monitoring, and reporting processes.

For FY 2016, a Quality Review and Assurance (QAR) will examine the tagging decisions of the NGAs and include an assessment of the evidence base to support the tagging decision. The QAR process clarifies the objectives and coverage of the tagged P/A/Ps, and identifies its interconnectedness with adaptation and/or CC mitigation.

Below is a QAR Form in which Agencies are enjoined to submit to the CCC (via email at helpdesk@climate.gov.ph). This Form will be used for climate budget analysis and possible policy and budget recommendations to the DBM.

PAP	CC Typology Used	Main Objective	CC Objectives	Climate Risks being addressed?	Climate information used?
(1)	(2)	(3)	(4)	(5)	(6)
Feasibility Study/ Projects Development/ Preliminary and Detailed Eng'g		Develop detailed eng'g design within the given budget		Floods, Storm Surges	Climate projections, Flood susceptibility maps
Flood Management Services		Ensure efficiency and effectiveness of flood control mgt	Ensure efficiency and effectiveness of flood control mgt	Floods, Storm Surges	Climate projections, Flood susceptibility maps
CC Communication Plan		Develop a strategic action on enhancing awareness and knowledge on CC	Develop a strategic action on enhancing awareness and knowledge on CC	n/a	

(1) Indicate the PAP tagged as CC adaptation or CC mitigation

(2) Identify the corresponding activity-level typology. Refer to Annex B – CC Typologies

(3) Indicate the Main Objective of the PAP. Refer to the P/A/P technical document.

(4) Identify objectives that are relevant to CC adaptation or CC mitigation. Refer to JMC – Definition

(5) Identify climate risks being addressed. Refer to JMC – Definition

(6) Identify climate information used. Refer to the JMC - Definition

Help Desk



The Help Desk will continue to provide support and assistance to NGAs, GOCCs, and SUCs in climate change (CC) expenditure tagging for FY2016 Budget Proposals. For technical and system inquiries, agencies can reach the Help Desk through phone at (02) 735-3144 or email at helpdesk@climate.gov.ph. The Help Desk will be reporting to both the DBM and the CCC, and will be stationed at the CCC office.

The Help Desk will provide assistance to NGAs, the CCC and the DBM in several steps of the planning and budget preparation process. This includes, but not limited to:

1. Support to key agencies in the implementation of the CCET during the budget 2016 cycle, including agency-specific orientations and capacity building;
2. Assist the CCC and DBM in facilitating the training sessions on the CC expenditure tagging guidelines and typologies, and quality review and assurance (QAR);
3. Provide quick response to queries on the CC expenditure tagging, including documentation of the inquiries and farming out of inquiries to DBM and CCC for further action, whenever necessary;
4. Start up an online Community of Practice on CCET, including updating of directory of planning, budget, and CC focal persons;
5. Consolidate and disseminate relevant CC and CCET materials, and updated Frequently Asked Questions (FAQs);
6. Prompt agencies on DBM/CCC advisories, in relation to the CCET; and
7. Assist the CCC in consolidating and reviewing NGA submissions.

Annex B - Climate Change Typologies

New typologies are in red font || *Typologies under the NCCAP

The Philippines has led the development of a standardized climate change (CC) typology and coding structure for use in the planning, budgeting, monitoring, and reporting of public CC expenditures. The CC typology provides a comprehensive and detailed coverage of CC activities based on the priorities identified in the National Climate Change Action Plan (NCCAP).

The UACS code is composed of the Sector/Sub-sector and Horizontal Outcome segment, wherein the first three digits refers to the Sector/Sub-Sector segment and the remaining two digits refers to the Horizontal Outcome segment.

The CC typology code is created to generate various information such as: (a) direction of the tagged P/A/P (whether it is adaptation or mitigation); (b) NCCAP strategic priorities; (c) Sectoral focus; and (d) instrument.



Agriculture and Livestock					
UACS	FY2016	Policy Development and Governance	UACS	FY2016	Policy Development and Governance
162-03	A111-01	Incorporate climate change and climate variability considerations in policies and institutions	162-02	M111-01	Introduce rules and regulations to reduce the emissions of greenhouse gases (GHGs), or absorption of GHGs in the agricultural sector
162-03	A111-02	Regulate commodity shifting and agricultural land conversion*	162-02	M111-02	Public administration of sustainable land and water management that address land degradation and agro ecological conditions
162-03	A111-03	Design and implement climate change risk transfer and social protection mechanisms in agriculture and fisheries*	162-02	M111-03	Monitor carbon sequestration
162-03	A111-04	Incorporate risks from climate change and climate variability in irrigation/water management planning			
UACS	FY2016	Research, Development and Extension	UACS	FY2016	Research, Development and Extension
168-03	A112-01	Conduct agricultural vulnerability and risk assessments, impact assessments and simulation models on major crops and livestock *	168-02	M112-01	Develop, test and introduce practices or techniques that reduce GHG emissions and practices or techniques to sequester carbon dioxide (CO ₂) in crop production systems, animal husbandry systems, forest management systems and aquaculture management systems
168-03	A112-02	Develop climate-resilient crop and livestock production systems and technologies*	168-02	M112-02	Sector studies, surveys, assessments on energy and water use efficiency in agriculture
168-03	A112-03	Research on new threats to agriculture, fishing, and forestry from climate change and climate variability			
UACS	FY2016	Knowledge Sharing and Capacity Building	UACS	FY2016	Knowledge Sharing and Capacity Building
168-03	A113-01	Awareness raising of risks from climate change, or/and benefits of adaptation*	168-02	M113-01	Establish or strengthen institutions, information systems and capacity building on energy and water use efficiency in agriculture sector
168-03	A113-02	Establish climate information systems and database/resource network for agriculture and fisheries sectors*			
168-03	A113-03	Establish farmers' field school to demonstrate best adaptation practices*			
168-03	A113-04	Develop formal and non-formal training programs on climate change adaptation (CCA) and disaster risk reduction (DRR)*			
UACS	FY2016	Action Delivery	UACS	FY2016	Action Delivery
162-03	A114-01	Establish early warning systems for agriculture*	162-02	M114-01	Integrated organic and inorganic nutrient management
162-03	A114-02	Introduce or expand soil management practices that control soil erosion, nutrient loss and improve the water regime in the soil profile	162-02	M114-02	Switch to soil management techniques that reduce GHG emissions or increase carbon sequestration
162-03	A114-03	Introduce or expand use of crops or crop mix more suited to climate change and climate variability	162-02	M114-03	Intensify or expand farm and fodder production using techniques that reduce GHG emissions or increase carbon sequestration
162-03	A114-04	Reduce vulnerability of crop storage facilities and irrigation systems to climate change and climate variability*	162-02	M114-04	Manure management and methane capture in animal husbandry
162-03	A114-05	Construct/Repair/Rehabilitate national and communal irrigation systems, dams and water storage systems to manage changes in the water cycle due to climate change and climate variability*	162-02	M114-05	Change forage systems to reduce ruminant methane emissions
162-03	A114-06	Introduce weather or climate indexed insurance programs (e.g. crop insurance)	162-02	M114-06	Introduce or expand water pumping for irrigation using renewable energy sources
			162-02	M114-07	Replace existing water pumps with more energy efficient pumps
			162-02	M114-08	Implement agricultural and fisheries waste recycling and composting*
			162-02	M114-09	Switch to less water intensive crops

Annex B – Climate Change Typologies

New typologies are in red font || *Typologies under the NCCAP

Fisheries					
UACS	FY2016	Policy Development and Governance	UACS	FY2016	Policy Development and Governance
162-03	A121-01	Implement climate-responsive and gender-sensitive Comprehensive National Fisheries Industry Development Plan*	162-02	M121-01	Introduce rules and regulations to reduce the emissions of GHGs, or absorption of GHGs in the fishing sectors
162-03	A121-02	Formulate guidelines on reversion of abandoned fishponds back to mangroves*			
162-03	A121-03	Harmonize climate change adaptation plans in local resource management and local fisheries development*			
UACS	FY2016	Research, Development and Extension	UACS	FY2016	Research, Development and Extension
168-03	A122-01	Conduct of provincial-level vulnerability and risk assessments for fisheries*			
168-03	A122-02	Conduct researches on best practices in fisheries and coastal climate change adaptation, technologies and tools*			
168-03	A122-03	Conduct policy study on climate change risk transfer and social protection mechanisms for agriculture and fisheries*			
UACS	FY2016	Knowledge Sharing and Capacity Building	UACS	FY2016	Knowledge Sharing and Capacity Building
168-03	A123-01	Establish a resource network / information system and database on climate change and fisheries*	168-02	M123-01	Establish or strengthen institutions, information systems and capacity building on energy and water use efficiency in fishing sector
168-03	A123-02	Review fisheries education and develop climate change-responsive curricula*			
UACS	FY2016	Action Delivery	UACS	FY2016	Action Delivery
162-03	A124-01	Change fish farming and aquaculture practices or techniques to reduce vulnerability to climate change and climate variability	162-02	M124-01	Reduce fishing fleet
162-03	A124-02	Establish early warning systems for fisheries*	162-02	M124-02	Improve energy efficiency in fishing fleets

Water Sufficiency					
UACS	FY2016	Policy Development and Governance	UACS	FY2016	Policy Development and Governance
203-03	A211-01	Develop policy and guidelines for water conservation, allocation, recycling and reuse*			
203-03	A211-02	Review and streamline existing water resources management and institutional structure and policies*			
203-03	A211-03	Develop and implement a comprehensive ground water management program that includes vulnerability assessment*			
203-03	A211-04	Develop public financing mechanism for water supply infrastructures rehabilitation and development*			
UACS	FY2016	Research, Development and Extension	UACS	FY2016	Research, Development and Extension
205-03	A212-01	Study "low cost, no regrets" adaptation measures and technologies under various hydrologic conditions, supply-demand conditions, and policy scenarios for surface and groundwater systems*	205-02	M212-01	Administration, sector studies, surveys, assessments, information systems and capacity building for energy and water use efficiency in water, sanitation and flood protection, and solid waste management
205-03	A212-02	Define areas not suitable for large water infrastructure development and settlements based on vulnerability assessment*			
205-03	A212-03	Conduct ground water resource vulnerability and recharge areas assessment in water stressed cities*			
205-03	A212-04	Develop and implement monitoring networks for hydrologic trend analysis, forecasting and detecting shifts in trends of precipitation and stream flow*			
205-03	A212-05	Identify alternative water sources and demand management especially for urbanized areas that rely on reservoirs and are prone to recurrent and severe drought events*			
UACS	FY2016	Knowledge Sharing and Capacity Building	UACS	FY2016	Knowledge Sharing and Capacity Building
205-03	A213-01	Training for community-based water associations to managed water supply infrastructures	205-02	M213-01	Train managers or workers to improve water or energy efficiency in business operations
205-03	A213-02	Conduct Integrated Water Resource Management and climate change adaptation and disaster risk reduction training for vulnerable communities*			
205-03	A213-03	Develop gendered and accessible knowledge products and IEC materials that include local and indigenous knowledge on water resources management, climate change impacts on water resources and adaptation best practices*			
205-03	A213-04	Develop and network government database on water resources and users*			
UACS	FY2016	Action Delivery	UACS	FY2016	Action Delivery
203-03	A214-01	Rehabilitate water infrastructure with climate lens (use of climate projections and other relevant climate data)*			
203-03	A214-02	Construct new and expand existing water supply infrastructures for waterless communities*			
203-03	A214-03	Treatment of wastewater conservation/re-use purposes to respond to declines in water availability due to climate change and climate variability			

Annex B - Climate Change Typologies

New typologies are in red font || *Typologies under the NCCAP

Flood Protection					
UACS	FY2016	Policy Development and Governance	UACS	FY2016	Policy Development and Governance
202-03	A221-01	Develop and implement guidelines for rain water collection, such small water impoundments, retarding basins, mini dams to address water shortage and flooding*			
202-03	A221-02	Design guidelines, emergency protocols, and encourage preparedness and risk/contingency planning in communities that are at risk to present or future flooding			
202-03	A221-03	Consider changes to zoning and land use to accommodate increase flood risk from sea level rise, storm surge, and tropical cyclones in coastal and riverine communities			
UACS	FY2016	Research, Development and Extension	UACS	FY2016	Research, Development and Extension
205-03	A222-01	Conduct vulnerability assessments in communities, cities, and sectors that are at risk to present or future flooding			
205-03	A222-02	Improve hydromet infrastructure and monitoring systems for data collection and management and the development and delivery of information, products and services to increase flood resilience			
205-03	A222-03	Develop innovative technologies and methodologies to communicating flood emergency information and longer-term risks of flooding to relevant populations and communities			
UACS	FY2016	Knowledge Sharing and Capacity Building	UACS	FY2016	Knowledge Sharing and Capacity Building
205-03	A223-01	Build local capacity for the management of climate change and extreme flood risks, and increase capacity in conducting vulnerability assessments			
205-03	A223-02	Increase knowledge for how to consider climate change information and climate risk in water resources management			
UACS	FY2016	Action Delivery	UACS	FY2016	Action Delivery
202-03	A224-01	Incorporate climate change and climate variability in design standards for flood control and drainage systems			
202-03	A224-02	Improve resilience of infrastructure (bridges, water supply, community infrastructure, water storage, coastal defense, etc) to account for climate change and climate variability related extreme weather and climate variability that could increase flood risks in infrastructure			
202-03	A224-03	Retain or re-establish mangrove forests, wetlands, and other ecosystems considerations to as protection against floods risks			
203-03	A224-04	Implement water harvesting technologies and designs to improve management of storm water*			
205-03	A224-05	Improve early warning information and alert systems to increase readiness to extreme flood risks			

Water Sanitation and Solid Waste					
UACS	FY2016	Policy Development and Governance	UACS	FY2016	Policy Development and Governance
181-03	A231-01	Incorporate change in design of solid waste management systems in response to extreme weather and flood events arising from CC&CV	181-02	M231-01	Upgrade existing landfills to capture methane for energy generation or gas flaring for CO2 generation
182-03	A231-02	Design guidance for incorporating climate change risk into water sanitation and treatment planning, operation, and management (Including accounting for increased construction and maintenance costs that account for climate risk)			
182-03	A231-03	Incorporate risk of sea level rise, storm surge, and saltwater intrusion on the design and upgrades of coastal water sanitation infrastructure			
UACS	FY2016	Research, Development and Extension	UACS	FY2016	Research, Development and Extension
181-03	A232-01	Study and adopt centralized wastewater treatment systems to improve quality in highly urbanized and densely populated areas with respect to increased flooding, storm surge, and extreme precipitation events			
181-03	A232-02	Conduct vulnerability assessments for the sanitation and treatment of water supply			
UACS	FY2016	Knowledge Sharing and Capacity Building	UACS	FY2016	Knowledge Sharing and Capacity Building
182-03	A233-01	Increase local knowledge for how to consider climate change information and climate risk in water quality and wastewater treatment			
UACS	FY2016	Action Delivery	UACS	FY2016	Action Delivery
203-03	A234-01	Expand the establishment of alternative micro-water purification systems especially to areas that cannot be reached by safe water supply*			
182-03	A234-02	Monitor impact of climate change and climate variability as part of water resource management			
181-03	A234-03	Incorporate changes in design of sanitation systems, wastewater treatment and disposal system in response to extreme weather and flood events arising from climate change and climate variability			

Annex B - Climate Change Typologies

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Forest and Biodiversity					
UACS	FY2016	Policy Development and Governance	UACS	FY2016	Policy Development and Governance
184-03	A311-01	Design and implement payments for environmental services and other innovative conservation financing mechanisms to support ecosystem-based adaptation and mitigation*	184-02	M311-01	Implement and monitor progress of REDD+ related policies†
184-03	A311-02	Review PEENRA policy and implement greening of the national income accounts *			
184-03	A311-03	Integrated ecosystem management approaches for watersheds and wetlands to reduce vulnerability to climate change and climate variability			
184-03	A311-04	Establish zoning guidelines for different ecosystems based on the vulnerability and risk assessment results*			
184-03	A311-05	Develop guidelines for implementing Integrated Water Resources Management (IWRM) and climate change adaptation at the local, watershed and river basin level*			
UACS	FY2016	Research, Development and Extension	UACS	FY2016	Research, Development and Extension
185-03	A312-01	Conduct ecosystems vulnerability and risk assessment*			
185-03	A312-02	Study, design and implement financing mechanisms for IWRM and climate change adaptation implementation in critical watersheds and river basins*			
UACS	FY2016	Knowledge Sharing and Capacity Building	UACS	FY2016	Knowledge Sharing and Capacity Building
185-03	A313-01	Training on vulnerability and risk assessments*			
185-03	A313-02	Implement training program on wealth accounting or ENRA*			
185-03	A313-03	Establish management information system for different ecosystems that link various data sources*			
185-03	A313-04	Document and disseminate best practices, including climate change responsive indigenous practices*			
UACS	FY2016	Action Delivery	UACS	FY2016	Action Delivery
184-03	A314-01	Rehabilitate of degraded watersheds and forest areas	184-02	M314-01	Re-forestation and afforestation that increases vegetative cover or sequesters carbon
184-03	A314-02	Conserve and protect existing watershed and protected areas	184-02	M314-02	Sustainable peat land/ wetland/forest management and protection
184-03	A314-03	Delineate "ridge-to-reef" ecosystem-based management zones for the ecotowns through multi stakeholder process*	184-02	M314-03	Avoided deforestation
184-03	A314-04	Update status of Protected Areas and Key Biodiversity Areas from results from the vulnerability and risk assessment*			
184-03	A314-05	Design payment for ecosystem services (PES) scheme and pilot test identified ecotowns*			

Health					
UACS	FY2016	Policy Development and Governance	UACS	FY2016	Policy Development and Governance
224-03	A411-01	Develop guidelines on treatment of health issues due to climate change and climate variability			
226-03	A411-02	Include climate related diseases in basic benefits of insurance policies			
224-03	A411-03	Develop policy requiring integration of climate change and disaster risk reduction concepts and approaches in medical and allied health training courses*			
224-03	A411-04	Develop and implement monitoring health infrastructure damage and rehabilitation plan*			
224-03	A411-05	Develop and implement post disaster epidemic outbreak management and disease surveillance system (ex. water-borne diseases and other health risks due to climate change)*			
UACS	FY2016	Research, Development and Extension	UACS	FY2016	Research, Development and Extension
225-03	A412-01	Assess changes in risk, exposure or sensitivity to climate change and climate variability related diseases for vulnerable groups			
225-03	A412-02	Assess impact of climate change and climate variability on livelihoods and poverty with focus on vulnerable groups			
UACS	FY2016	Knowledge Sharing and Capacity Building	UACS	FY2016	Knowledge Sharing and Capacity Building
225-03	A413-01	Training and education of health personnel on treatment, monitoring and surveillance of climate change and climate variability related health issues *			
225-03	A413-02	Strengthen health management information management			
225-03	A413-03	Incorporate climate related health risks into clinical practice guidelines, and curricula for continuous medical education			
UACS	FY2016	Action Delivery	UACS	FY2016	Action Delivery
224-03	A414-01	Develop and implement program for community-based adaptation measures and health emergency preparedness and *			
224-03	A414-02	Upgrade health systems to respond to changes in environmental health risks from climate change and climate variability (e.g. malaria)			
224-03	A414-03	Develop food safety/ food security measures that take account of new conditions caused by climate change			
285-03	A414-04	Development of livelihood diversification strategies to reduce dependence of climate related income opportunities			

Annex B - Climate Change Typologies

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Settlements and Local Land Use					
UACS	FY2016	Policy Development and Governance	UACS	FY2016	Policy Development and Governance
202-03	A421-01	Mainstreaming of CCA-DRRM in local plans*			
201-03	A421-02	Incorporate vulnerability to climate change and climate variability in housing design standards			
201-03	A421-03	Develop green building rating scheme, specifications and criteria*			
201-03	A421-04	Develop and implement programs and incentive system for CC proofing and retrofitting water infrastructure at the household/community level*			
UACS	FY2016	Research, Development and Extension	UACS	FY2016	Research, Development and Extension
205-03	A422-01	Identify, map and profile areas and communities highly prone to climate-related disasters*			
205-03	A422-02	Conduct risk and vulnerability assessment*			
205-03	A422-03	Conduct a study on population carrying capacity of areas and CC adaptive capacity of various communities*			
UACS	FY2016	Knowledge Sharing and Capacity Building	UACS	FY2016	Knowledge Sharing and Capacity Building
205-93	A423-01	Develop and implement knowledge management on climate change and disaster risks for local government units and communities*			
205-03	A423-02	Increase local capacity for forecasting, early warning (including indigenous systems) and disaster risk communication*			
205-03	A423-03	Conduct training of trainers to respond to the needs of communities for climate change adaptation*			
UACS	FY2016	Action Delivery	UACS	FY2016	Action Delivery
283-03	A424-01	Identify and implement gender-responsive sustainable livelihood and social protection programs for resettled and vulnerable poor families*	202-02	M424-01	Retrofit/ Install new heating and cooling systems using renewable energy
283-03	A424-02	Develop and implement post-disaster resettlement and counseling of displaced families and communities*	202-02	M424-02	Promote energy efficient housing
202-03	A424-03	Implement mixed-use, medium-to-high density integrated land use-transport plan in developing new urban communities or in expanding existing ones*	181-02	M424-03	Intensify waste segregation at source, discard recovery, composting and recycling*
203-03	A424-04	Expand the establishment of alternative micro-water purification systems especially to areas that cannot be reached by safe water supply*			

Tourism, Trade and Industries					
UACS	FY2016	Policy Development and Governance	UACS	FY2016	Policy Development and Governance
164-03	A511-01	Integrate in the National Building Code a requirement for all water-intensive facilities to have water recovery system*	164-02	M511-01	Introduce rules and regulations to reduce GHG emissions or absorb of GHGs in industry and trade
202-03	A511-02	Incorporate new CC&CV resilient design standards in new buildings	167-02	M511-02	Develop and implement a system of incentives for the use of reusable bags and containers*
161-03	A511-03	Develop a nationally acceptable operational definition of "green jobs"*	161-02	M511-03	Introduce a system of incentives to encourage the use of climate-smart technologies and practices
161-03	A511-04	Enhance tourism policies and strategies to promote green tourism*	161-02	M511-04	Integrate monitoring of existing and new-climate smart industries and services within existing business registration system*
UACS	FY2016	Research, Development and Extension	UACS	FY2016	Research, Development and Extension
168-03	A512-01	Identify the carrying capacity of tourism areas*	168-02	M512-01	Conduct baseline inventory of climate-smart industries and services and good practices in the country*
			168-02	M512-02	Baseline data on GHG emissions from industry and other sources
			168-02	M512-03	Conduct national needs assessment on the state of eco efficiency in SMEs
UACS	FY2016	Knowledge Sharing and Capacity Building	UACS	FY2016	Knowledge Sharing and Capacity Building
			168-02	M513-01	Develop modules and conduct trainings to capacitate industries to conduct GHG emissions inventory and carbon footprint*
UACS	FY2016	Action Delivery	UACS	FY2016	Action Delivery
167-03	A514-01	Marketing and trade support for changing agricultural product mix in response to climate change and climate variability	167-02	M514-01	Marketing and trade support for products that reduce GHG emissions per unit of output
167-03	A514-02	Support new income generating opportunities and industries utilizing natural resource better adapted to climate change and climate variability			
167-03	A514-03	Retrofit assets and capital to protect against climate change and climate variability			

Annex B - Climate Change Typologies

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Energy Efficiency					
UACS	FY2016	Policy Development and Governance	UACS	FY2016	Policy Development and Governance
163-03	A611-01	Change operational management practices at power generation facilities due to climate change and climate variability	163-02	M611-01	Change operational procedures or techniques, or retrofit technologies to reduce GHG emissions in existing operations
163-03	A611-02	Taking account of climate variability and change in planning for power system reliability and designing future energy supply mix	163-02	M611-02	Develop guidelines for climate-proofing of existing and new energy system*
163-03	A611-03	Design and application of new design criteria and technical standards in planning location, and construction of power generation facilities in order to respond to climate change and climate variability			
163-03	A611-04	Mandatory implementation of AO110 and AO126 directing the institutionalization of Government Energy Management Program*			
UACS	FY2016	Research, Development and Extension	UACS	FY2016	Research, Development and Extension
168-03	A612-01	Conduct sustainable and renewable energy resource assessments (e.g. hydro, geothermal, biomass, wind, ocean and solar)*	168-02	M612-01	Conduct of risk and vulnerability assessments of energy systems*
			168-02	M612-02	Sector studies, surveys, assessments and information systems on energy efficiency, efficient energy pricing, and promotion of renewable energy
UACS	FY2016	Knowledge Sharing and Capacity Building	UACS	FY2016	Knowledge Sharing and Capacity Building
168-03	A613-01	Capacity building or strengthening capacity for energy sector institutions to improve climate risk management in the energy sector	168-02	M613-01	Sector reform and capacity building related to energy efficiency in energy sector, promotion of renewable energy and efficient energy pricing
168-03	A613-02	Conduct capacity building of community-based renewable energy organizations on system maintenance, energy efficiency and conservation, organizational development, tariff setting and management systems*	168-02	M613-02	Strengthen regulatory and institutional framework to support expansion of renewable power generation
			168-02	M613-03	Strengthening capacity of institutions to plan for low-carbon growth and environmentally sustainable energy supply
UACS	FY2016	Action Delivery	UACS	FY2016	Action Delivery
163-03	A614-01	Design and implement system of incentives for renewable energy host communities and local government units that can be used for sustainable livelihood programs and climate change adaptation measures*	163-02	M614-01	Rehabilitate existing power plants to decrease GHG emission intensity
			163-02	M614-02	Pilot programs on energy efficiency activities
			163-02	M614-03	Replace existing power plant with more efficient facility

Power Generation					
UACS	FY2016	Policy Development and Governance	UACS	FY2016	Policy Development and Governance
163-03	A621-01	Incorporate effects of extreme weather events caused by climate change and climate variability in design standards of power systems, transmission and distribution lines.	163-02	M621-01	Review and integrate the National Biofuels Program*
163-03	A621-02	Incorporate climate change and climate variability related risk factors (changes in precipitation, run-off, temperature, evapotranspiration) in hydro-meteorological forecasts related to water demand for energy generation	163-02	M621-02	Strengthen regulatory and institutional framework to support expansion of renewable energy production and use
163-03	A621-03	Incorporate climate change and climate variability risk factors in assessments of total and seasonal water availability for hydropower generation and water storage	163-02	M621-03	Design and implement system of incentives for RE host communities and LGUs that can be used for sustainable livelihood programs and CCA measures*
163-03	A621-04	Water flow management throughout the hydrological cycle for hydroelectricity generation	163-02	M621-04	Develop RE project-based and service contracts-based portfolios to encourage potential investors in identified sites
UACS	FY2016	Research, Development and Extension	UACS	FY2016	Research, Development and Extension
168-03	A622-01	Incorporate impact of climate change and climate variability on power system reliability assessments	168-02	M622-01	Conduct studies on hybrid systems (fuel cells, electric vehicles)
			168-02	M622-02	Conduct survey of RE potential in off-grid areas
UACS	FY2016	Knowledge Sharing and Capacity Building	UACS	FY2016	Knowledge Sharing and Capacity Building
			168-02	M623-01	Conduct capacity building of community-based RE organizations on RE system maintenance, EE&C organizational development, tariff setting and management systems
UACS	FY2016	Action Delivery	UACS	FY2016	Action Delivery
163-03	A624-01	Changes to power systems to cope with shifts in seasonal peak demand results from climate change and climate variability	163-02	M624-01	Rehabilitate transmission and distribution systems to reduce technical losses
163-03	A624-02	Flood protection or irrigation from construction of dams or water storage system that manage changes in the water cycle due to climate change and climate variability	163-02	M624-02	Transmission and distribution capacity (new, expansion or strengthening of existing) or any new system to facilitate the integration of renewable energy sources into the grid
163-03	A624-03	Improve design of turbines to withstand higher wind speeds as a result of extreme weather events	163-02	M624-03	Construct or rehabilitate energy generation capacity from renewable sources other than hydropower including demonstration and pilots
163-03	A624-04	Improve design of solar panels to withstand higher intensity storms resulting from climate change and climate variability	163-02	M624-04	Rehabilitate existing hydropower plant
163-03	A624-05	Secure access to water for crops used as bioenergy source	163-02	M624-05	Construct new hydropower plant

Annex B – Climate Change Typologies

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Transportation and Communication					
UACS	FY2016	Policy Development and Governance	UACS	FY2016	Policy Development and Governance
165-03	A631-01	Incorporate risks from climate change and climate variability in transportation system planning	165-02	M631-01	Improve vehicle emission standards
			165-02	M631-02	Improve fuel efficiency standards
			165-02	M631-03	Strengthen vehicle inspection systems on emissions and fuel efficiency
UACS	FY2016	Research, Development and Extension	UACS	FY2016	Research, Development and Extension
168-03	A632-01	Develop/ upgrade design standards to take account of climate change impact on transport infrastructure	168-02	M632-01	Conduct study on feasibility (performance and safety) of biofuels blends in other transport system (air and sea transport)
168-03	A632-02	Conduct risk and vulnerability assessment of the transport system*	168-02	M632-02	Conduct technical study on the development of standards on energy efficiency labeling for vehicles
			168-02	M632-03	Review current standards for fuel quality to support clean fleet program and fuel efficiency labeling for vehicles
			168-02	M632-04	Research and development in low-carbon or non-fossil fuel transport technologies
			168-02	M632-05	Research & development to reduce the GHG intensity in sea and lake bound transport operations
UACS	FY2016	Knowledge Sharing and Capacity Building	UACS	FY2016	Knowledge Sharing and Capacity Building
			168-02	M633-01	Capacity building related to energy efficiency in the transport sector
UACS	FY2016	Action Delivery	UACS	FY2016	Action Delivery
165-03	A634-01	Protect transport infrastructure against extreme weather events (especially floods and storms) becoming more frequent and violent due to climate change and climate variability	165-02	M634-01	Urban traffic management (e.g. improve traffic flow) to reduce GHG emissions per unit transported
165-03	A634-02	Establish of emergency services designed to cope with climate change and climate variability related emergencies in the transport sector	165-02	M634-02	Improved waterways, port and aviation facilities to reduce the carbon intensity per unit transported
165-03	A634-03	Construct new roads, ports, airports and aviation infrastructure to climate resilient design standards	165-02	M634-03	New railway lines for electricity based railcars
165-03	A634-04	Upgrade existing roads, ports and aviation infrastructure to climate resilient design standards	165-02	M634-04	Reduction of carbon-content in aviation infrastructure facilities
166-03	A634-05	Development of telecommunications infrastructure for use as part of an emergency response system during extreme weather events	166-02	M634-05	Improve energy efficiency in telecommunications information technologies

Education and Climate Science					
UACS	FY2016	Policy Development and Governance	UACS	FY2016	Policy Development and Governance
268-03	A711-01	Review and rationalize systems and infrastructure requirements to improve climate change modeling and weather forecasting*			
UACS	FY2016	Research, Development and Extension	UACS	FY2016	Research, Development and Extension
267-03	A712-01	Support research on adaptation	267-02	M712-01	Support research on mitigation
UACS	FY2016	Knowledge Sharing and Capacity Building	UACS	FY2016	Knowledge Sharing and Capacity Building
267-03	A713-01	Awareness raising programs on climate change and climate variability			
267-03	A713-02	Training for pre-elementary, elementary, high school and college teachers on integrating climate change in basic courses*			
267-03	A713-03	Upgrade personnel's capacity and skills on climate change modeling and weather forecasting*			
UACS	FY2016	Action Delivery	UACS	FY2016	Action Delivery
264-03	A714-01	Development of climate change adaptation focused curricula, graduate courses and programs*	264-02	M714-01	Development of curricula or programs focused on reducing GHG emissions, energy consumption or water consumption.
261-03	A714-02	Review and revise, current textbooks, modules and exemplars for pre-elementary, elementary, for climate change content and gender-sensitivity*			
262-03	A714-03	Review and revise, current textbooks, modules and exemplars for high school and alternative learning system for climate change content and gender-sensitivity*			
265-03	A714-04	Establish centers of excellence on climate change science at the national and regional level*			
267-03	A714-05	Improve government systems and infrastructure required for climate change modeling and climate forecasting*			

Finance					
UACS	FY2016	Policy Development and Governance	UACS	FY2016	Policy Development and Governance
101-03	A811-01	Introduce regulations and programs to support climate resilient investments	101-02	M811-01	Introduce regulations, programs or financial instruments to support GHG reducing activities
202-03	A811-02	Expand insurance eligibility to populations vulnerable to climate related diseases	101-02	M811-02	Strengthen institution and policies to mobilize carbon finance
			101-02	M811-03	Prepare for carbon markets or implement carbon finance market transactions
UACS	FY2016	Research, Development and Extension	UACS	FY2016	Research, Development and Extension
105-03	A812-01	Analysis of impact of climate change and climate variability on long-term growth, and poverty	105-02	M812-01	Fiscal policy and management measures in support of mitigation
105-03	A812-02	Fiscal policy and management measures in support of adaptations	105-02	M812-02	Economic research, modeling and policy making for mitigation
105-03	A812-03	Economic research, modeling and policy making for adaptation	165-02	M812-03	Reduce fossil-fuel consumption through taxes, levies or fees on energy or transport services
105-03	A812-04	Economic analysis of financial needs for adapting to climate change and climate variability (cost of adaptation)			
UACS	FY2016	Knowledge Sharing and Capacity Building	UACS	FY2016	Knowledge Sharing and Capacity Building
UACS	FY2016	Action Delivery	UACS	FY2016	Action Delivery