



MEMORANDUM

FOR : **THE DIRECTORS**
Biodiversity Management Bureau
Knowledge and Information Systems Service
Human Resource Development Service
Strategic and Communication and Initiative Service

THE GENERAL MANAGER
Laguna Lake Development Authority

THE EXECUTIVE DIRECTOR
Palawan Council for Sustainable Development Staff

FROM : **THE OIC, DIRECTOR**
Policy and Planning Service

SUBJECT : **REQUEST FOR WORK PROGRAM FOR NATURAL CAPITAL ACCOUNTING**

DATE : **JUN 01 2022**

This pertains to the recently adopted and approved roadmap to institutionalize Natural Capital Accounting in the Philippines. Part of the roadmap is the schedule of the deliverables of each concerned government agency per component.

We would like to request for the list of activities or work program for each component for 2022 and for the succeeding planning cycle. We plan to consolidate the overall work program of the Department in preparation to the inclusion of NCA related initiatives in the incoming 2023-2028 Philippine Development Plan. The following are the components of the roadmap and the responsible Office:

NCA Component	Responsible Office
Development of new ecosystem accounts	BMB
Updating of Southern Palawan and Laguna de Bay	LLDA, PCSDS
Data Management System	KISS
Capacity development	HRDS
Dissemination	SCIS

We hope to receive your inputs **on or before June 6, 2022**. Attached herewith is the copy of the Short-, Medium- and Long-term activities for NCA for your ready reference. You may send the advance copy of the submission thru jcbautista@denr.gov.ph. Should you have any questions/clarifications, kindly direct them to our Policy and Planning Service, through the Planning and Programming Division, at telephone number 8928-7327 and look for Mr. Joseph C. Bautista.

For consideration, please.


MELINDA C. CAPISTRANO

4.3 The NCA Roadmap: Short-, Medium-, and Long-Term Activities

The short-term (2022), medium-term (2023-2028) and long-term (2029 onwards) activities associated with the six major components of the Roadmap to institutionalize NCA and other supporting activities are summarized in **Table 3**.

Table 3. The Roadmap: Updated Activities from 2022 to 2040

No.	Component(s)/ Activities	Focal Agency	Period (years)			
			2022	2023-2028	2029-2034	2035-2040
<ul style="list-style-type: none"> Component 1. Development of natural capital accounts (national and subnational assets, flow, and ecosystem accounts) 						
1.1	Asset Flow Accounts	PSA	<p>National asset accounts:</p> <ul style="list-style-type: none"> Minerals (Metallic) Energy (for development in 2022) Land and Soil Timber <p>Subnational asset accounts for pilot regions:</p> <ul style="list-style-type: none"> Land and soil Timber Minerals Water Energy 	<p>Research and development of Biological resources:</p> <ul style="list-style-type: none"> Fisheries <p>Continuous updating of the following Asset Accounts:</p> <ul style="list-style-type: none"> Minerals Energy Land and Soil Timber Water Energy Material Flow <p>Development and continuous compilation of asset accounts at the subnational level</p> <p>Exploratory activities for the non-metallic mining and small-scale mining for Gold and other commodities</p>	<p>Continuous updating of the following Asset Accounts:</p> <ul style="list-style-type: none"> Minerals (Metallic and non-metallic) Energy Land and Soil Timber Water Biological resources <p>Continuous compilation of asset accounts at the subnational level</p>	<p>Continuous updating of the following Asset Accounts:</p> <ul style="list-style-type: none"> Minerals (Metallic and non-metallic) Energy Land and Soil Timber Water Biological resources <p>Continuous compilation of asset accounts at the subnational level</p>
	Flow Accounts	PSA	Updating of water flow accounts developed in 2020	Continuous updating of flow accounts (water, energy, and material flow)	Continuous updating of flow accounts (water, energy, material flow, water emissions, air emissions)	Continuous updating of flow accounts (water, energy, material flow, water emissions, air emissions)

No.	Program/Activities	Responsible Agency	Period (years)			
			2022	2023-2028	2029-2034	2035-2040
			Energy flow accounts (inclusion of renewable energy in the coverage is subject to further discussion with data producers)	Development and continuous compilation of the same accounts at the subnational level	Continuous compilation of flow accounts at the subnational level	Continuous compilation of flow accounts at the subnational level
			Material Flow (ongoing research and development)	Exploratory activities on: <ul style="list-style-type: none"> • Water emissions and • Air Emissions accounts 		
1.2	Ecosystem Accounts <ul style="list-style-type: none"> • Ecosystem extent accounts • Ecosystem condition accounts • Ecosystem service accounts • Ecosystem asset accounts 	DENR	Development of new ecosystem accounts <ul style="list-style-type: none"> • Masinloc Oyon Bay PLS (Zambales) • Mt. Mantalingahan Protected Landscape 	Updating of Southern Palawan and Laguna de Bay <p>Development of new accounts:</p> <ul style="list-style-type: none"> • Puerto Princesa Subterranean River NP • Cleopatra's Needle CH • Siargao Island • Mt. Hamiguitan Range Wildlife Sanctuary • Victoria-Anepahan Ranges • Calamianes Group of Islands 	Updating of Southern Palawan, Laguna de Bay, Masinloc Oyon Bay PLS (Zambales), Mt. Mantalingahan Protected Landscape <p>New sites:</p> <ul style="list-style-type: none"> • Chico River and Mt. Pulag • Laur in Pantabangan • Sierra Madre in Nueva Ecija • Sierra Madre in Cagayan • Iloilo • Apayao • Zambales • Northern Samar • Eastern Samar • Zamboanga Del Norte 	Updating of the following sites: <ul style="list-style-type: none"> • Puerto Princesa Subterranean River NP • Cleopatra's Needle CH • Siargao Is. PLS • Mt. Hamiguitan Range Wildlife Sanctuary • Victoria-Anepahan Ranges • Calamianes Group of Islands <p>New sites:</p> <ul style="list-style-type: none"> • Kaliwa watershed in Marikina and Sierra Madre • Sorsogon • Samar • Cebu • Kalinga • Ifugao • Catanduanes • Surigao Del Sur • Southern Leyte • Bukidnon

No.	Components/ Activities	Focal Agency	Period (years)			
			2022	2023-2028	2029-2034	2035-2040

• **Component 2. Calculation of natural capital-adjusted macroeconomic indicators**

Focal Agency	2022	2023-2028	2029-2034	2035-2040
PSA	Capacity building for Natural capital-adjusted macroeconomic indicators Development of economic indicators for ecosystem services to be used in the adjustment of macro-economic indicators and national wealth	NC-Adjusted Macroeconomic Indicators: <ul style="list-style-type: none">• Mineral (Metallic)• Energy• Timber• Biological resources Capacity-building on incorporating ecosystem assets and services in the NC-adjusted macroeconomic indicators	NC-Adjusted Macroeconomic Indicators: <ul style="list-style-type: none">• Mineral (Metallic)• Energy• Timber• Biological resources• Ecosystem accounts Updating of indicators	NC-Adjusted Macroeconomic Indicators: <ul style="list-style-type: none">• Mineral (Metallic)• Energy• Timber• Biological resources• Ecosystem accounts Updating of indicators

• **Component 3. Policy Use and Application**

Focal Agency	2022	2023-2028	2029-2034	2035-2040
NEDA, DENR, DILG, DHSUD, OCD, LGA, CCC, CHED, SEPO, CPBRD other users	Inclusion of NCA indicators in the 2023-2028 PDP-Results Matrix (NEDA/DENR) Studies/assessment on the integration of NCA in development, sectoral and spatial planning, policy, and budgeting (NEDA, DENR, DILG, LGA, DHSUD, OCD, CCC) Adoption of NCA innational and local planning, policy, and budgeting (NEDA, DENR, DILG, DHSUD, OCD, CCC)	Development of policy notes/briefs on NCA (NEDA, DENR, PIDS, SEPO, CPBRD) Policy analysis using natural capital-adjusted macroeconomic indicators (NEDA) Study on financing instrument for upscaling (NEDA, DENR, DOF) Guidebook/Guidance document on NCA in project preparation and design (NEDA, DENR, PSA)	Inclusion of NCA modules in the educational system (CHED) Regular policy notes/briefs and policy analysis (NEDA, DENR, PIDS, SEPO, CPBRD)	Continuing incorporation of NCA both in national and local development planning, resource management, and decision-making (NEDA, DENR, DILG, DHSUD, OCD, CCC) Application of adjusted macroeconomic indicators, including ecosystem accounts (NEDA, DOF)

No.	Components/ Activities	Responsible Agency	Period (years)			
			2022	2023-2028	2029-2034	2035-2040
			Development of policy notes/briefs on NCA (NEDA, DENR, PIDS, SEPO, CPBRD)	Integration of NCA in the Philippine Environmental Impact Statement System (PEISS) (DENR)		

• **Component 4. Data Management System**

• **4.1 Establishment and maintenance of ENR database**

DENR with DICT, DOST	<p>Identification of infrastructure requirements for hardware, software and network that will be used for ecosystems account development, production, and compilation</p> <p>Proposals for expansion of data storage and handling capability of DENR and upgrading of servers</p> <p>Proposal for expansion of spatial data handling capacity of the DENR, including purchase of ArcGIS licenses</p> <p>Plans for hardware and other back-end infrastructure procurement, maintenance and upgrading</p> <p>Assessing hardware, network and software assets available for use</p>	<p>Additional hardware for data store of compiled accounts</p> <ul style="list-style-type: none"> • Server • Workstations • Gadgets for data collection • GPS units for location • Drone for imagery • Photography equipment • Other requirements <p>Expansion of software for NCA</p> <p>Continuing assessment and updating.</p> <p>Procurement</p> <p>Maintenance and upgrading</p> <p>Establishment of Local ENR database for data production locations / field offices</p>	<p>Hardware, equipment and tools maintenance</p> <p>Additional hardware provisioning for expansion of accounts</p> <p>Use of ArcGIS as platform for spatial analysis and mapping ecosystems</p> <p>Continuing assessment and updating</p> <p>Procurement</p> <p>Maintenance and procurement/upgrading of assets</p> <p>Maintenance, updating, upgrading and expansion</p> <p>Connection to DENR Portal includes uploading, viewing and updating of spatial data</p>	<p>Hardware, equipment and tools maintenance</p> <p>Additional hardware provisioning for expansion of accounts</p> <p>Spatial analysis is incorporated to all ecosystem account.</p> <p>Data submission is coursed through the DENR Portal</p> <p>Continuing assessment and updating</p> <p>Procurement</p> <p>Maintenance and procurement of new assets</p> <p>Maintenance, updating, upgrading and expansion</p>
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No.	Components/ Activities	Focal Agency	Period (years)			
			2022	2023-2028	2029-2034	2035-2040
			Design and development of database and information systems for data compilation and dataflow and process based on identified account components	Establishment of process flow for submission of produced data Pilot links to the Central DENR Portal through network services Setting-up account compilation protocols and policies	Design for automation of data generation and compilation (use of digital platforms)	Full connectivity to DENR Portal
			<ul style="list-style-type: none"> 4.2 Data production, governance, and sharing protocol 			
		DENR/PSA	Development of standards, production guidelines, forms, data structures Submission of produced data, including metadata and spatial attributes Institutionalize account creation, and compilation among PSS agencies and PSA members and other government units and SUCs producing/using NCA data Development of data handling protocols, policies, procedures, security and privacy for compilation of accounts, both at the central and in local sites/field offices	Use of internet and technology-based communication to submit data	Full data production is linked to Central database for automatic data transfers and updating Maintenance, updating, upgrading and expansion	Continuous updating and upgrading in data processing and governance Data production makes full use of technology for data production and sharing

No.	Components/ Activities	Focal Agency	Duration (years)			
			2022	2023-2028	2029-2034	2035-2040

- **4.3. Data Interoperability**

DENR, DOST, DICT	<p>Development of algorithm for data interoperability and protocol for common data input/output;</p> <p>Development of information system to manage data integration at the front-end for users and policy developers;</p>	Beta-test of information system for data interoperability and sharing	Cloud-hosted database of interoperable data established and maintained through API and appropriate access/sharing protocol	Maintenance of data system
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- **Component 5. Capacity Development**

DENR, PSA, NEDA	<p>Development of training program and conduct of basic training on NCA and UN SEEA frameworks</p> <p>Development of Technical Note to provide standard set of Ecosystem Typology (ET) or NCA terminologies (PSA)</p>	<p>Follow-up training and other special training courses (e.g., GIS, wealth accounting, policy analysis)</p> <p>Establishment of local pool of experts and trainers</p> <p>Regular development, review and updating of training kits and manuals</p>	<p>Follow-up training and other special training courses (e.g., GIS, wealth accounting, policy analysis)</p> <p>Strengthening of local pool of experts and trainers</p> <p>Updating of training kits/manuals</p>	<p>Follow-up training and other special training courses (e.g., GIS, wealth accounting, policy analysis)</p> <p>Strengthening of local pool of experts and trainers</p>
DENR, PSA, NEDA	Competency Development and Human Resource Complement for NCA	Roll out trainers' training for personnel who will be involved in expansion of NCA	Training expansion	Training expansion and re-training for updated capacity development for all involved personnel
DENR, PSA, NEDA	Identification, designation and setting up of NCA units and personnel for initial data production and compilation of accounts, training and competency development, and other NCA activities through agency policy issuance (DENR/NEDA and other relevant agencies) .	<p>Updating skills and competency of personnel and units assigned to perform related functions (DENR)</p> <p>Proposal for creation of an additional unit at the central office (DENR)</p>	Full operational unit created at the central office for data compilation, database maintenance and data management (PSA/DENR)	Upgrading of NCA skills/expertise (PSA/DENR)

No.	Components/ Activities	Focal Agency	Period (years)			
			2022	2023-2028	2029-2034	2035-2040

Proposal for hiring additional personnel in data gathering units/field offices (DENR)

- **Component 6. Dissemination**

DENR, PSA, NEDA	Establishment of NCA Community of Practice (NEDA)	Crafting of NCA Communication Plan (PSA)	Continuing public awareness activities, updating and implementation of Communication Plan, publication of reports and ecosystems accounts summary (PSA/DENR)	Continuing public awareness activities, updating and implementation of Communication Plan, publication of reports and ecosystems accounts summary (PSA/DENR)
	Release/uploading of NCA implementation annual report (PSA/DENR)	Establishing coordination, collaboration and feedback mechanisms and platforms among the NCA players (PSA/DENR)	SOPENR published every 2 or 3 years with an online version at the DENR and PSA websites (DENR)	SOPENR published every 2 or 3 years with an online version at the DENR and PSA websites (DENR)
	Publication of initial results to the DENR e-library (DENR)	Public awareness activities	Production of audiovisual and multimedia materials for NCA (PSA/DENR)	Production of audiovisual and multimedia materials for NCA (PSA/DENR)
		Release/uploading of NCA implementation annual report on the website (PSA/DENR)		
		Publication of reports and curated ecosystems accounts summary data on the DENR website (DENR)		
		Publication of State of the Philippine Environment and Natural Resources, (SOPENR) (DENR)		
		Production of audiovisual and multimedia materials for NCA (PSA/DENR)		

No.	Component(s)/Activities	Focal Agency	Period (years)			
			2022	2023-2028	2029-2034	2035-2040
<ul style="list-style-type: none"> Review, monitoring, and updating of roadmap activities 						
	PSA	Annual review and reporting (PSA)	Annual review and reporting (PSA)	Annual review and reporting (PSA)	Annual review and reporting (PSA)	Discussion on updating the activities (2035) (PSA)
<ul style="list-style-type: none"> Budget Support 						
	DENR, PSA (from 2022-2028)	Planning and budgeting for NCA activities within the DENR, including data management, e.g., ISSP inclusion.	Continuing budget support for PSA and DENR	Continuing budget support for PSA and DENR	Continuing budget support for PSA and DENR	Continuing budget support and other stakeholders
	DENR, PSA, other stakeholders (2029-2040)					