



REPUBLIC OF THE PHILIPPINES  
PHILIPPINE STATISTICS AUTHORITY



# Institutional Mechanisms for the SEEA Implementation: The Philippine Experience

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Environment and Natural Resources Accounts Division  
Macroeconomic Accounts Service  
Philippine Statistics Authority

Regional Training Workshop on an Accounting Approach to  
Climate Change Statistics and Indicators  
UN SIAP | 14 April 2023

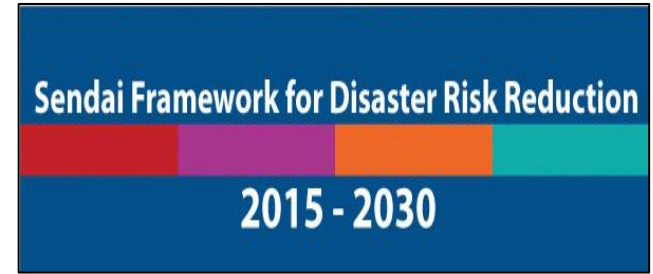
# The country's environmental-economic accounts and environment statistics support the goals and indicator frameworks of the Philippine Development Plan 2023-2028, AmBisyon Natin 2040, 8-Point Socioeconomic Agenda



**Marcos administration's 8-point socioeconomic agenda in the near and medium term**

ROBUST ECONOMY, INCLUSIVE, AND RESILIENT SOCIETY

<p><b>PROTECT THE PURCHASING POWER OF FAMILIES</b></p> <ul style="list-style-type: none"> <li>Ensure Food Security</li> <li>Reduce Transport and Logistic Cost</li> <li>Reduce Energy Cost</li> </ul>	<p><b>REDUCE VULNERABILITY AND MITIGATE SCARRING FROM THE COVID-19 PANDEMIC</b></p> <ul style="list-style-type: none"> <li>Tackle Health</li> <li>Strengthen Social Protection</li> <li>Address Learning Losses</li> </ul>	<p><b>ENSURE SOUND MACROECONOMIC FUNDAMENTALS</b></p> <ul style="list-style-type: none"> <li>Improve Bureaucratic Efficiency</li> <li>Ensure Sound Fiscal Management</li> </ul>	<p><b>CREATE MORE JOBS, QUALITY JOBS, GREEN JOBS</b></p> <ul style="list-style-type: none"> <li>Promote Investments</li> <li>Expand Digital Infrastructure</li> <li>Improve Infrastructure</li> <li>Encourage R&amp;D and Innovation</li> <li>Ensure Energy Security</li> <li>Pursue a Green and Blue Economy</li> <li>Increase Employability</li> <li>Establish Livable and Sustainable Communities</li> </ul>
NEAR-TERM AGENDA			MEDIUM-TERM AGENDA



among other relevant development frameworks...

The **Philippine Statistics Authority (PSA)** is the **central statistical authority on statistics, coordinator of the Philippine Statistical System (PSS)**, administrator of civil registration functions and Philippine Identification System (PhilSys).



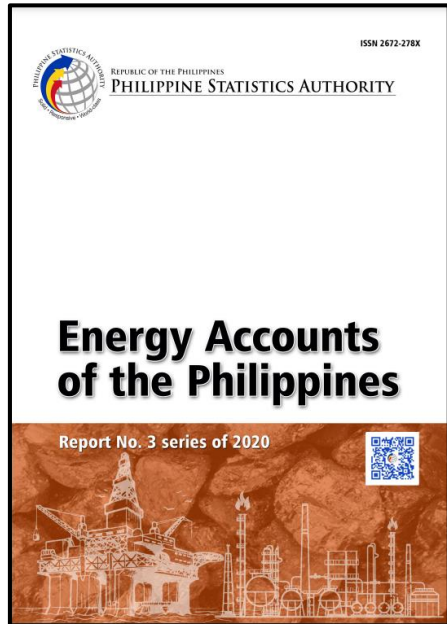
The **Environment and Natural Resources Accounts Division (ENRAD)** of the **Macroeconomic Accounts Service** have the following functions:

- Development and compilation of environmental-economic accounts
- Collection and maintenance of statistics and indicators on environment, climate change, disasters
- Coordination and technical support to statistical inter-agency committees, task forces, and technical working groups on environment statistics

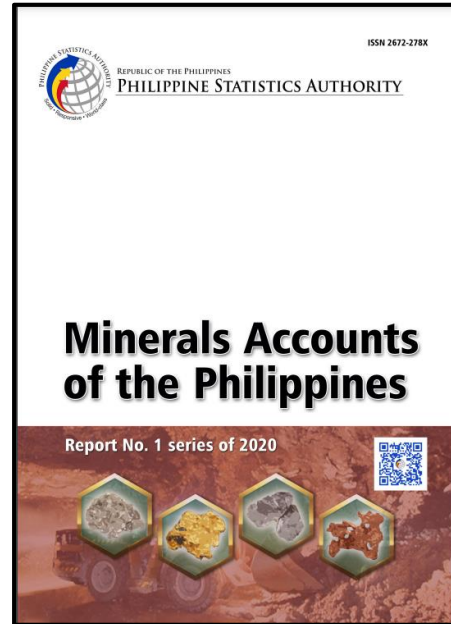


# Environmental-Economic Accounts and Statistics

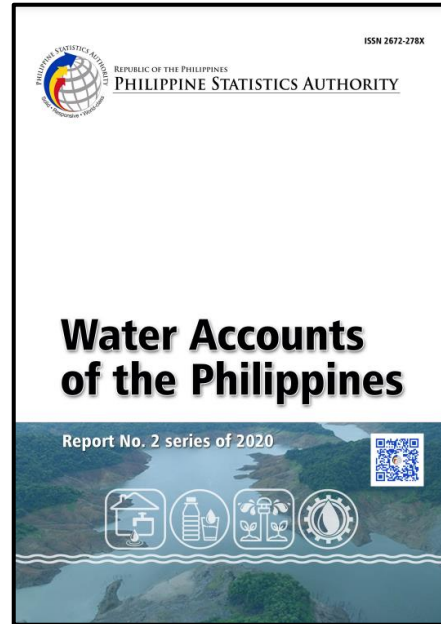
The PSA regularly releases the following accounts and statistical compilation:



**Asset Accounts for Coal, Oil, Natural Gas, and Condensate**



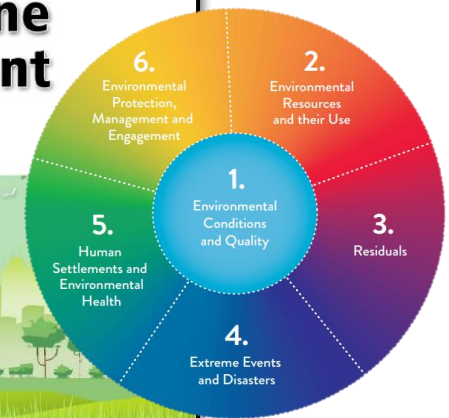
**Asset Accounts for Gold, Copper, Nickel, and Chromite**



**Flow Accounts for Water Resources**



**Compilation of statistics following the FDES Components**



# Environmental-Economic Accounts and Statistics Dissemination

The total monetary value of Class A nickel, gold, copper, and chromite reserves reached PHP 378.04 billion in 2021. This is a 32.2 percent increase from the recorded value in 2020. Class A nickel reserves reached PHP 121.60 billion, or 32.2 percent of Class A gold reserves reached PHP 127.32 billion in 2020. The value of Class A chromite reserves was valued at PHP 1.46 billion in 2020. (Tables 1.6, 2.4 and 3.1)

The total resource rent<sup>2</sup> of the four metallic mineral resources in the country, namely nickel, gold, copper, and chromite, reached PHP 44.87 billion in 2020. (Tables 5.1 and 5.2)

**Physical Asset Accounts**  
The Class A nickel reserves of the 498.68 million metric tons (MT) in 2021, a decrease of 3.6 percent from 492.75 thousand kilograms in 2020. Meanwhile, a decrease by less than 1 percent from 475.14 thousand kilograms recorded a decline by 1.5 percent from 2021. Meanwhile, a decrease by less than 1 percent from 35.98 million MT are commercially recoverable mineral resources economically viable by a defined development level. (Tables 3.1, and 4.1)

**Monetary Asset Accounts**  
The valuation of the mineral assets of the Philippines uses the Net Present Value Approach as recommended by SEEA-CF using a 10 percent discount rate.<sup>1</sup>

**PRESS RELEASE**  
Philippines' Class A Nickel, Gold, Copper, and Chromite Resources Valued at PHP 378.04 Billion in 2021

Date of Release: 02 June 2022  
Reference No. 2022-224



**Technical Notes**  
The Mineral Accounts of the Philippines is a publication that presents the physical and monetary asset accounts of the country's metallic mineral resources, namely nickel, gold, copper, and chromite. This is an update of the previous compilation covering the period 2013 to 2020 released in July 2021.

The System of Environmental-Economic Accounting 2012 Central Framework (SEEA-CF), a multi-purpose framework for measuring the environment and its interaction with the economy, serves as the framework for this compilation. It is also a statistical framework that consists of a comprehensive set of tables and accounts which guides the compilation of consistent and comparable statistics and indicators for policy making, analysis, and research.

The SEEA-CF covers measurement in three main areas: (1) the flows of resources within the economy and between the economy and the environment, (2) the economic activity and transactions related to the environment, and (3) the stocks and the changes in stocks of environmental assets, such as mineral resources, which is the focus of this study.

The accounts provide information on the available stocks of the four metallic minerals at the start and end of each year, as well as the changes that occurred during the period. These mineral resources were also classified following the United Nations Framework Classification for Fossil Energy and Mineral Resources (UNFC-2009) as follows: Class A, commercially recoverable resources; Class B, potentially commercially recoverable resources; and Class C, non-commercial and other known deposits.

A basic physical asset account for mineral resources is compiled by type of resources, each with the same unit of measurement, and by class of resources.

Digitally signed by DENNIS S. MAPA, Ph.D., Undersecretary, National Statistician and Civil Registrar  
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**TECHNICAL NOTES  
2013 – 2021 Mineral Asset Accounts**

**Conceptual Framework**

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**FOLLOWING THE FLOW: WATER ACCOUNTS OF THE PHILIPPINES**  
2010 to 2020

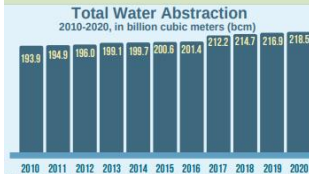
AS OF OCTOBER 2021  
MAS 06-IG-05-07102021

The **WATER ACCOUNTS OF THE PHILIPPINES** provide information on the flows of water between the environment and the economy - from its initial abstraction as input to various economic activities to its return to the environment.

**Abstraction** is the amount of water that is removed from any source, either permanently or temporarily, in a given period of time. It is measured in volume (m<sup>3</sup>).  
Source: SEEA 2012 Central Framework

**SOURCES OF ABSTRACTED WATER**

**Total Water Abstraction**  
2010-2020, in billion cubic meters (bcm)



1.9% groundwater  
98.1% surface water

**USE OF ABSTRACTED WATER**

1.4% for distribution  
98.6% for own use

**DISTRIBUTED WATER**  
Increased from 2.65 bcm in 2019 to 2.75 bcm 2020.

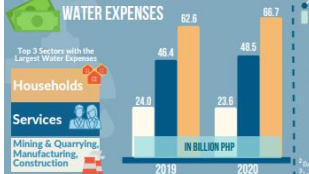
Power Generation and Agriculture, Forestry and Fishing: 1.2%  
Mining & Quarrying, Manufacturing, Construction: 11.1%  
Services: 36.7%  
Households: 51.0%

**WATER ABSTRACTED FOR OWN USE**  
Increased from 213.34 in 2019 to 214.79 bcm in 2020.

Power Generation: 58.6%  
Agriculture, Forestry and Fishing: 33.8%  
Mining & Quarrying, Manufacturing, Construction: 5.3%  
Services and Households: 2.4%

**AVERAGE SHARE!**  
by sector, 2010 to 2020

**WATER EXPENSES**  
Top 3 sectors with the Largest Water Expenses



**DERIVED INDICATORS<sup>2</sup>**

**WATER USE EFFICIENCY**  
decreased from PhP 217.42/m<sup>3</sup> in 2019 to PhP 192.39/m<sup>3</sup> in 2020.

**LEVEL OF WATER STRESS**  
remains to be **LOW**<sup>3</sup> from 26.3% in 2019 to 26.7% in 2020.

<sup>1</sup>Based on parameters and criteria of IPAD AQUASTAT  
<sup>2</sup>Low level of water stress ranges from 24 to 30 percent

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**Energy Accounts of the Philippines 101:  
ANO ANG ENERGY ASSET ACCOUNTS?**

Ang **ENERGY ASSET ACCOUNTS** ay naglalayong magbigay ng impormasyon tungkol sa **dami (volume)** at **halaga (value)** ng stocks at mga pagbabagong naganap sa **stocks** ng mga **energy resources** ng bansa.

Ito ay nakabatay sa mga konseptong nakapaloob sa System of Environmental-Economic Accounting 2012 Central Framework (SEEA-CF) at SEEA-Energy. Ang SEEA ay isang framework na ginagamit para maunawaan at masukat ang ugnayan ng kalikasan at ng ekonomiya.

www.psa.gov.ph /PhilippineStatisticsAuthority @PSAgovph

Press Release with  
Statistical Tables

Explanatory  
Technical Notes

Infographics

# Environmental-Economic Accounts and Statistics *Developmental*



**Energy Flow Accounts**



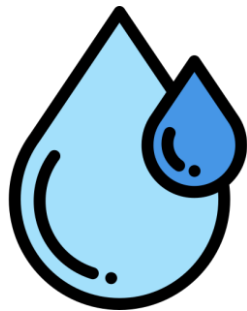
**Material Flow Accounts**



**Land Asset and Ecosystem Extent Accounts**



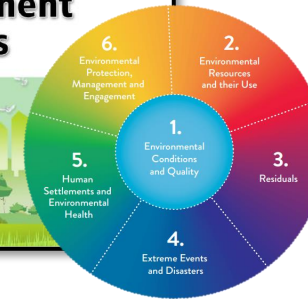
**Timber Asset Accounts**



**Water Asset Accounts**



**Other Thematic Accounts**



**Enhancement of CPES to include its links to SDGs and the Global Set of Climate Change Statistics and Indicators**



# Institutional Mechanism for Envi Accounts and Statistics



The **Inter-Agency Committee on Environment and Natural Resources Statistics (IACENRS)** serves as forum for discussion on the development, compilation, dissemination, and use of environment and natural resources statistics, including climate change and disaster statistics.



TWG on Mineral Resources Statistics

TWG on Energy Resources Statistics

TWG on Water Resources Statistics

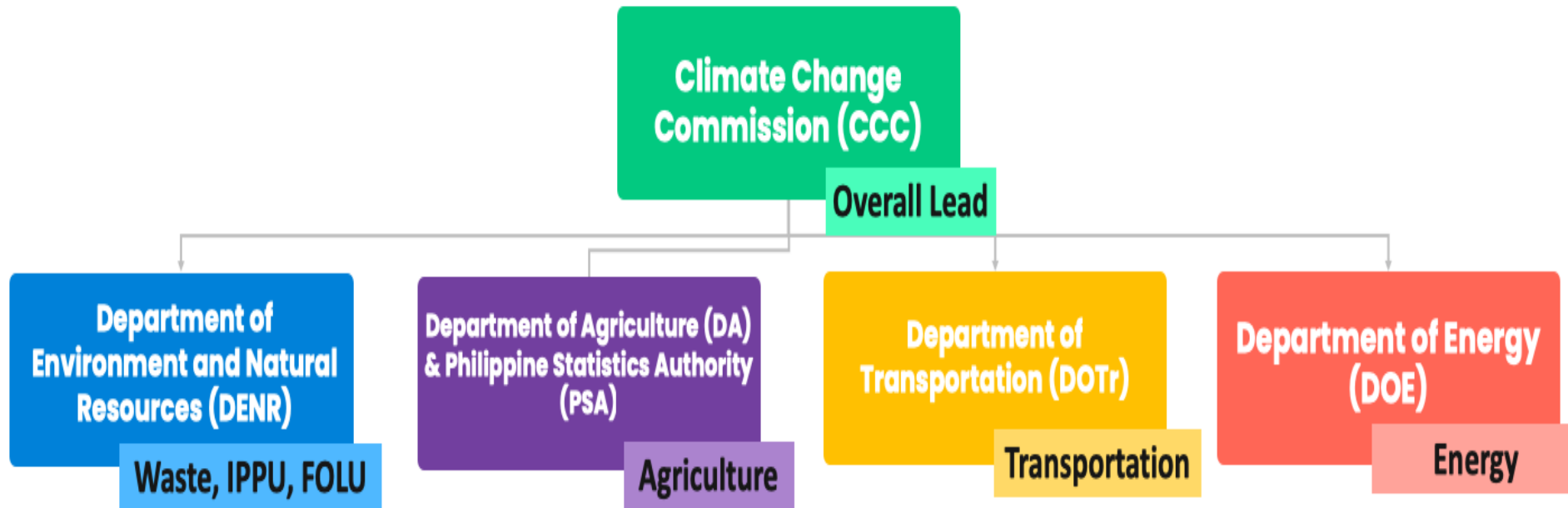
TWG on Land and Soil Resources Statistics

TWG on Natural Capital Accounts

TWG on Climate Change- and Disaster related Statistics

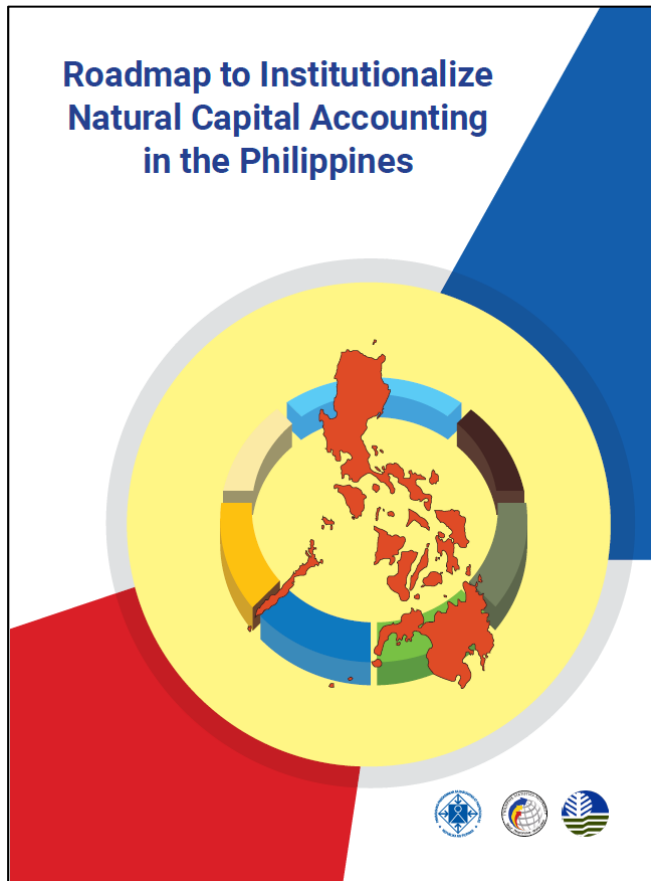
# Philippine GHG Inventory, Management and Reporting System

Institutionalizes the inter-agency development of the National GHG Inventory reporting in the Philippines.



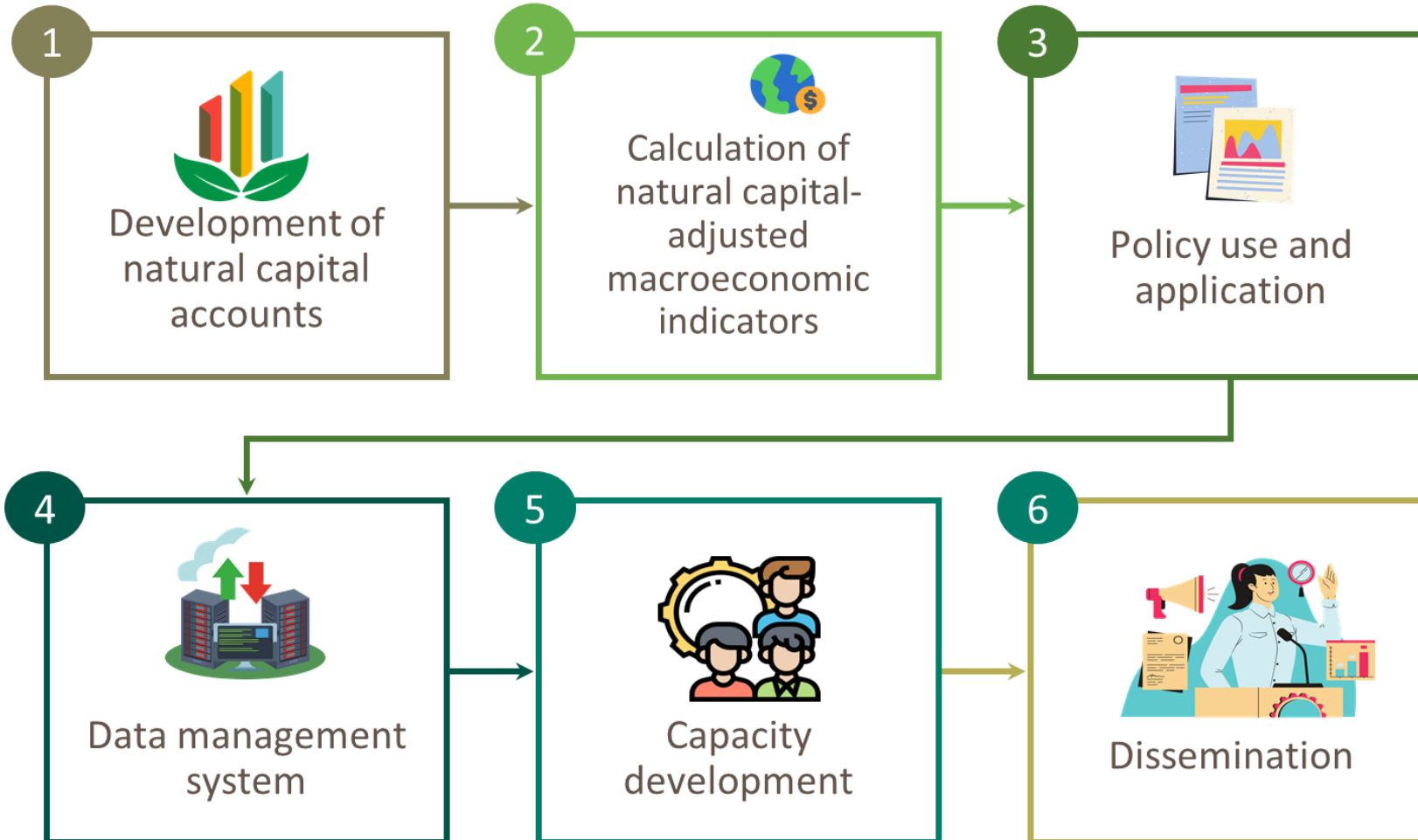


# Roadmap to Institutionalize Natural Capital Accounting in the Philippines (NCA Roadmap)



- Developed by **NEDA** together with **PSA** and **DENR** (collectively, the TWG on Natural Capital Accounts)
- Provides strategic guidance on the national implementation of NCA from 2022 to 2040.
- Presents the critical activities, milestones, and outputs to institutionalize and integrate NCA in the government's planning, investment decisions, and policymaking process.

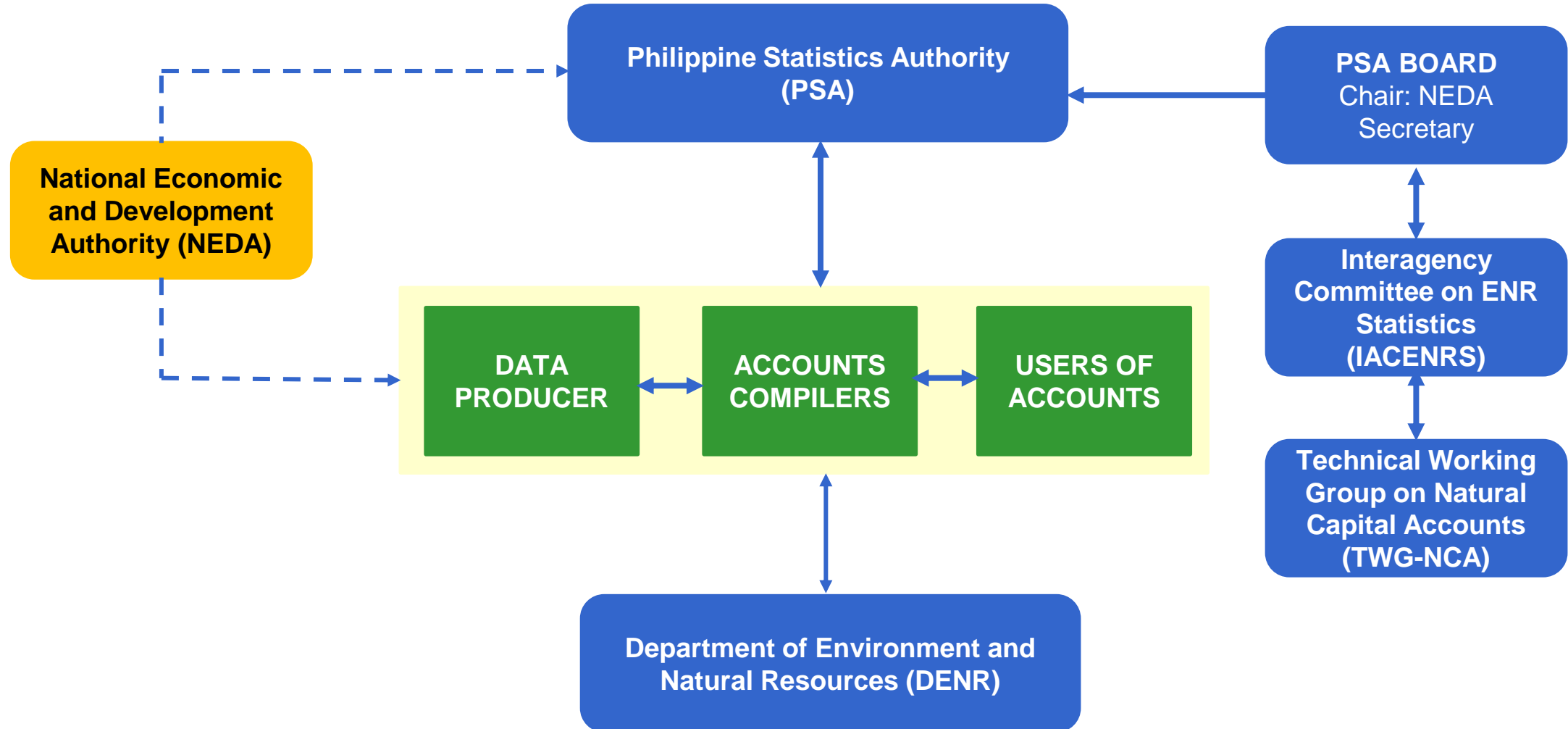
# Six Components of the NCA Roadmap



**With targets and activities for:**

- 2023 – 2028
- 2029 – 2034
- 2035 – 2040

# NCA Roadmap Implementation Arrangement





# Action Plan for Environmental-Economic Accounting for Evidence-Based Policy Philippines

It is a supporting document of the NCA Roadmap. It contains a program of work on advancing the SEEA which includes:

1. Prioritization of accounts for compilation
2. Utilization of the accounts for SDG indicators and monitoring other relevant initiatives
3. Continued engagement and communication with stakeholders and different user groups



**Strengthening institutional frameworks and statistical production process**



**Promote mainstreaming and effective communication and use of the accounts**



**Development of Research & Implementation Agenda**



**Capacity Building**

# What's next?

Legislative measures seeking to institutionalize the **Philippine Ecosystem and Natural Capital Accounting System (PENCAS)** as a mechanism for ascribing economic values to our environment and natural resources have been filed.



*– Mandate its use in policy and decision-making, designate agencies responsible for its implementation, provide institutional arrangements among responsible agencies, appropriate funds thereof and for other purposes*



# Thank you!



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