

Overview & Recommendations

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Commerce for Economic Affairs*

NATIONAL STRATEGY TO DEVELOP STATISTICS FOR ENVIRONMENTAL- ECONOMIC DECISIONS

A U.S. SYSTEM OF NATURAL
CAPITAL ACCOUNTING AND
ASSOCIATED ENVIRONMENTAL-
ECONOMIC STATISTICS

OFFICE OF SCIENCE AND TECHNOLOGY POLICY
OFFICE OF MANAGEMENT AND BUDGET
DEPARTMENT OF COMMERCE

JANUARY 2023





Outline

Statistics shape our conversations.



THE WHITE HOUSE
WASHINGTON

1. Need
2. Goals
3. U.S. Policy Timeline
4. Longer History
5. Recommendations
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Need for Natural Capital Accounts



Some core statistics that measure the economy do not include key components of economic activity and resources.

- GDP measures the market value of the goods and services a nation produces, does not include:
 - Ecosystem services, or
 - Negative effects from pollution.
- Investment in Fixed Assets does not include:
 - Estimates of the level or value of natural and environmental resources, or
 - Change in natural and environmental resources due to depletion and degradation.



Goal of Natural Capital Accounts

To develop Headline Measures through a 15 year strategic plan that measure:

1. Changes in natural capital wealth, and
2. Support including natural assets in Net Domestic Product.

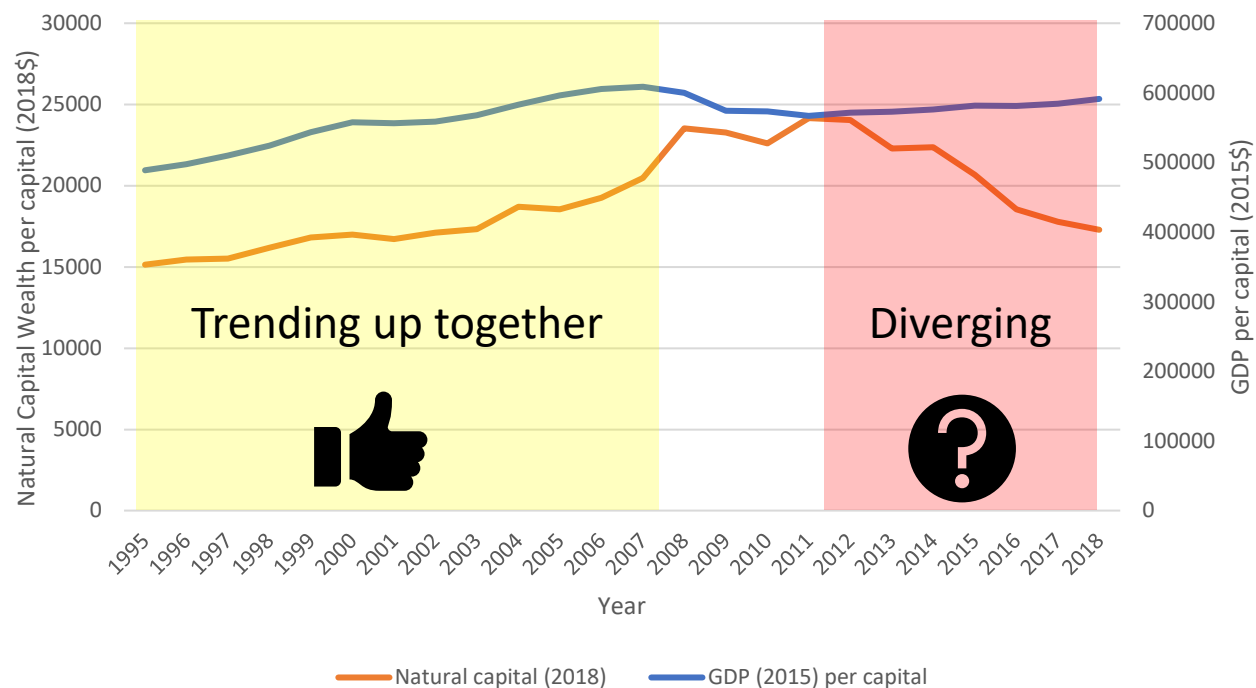


Note: Headline trends matter for national and international conversation.

“The path articulated in this Strategic Plan treats nature as an asset and **incorporates these natural assets on the national balance sheet**. These accounts and statistics can work alongside traditional economic statistics, such as GDP, to help guide economic decision making to be more inclusive of the services—or benefits to humans—nature provides.”

- *National Strategy to Develop Statistics for Environmental-Economic Decisions, 2023*

Illustrative World Bank Estimates (not official U.S. Statistics)





Policy Timeline



Gina Raimondo
Secretary of
Commerce
Timestamp 48:32.

April 22, 2022

“...announce the initiation of the first U.S. national system of natural capital accounts and standardized environmental-economic statistics. This work will ensure that we measuring our natural assets, our lands and waters – just like we do our other economic assets ...

Develop a national strategy ...

Turn to implementation by the end of next year.”

Public roundtables and
listen sessions

Interagency process, growing to 27 Departments, Agencies, and Offices

August 18, 2022 – Draft National Strategy Release for Public Comment

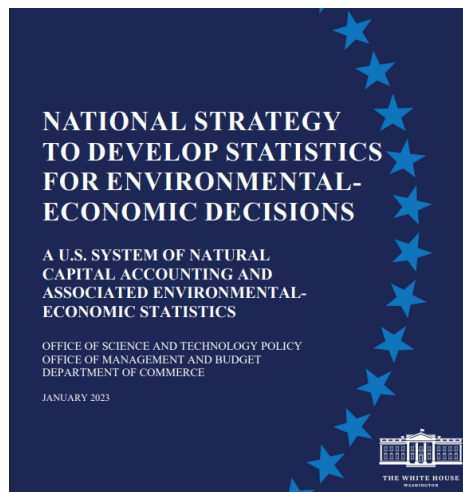
October 22, 2022 – Public Comment Period Ends



John Kerry
SPEC

Jan 19, 2023

SPEC Kerry announces
Final Strategy in Davos





History and Authority

Nordhaus & Tobin 1973
“Serious consequences of treating as free things which are not really free. This practice gives the wrong signals for the directions of economic growth.”

BEA 1992-1994
Integrated Environmental and Economic Satellite Accounts

Congress 1994
Directs DOC to suspend work and get independent analysis of methodology & provides funding

Congress 1995
Paperwork Reduction Act
Re-Created the office of the Chief Statistician of the United States

Nordhaus & Kokkelenberg 1999
Natures Numbers: Expanding the National Economic Accounts to Include the Environment

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National Research Council 2005
Beyond the Market: Designing Nonmarket Accounts for the United States

Jorgenson, Landefeld, Nordhaus 2006
A New Architecture for the U.S. National Accounts

GAO 2007
Measuring our Nation’s Natural Resources and Environmental Sustainability
(YES to Enviro-Econ statistics, but maybe not Green-GDP)

UN Statistics 2012
System of Environmental Economic Accounting (SEEA) Central Framework

UK 2014
Initiates Natural Capital Accounts
And many other countries do too.

Congress 2019
Evidence-Based Policymaking Act

2021
1. Dasgupta Review &
2. UN Statistics System of Environmental Economic Accounting – Ecosystem Accounts

2023
U.S. National Strategy for Statistics for Environmental-Economic Decisions



Fundamental Questions to Address

Projects underway are asking fundamental questions about natural resources and the economy, which will aid the construction of Natural Capital Accounts:

1. How much air pollution is produced by different industries?
2. How much water is consumed by different industries?
3. How has the value of land changed over time?
4. How much economic activity – as currently measured – is linked to the environment? To the marine environment specifically?

Eventual question: How is the value of our natural capital assets (e.g., minerals, forests, fisheries, etc.) changing over time?

To answer these questions and to develop natural capital accounts, the Strategic Plan lays out **five recommendations**.



Recommendations (1)

Recommendation 1



The natural capital accounts and environmental-economic statistics should be **pragmatic and provide information** to:

1. Guide sustainable development and macroeconomic decision making;
2. Support Federal decision making in programmatic, policy, and regulatory settings;
3. Provide structure and data that promote the competitiveness of U.S. businesses;
4. Support resilient state, territorial, Indigenous, Tribal, and local communities; and
5. Facilitate conservation and environmental policy.



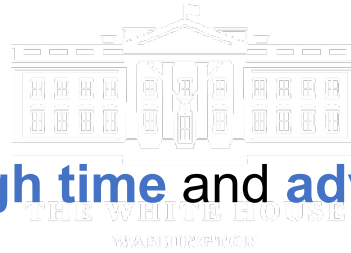
Credit: Forest NPS/Katy Cain, Reef, Washington Monument, and Bee NPS, Atoll NOAA/Paulo Maurin, Fish NOAA/Greg McFall, Yellowstone River, USDA



Recommendations (2)

Recommendation 2

Provide **domestic comparability through time** and **advance international comparisons** and harmonization.



This requires the United States to:

1. Regularly repeat and update its accounts, and
2. Engage with international partners.



Credit: Forest NPS/Katy Cain, Reef, Washington Monument, and Bee NPS, Atoll NOAA/Paulo Maurin, Fish NOAA/Greg McFall, Yellowstone River, USDA



Recommendations (3)

Recommendation 3



Embed the accounts in the broader U.S. economic statistical system. This process will be guided by three sub-recommendations:

1. Incorporate the **internationally-agreed standards** ... *guided by* SEEA ... **following the standard supply-use framework**;
2. Apply more than one, but a small number of, **specific accounting boundaries**; and [use]
3. ... **best available economic science for monetizing** the value of natural assets.

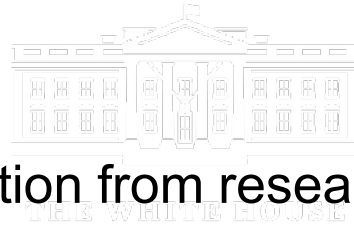


Credit: Forest NPS/Katy Cain, Reef, Washington Monument, and Bee NPS, Atoll NOAA/Paulo Maurin, Fish NOAA/Greg McFall, Yellowstone River, USDA



Recommendations (4)

Recommendation 4



Use a **15-year phased approach** to transition from research grade environmental-economic statistics and natural capital accounts to **core statistical products**.

1. Produce a new forward-looking **headline measure** focused on the change in wealth held in nature: **Change in Natural Asset Wealth**.
2. Supporting products, tables and reports that provide information in **physical and monetary units**.
3. Make use of **dashboards** for biological and physical measures.
4. First **pilot accounts appearing in 2023**, ... while over the long term meeting high statistical standards and producing a durable & comprehensive set of statistics to expand the national economic accounts.

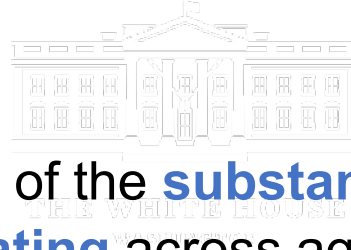


Credit: Forest NPS/Katy Cain, Reef, Washington Monument, and Bee NPS, Atoll NOAA/Paulo Maurin, Fish NOAA/Greg McFall, Yellowstone River, USDA



Recommendations (5)

Recommendation 5



Apply **existing authorities** and make use of the **substantial expertise within Federal departments and agencies**, by **coordinating** across agencies.

These authorities include:

1. Paperwork Reduction Act of 1995
2. Evidence-Based Policymaking Act of 2018
3. Report by the U.S. Government Accountability Office (2007) on *Measuring our Nation's Natural Resources and Environmental Sustainability*.



Credit: Forest NPS/Katy Cain, Reef, Washington Monument, and Bee NPS, Atoll NOAA/Paulo Maurin, Fish NOAA/Greg McFall, Yellowstone River, USDA



Timeline

		Co-Lead Departments/ Agencies	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Phase II Environmental I Sectors	Minerals & Energy	DOI, BEA, NOAA														
	Forests	USDA, USFS														
	Urban green space	DOI, USDA, NOAA, USFS														
	Pollinators	USDA														
	Marine natural capital (II)	NOAA, BEA														
Phase III Environmental Sectors	Wildlife, including birds, mammals, and fish	DOI														
	Wetlands and peatlands	DOI, NOAA														
	Soils	USDA														
	Grasslands, deserts, tundra, etc.	USDA, DOI														
	Marine natural capital (III)	NOAA, BEA														
	Non-traditional geologic assets	DOI, BEA														
Supporting Activities	Classification systems	CSOTUS, BEA, EPA, BLS, Census, DOI														
	Data sharing protocols	CSOTUS, NASA, DOI, NOAA, Census														
	Valuation standards for national accounting	OMB, BLS, BEA, EPA, NOAA, DOI, USDA														
	Guidance for using the system in Federal benefit-cost analysis	OMB														
	International engagement	CSOTUS, Treasury, State									Ongoing					
	Website and data serving system	BEA or other														

*Pending expected new guidance from the international statistical community in 2025.

**May articulate to the G20 data gaps initiatives.



Accounts and Valuation

There is variability in how the different accounts will be developed.

- Some products will focus on **stocks** (e.g., Land), others will focus on **flows** (e.g., Air & Water).
- Some products have a **valuation/monetary component** (e.g., Land).
- For others, there is **currently no international consensus** on how to get to valuation (e.g., Air & Water).
- Some products will focus on measuring **economic activities already included in the NIPA** accounts associated with the environment (e.g., Environmental Activities).
- For others, the product builds on an **existing satellite account** (e.g., Marine).



Aggregation and Summary Statistics

Data matter

Statistical information is very useful in the supply-use table form.

Physical and monetary accounts help people talk to each other.

Dashboards are useful for communicating these data.

Aggregation or a summary statistic matters

Aggregation requires a common unit – monetary units are best candidate for an aggregate statistic.

- Change in wealth is well supported in the literature and is what the U.S. intends to use.
- Means filling out the non-financial, non-produced balance sheet.
- Warrants paying more attention to the balance sheet .
- Could support partial Net National Income or Net Domestic Product.



Connections to other economic concerns

The economy increasingly experiences large pressures from outside the GDP boundary.
These pressures have implicit prices and matter for economic forecasting.

Examples of environmental pressures

- Climate change
- Water scarcity
- Changes in air quality
- Other environmental changes

Examples of non-environmental pressures

- Infectious disease
- Household child
- Elder care.

These are omitted variables in macro models.





Happening Now

Development is currently underway.

- Chief Statistician's office is coordinating natural capital accounts and environmental-economic statistics (classifications and valuation)
- Federal experts are actively working on:
 - Land account
 - Air emissions account
 - Environmental-activities account
 - Marine account
 - Water account
 - Pollinator account
 - Forest account
 - Urban green space account
- The U.S. is actively engaging international partners, including the Government of Australia (12/16/2022).



[Administration](#) [Priorities](#) [The Record](#)

DECEMBER 15, 2022

Joint Statement of the Government of the United States of America and the Government of Australia on Cooperation on Natural Capital Accounting, Environmental- Economic Accounting, and Related Statistics

[OSTP](#) [BRIEFING ROOM](#) [PRESS RELEASES](#)

Nature Positive by 2030





Conclusion

1. There is a long-standing need to **develop “headline” statistics that incorporate natural capital and satellite accounts**. This will allow users to understand the physical and monetary stocks and flows from natural capital.
2. The **work is underway** to develop underlying components consistent with international standards.
3. Future **challenges** include combining data from many sector/different approaches into a single statistical series.
4. Placing nature on the nation’s balance sheet is **long overdue**. Natural capital accounts will help the U.S. better address the issues of the 21st century and beyond.

