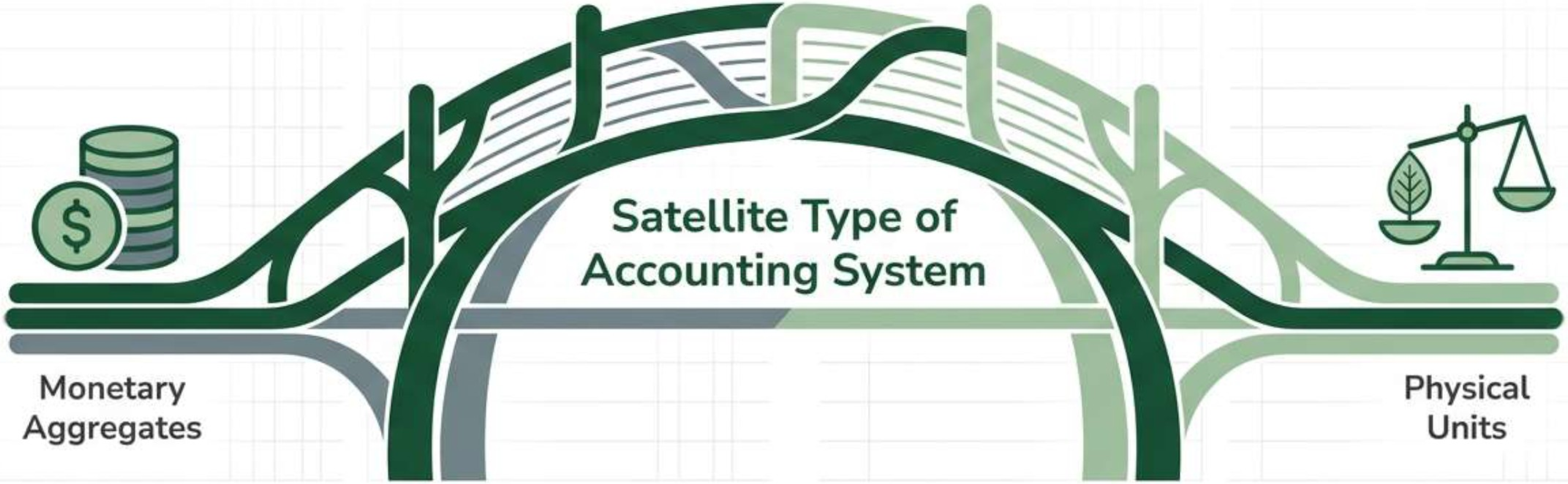
Environmental Accounting

A Visual Guide to Financial
& Management Accounting

✦ Introduction ✦

Main Objective: Present aggregate expenditure for the management and protection of the environment in the national territory.

System Function: Provide a link between monetary aggregates and quantitative data expressed in physical units on the management and state of the environment.



✦ Environmental Accounting - Origin ✦

Ledger Card

Norway (1970s)

First accounts tied to energy, forests, fisheries. Later integrated air pollutant emissions into macroeconomic planning.

Ledger Card

Netherlands (1980s)

Roefie Hueting sought sustainable national income measure. Led to National Accounting Matrix (NAMEA).

Ledger Card

France (1980s)

Developed Comptes du patrimoine (patrimony accounts) linking natural/historical resources, geographic accounts, and agent accounts.

Ledger Card

Indonesia (1989)

World Resources Institute compared conventional GDP with environmentally adjusted GDP (depreciating natural resources).

Ledger Card

USA (Late 1980s)

EPA pilot accounts for Chesapeake Bay (led by Henry Peskin) adjusting gross indicators for non-marketed goods.

Environmental Accounting in various countries

Norway

- First country to prepare environmental accounts.
- Collected data on energy, forests, minerals.
- Fed data into national economy for policymakers to assess alternative growth strategies.

Philippines

- ENRAP project (1993).
- Treated environment as productive sector.
- Calculated environmental NDP by by subtracting depletion of natural capital and adding discoveries of minerals.

Namibia

- Adopted SEEA approach in phased manner.
- Focused on water allocation among competing uses and land degradation effects on productivity.

Environmental Accounting in various countries

Netherlands

- NAMEA routinely constructed to track pollution emission by economic sector and assess protection objectives.

Chile

- Central Bank focused on forest and mineral sectors, questioning if current development strategies are sustainable.

USA

- BEA made a foray into mineral sector, faced political controversy.
- NRC panel asked to consider national strategy.

Japan

- Ministry of Environment issued comprehensive 2002 Guidelines.
- Uses standard formats (A, B, C) to measure environmental conservation costs and benefits in both physical and monetary units.

✦ Definition ✦

There is no standard definition of natural resources and environmental accounting. The three terms differ as follows:

Environmental Accounting

Measures in terms of money, the amount of loss done to the environment & its effect on national income. Takes remedial steps.

Environmental management

A deal with how the environment should be managed using optimum efforts efforts to reap its maximum benefits.

Environmental science

A positive science concern with finding out the Truth of the proposition for its own sake (Truthfulness) related to environment (Biodiversity).

Necessity of Environmental Accounting

Objectives of Environmental Accounting

1. Taking total stock of assets or reserves related to environmental issue & changes therein
2. Estimation of the total expenditure protection or enhancement of environment
3. Identify part of gross domestic product reflecting cost necessary to compensate negative impact (defensive expenditure)
4. Assessment of environmental costs & benefits (depletion vs. changes in quality)
5. Elaboration & measurement of indicators disclosed by Environmentally Adjusted Net Domestic Product (EDP)
6. Analysis of EDP to plan resource use by squeezing them & reducing waste to attain sustainable development

Sustainable Development

✦ Scope of Environmental Accounting ✦

Concept of National Income

Natural wealth is owned by the nation. Useful to show the contribution of various groups of the society.

The concept of **value added statement** is useful here.

Concept of expenditure

To use natural wealth in the best possible manner, **expenses** are necessary.

Distributed in two types:

(1) **Revenue** expenditure

(2) **Capital** expenditure

Example: Expenses of getting and purifying water.

✦ Scope of Environmental Accounting ✦

Depreciation of natural wealth

Provision of depreciation.

Example: Minerals

Valuation of Natural wealth

Needs approx. valuation to get at least its precise value.

Mention in National Balance sheet

Necessary to mention natural wealth as valuable assets of the nation.

Contribution in industrial development

Mention environmental resources' contribution in industrial development.

Environmental contribution

Negative effects on environment must be designed in least possible manner.

Example: Water/air pollution, land erosion, noise

Social upliftment

Pollution attracts diseases. Better use of resources strengthens health of the nation.

Procedure for Environmental Accounting

Forms of Environmental Accounting

✦ Utility of Environmental Accounting ✦

Measure effects on profit

Evaluates effects on production to find correct profit of the business

Decide expenses and incomes

Protects environment while knowing expenses and gains/revenue.

Valuation of natural wealth

Values natural wealth that reduces with use.

Show in National Balance sheet

Takes remaining assets after depreciation to show in the balance sheet.

Take corrective steps

Helps take corrective steps deeply affecting health of society

Example: Water/air pollution, land erosion, noise

✦ Utility of Environmental Accounting ✦

Repay social liability

Better use of environmental resources strengthens nation's health against pollution.

Take economic and investment decisions

Helps government, public, and corporates take correct decisions.

Rapid growth of economy

Countries with more natural resources grow at a greater speed.

Measure economic analysis and operations

Useful in measuring and planning economic operations at optimum level.

✦ Limitations of Environmental Accounting ✦

- There is no standard accounting method.
- Comparison between two firms or countries is not easily possible.
- Inputs (costs and benefits) are not easily measurable or available.
- Organizations inadequately track energy/material, underestimating costs.
- Mainly considers internal cost; excludes cost to society.
- It is a long-term process; drawing conclusions is not easy.
- Cannot work independently (needs financial/cost/tax accounting).
- Depends upon the results of other accounting aspects.
- User needs adequate knowledge of rules and regulations of that country.

FAQ’s in VNSGU Exam

1. Give the definition of environmental accounting method and its procedure. (November - 2025, 2022)
2. Development of Environmental Accounting System in Different Countries. (November - 2025, 2024, June - 2023)
3. Scope of Environmental Accounting (November - 2024, March - 2026, June - 2023)
4. Explain Usefulness of Environmental Accounting (November - 2023, 2022, March - 2026)
5. Demerits of Environment Accounting (November - 2023)
6. Limitations of Environmental Accounting (March - 2024)
7. Advantages of Environmental Accounting. (March - 2023)