

IEE's Continuing Professional Education

Central Framework for Ecosystem Accounting

Syllabus and study guide 2024

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Course description

The course 'Central Framework for Ecosystem Accounting' will acquaint the student with the essentials of the SEEA Central Framework, which will help him/her to understand the interactions between the economy and the environment, and enables the student to describe stocks and changes in stocks of environmental assets.

The student will learn how to use a wide range of information, which enables him/her to compare and contrast source data, and allows for the development of aggregates, indicators and trends across a broad spectrum of environmental and economic issues.

Particular examples include the assessment of trends in the use and availability of natural resources and the extent of emissions and discharges to the environment resulting from economic activity.

Learning outcomes

On successful completion of this exam, students should be able to:

1. Explain the SEEA Central Framework.
2. Demonstrate knowledge of the accounting structure, maintain accounts and tables.
3. Maintain physical flow accounts for energy, water and materials.
4. Demonstrate knowledge of environmental activity accounts and related flows.
5. Explain the principles of asset accounting.
6. Understand and maintain asset accounts for land-, soil-, timber-, aquatic-, biological- and water resources.
7. Combine, analyse and translate physical and monetary data to development strategies.
8. Demonstrate knowledge of aggregates and indicators.

Exam areas and weightings

Exam questions will cover the whole of the syllabus so you must study all the topics in the syllabus.

The weightings in the table below indicates the approximate proportion of the content areas examined in the exam.

Content area	Weight
A. SEEA Central Framework	[5%]
B. Accounting structure	[10%]
C. Physical flow accounts	[20%]
D. Environmental activity accounts and related flows	[20%]
E. Asset accounts	[20%]
F. Integrating and presenting the accounts	[25%]
	100%

Syllabus

SECTION A: Introduction to the SEEA Central Framework

1. Key features of the SEEA Central Framework
2. Relationship of the SEEA Central Framework to the System of National Accounts

SECTION B: Accounting structure

1. Main accounts and tables of the SEEA Central Framework
2. Accounting for flows and stocks
3. Economic units

SECTION C: Physical flow accounts

1. Physical flow accounting framework and subsystems
2. Principles of physical flow accounting
3. Physical flow accounts for energy, water and materials

SECTION D: Environmental activity accounts and related flows

1. Environmental activities, products and producers
2. Environmental activity accounts and statistics

SECTION E: Asset accounts

1. Environmental assets in the SEEA Central Framework
2. Principles of asset accounting
3. Assets accounts for resources

SECTION F: Integrating and presenting the accounts

1. Integration within the SEEA Central Framework
2. Central Framework aggregates and indicators
3. Combining physical and monetary data

Detailed study guide

SECTION A: Introduction to the SEEA Central Framework

Key features of the SEEA Central Framework

- Describe the key features of the SEEA Central Framework

Relationship of the SEEA Central Framework to the System of National Accounts

- Explain the relationship of the SEEA Central Framework to the System of National Accounts

SECTION B: Accounting structure

Main accounts and tables of the SEEA Central Framework

- Understand supply and use tables
- Prepare asset accounts
- Relate the sequence of economic accounts
- Maintain functional accounts
- Categorise employment, demographic and social information

Accounting for flows and stocks

- Apply flows and stocks for ecosystem accounting

Economic units

- Discuss institutional sectors, enterprises, establishments and industries
- Apply geographical boundaries for economic units
- Explain statistical units

SECTION C: Physical flow accounts

The physical flow accounting framework and subsystems

- Discuss physical supply and use table approach
- Understand definition and classification of natural input, products and residuals

Principles of physical flow accounting

- Discuss gross and net recording of physical flows
- Explain treatment of international flows
- Explain treatment of goods for processing

Physical flow accounts for energy, water and materials

- Explain the scope and definitions of energy,

water and product flows

- Understand physical supply and use table for energy and water
- Understand energy statistics, energy accounts and energy balances
- Demonstrate energy and water aggregates
- Demonstrate product flow accounting
- Understand accounting for air emissions, emissions to water and associated releases to economic units
- Apply solid waste accounts

SECTION D: Environmental activity accounts and related flows

Environmental activities, products and producers

- Understand the scope and definition of environmental activities
- Understand classification of environmental activities

Environmental activity accounts and statistics

- Understand environmental protection expenditure accounts
- Understand Environmental goods and services sector (EGSS)
- Discuss relationship between the EPEA and the EGSS
- Apply accounts for resource management expenditures

SECTION E: Asset accounts

Environmental assets in the SEEA Central Framework

- Apply scope of environmental assets
- Demonstrate valuation of environmental assets

Principles of asset accounting

- Defining depletion in physical terms
- Understand principles of asset valuation
- Explain the net present value (NPV) approach
- Understand approaches to estimating resource rent and net present values
- Apply measurement of environmental assets in volume terms

Assets accounts for resources

- Understand and apply asset accounts for mineral and energy resources

- Understand and apply asset accounts for land
- Understand and apply accounting for soil resources
- Understand and apply asset accounts for timber resources
- Understand and apply asset accounts for aquatic resources
- Understand and apply accounting for other biological resources
- Understand and apply asset accounts for water resources

SECTION F: Integrating and presenting the accounts

Integration within the SEEA Central Framework

- Understand integration of asset accounts and supply and use tables
- Apply sequence of economic accounts
- Discuss functional accounts

Central Framework aggregates and indicators

- Discuss aggregates related to financing and cost recovery of economic activity related to the environment
- Understand the SEEA Central Framework and international indicator initiatives

Combined physical and monetary presentations

- Understand general structure for combined presentations
- Apply combined presentations for energy and water data, forest products and air emissions



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