System of Environmental Economic Accounting

Forest accounts

Introduction: 14:00 - 15:30
How to: 15:45 – 16:30

Regional Training Workshop on an Accounting Approaches to Climate Change Policy

Nairobi, 4-5 September 2023

United Nations

Key Purpose and Content of this section

- Key purpose: Constructing a Forest Account is not “business as usual”. As in the case of the Energy Account, it also requires a development phase. But the approach is different.
- Key Content
  - There is an important formal story to know
  - There is an important practical story to know

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SYSTEM OF ENVIRONMENTAL ECONOMIC ACCOUNTING

Agriculture, Forestry and Fisheries

What is it?

The System of Environmental-Economic Accounting for Agriculture, Forestry and Fisheries integrates information on the environment and economic activities of agriculture, forestry and fisheries using the structures and principles laid out in the SEEA Central Framework. These activities depend directly on, as well as have an impact upon, the environment and its resources. Integrating information about agriculture, forestry and fisheries facilitates understanding of the trade-offs and dependencies between these activities and their related environmental factors. Understanding this complex relationship is critical for the analysis of sustainable food and agriculture.

MANUALS

SEEA Agriculture Forestry and Fisheries

How it works

The accounts in SEEA Agriculture, Forestry and Fisheries are most commonly compiled at the level of the individual product and use two main types of accounts to capture relevant agriculture, forestry and fisheries information:

1. **Flow accounts:** In physical terms, these accounts record physical flows of agriculture, forestry, and fishery products between the environment and the economy. Parallel monetary accounts then record the monetary flows associated with agriculture, forestry and fishery transactions for products.
2. **Asset accounts:** These accounts measure the quantity of agriculture, forestry and fishery resources and changes in these resources over an accounting period. These accounts can be compiled in physical terms, which provide important information on the stock of environmental assets. Parallel monetary accounts then record the monetary flows associated with transactions for the agriculture, fishery or forest products.

Agriculture, Forestry and Fisheries Accounting and the SEEA Central Framework

Agriculture, Forestry and Fisheries Accounts are one of the many types of accounts covered by the SEEA Central Framework. These accounts use the same accounting concepts as the SEEA and can be considered an application of the SEEA but with a specific focus on agricultural, forestry and fisheries activities.

System of Environmental-Economic Accounting 2012

Central Framework

United Nations
European Commission
Food and Agriculture Organization of the United Nations
International Monetary Fund
OECD
Organisation for Economic Co-operation and Development
The World Bank

Food and Agriculture Organization of the United Nations

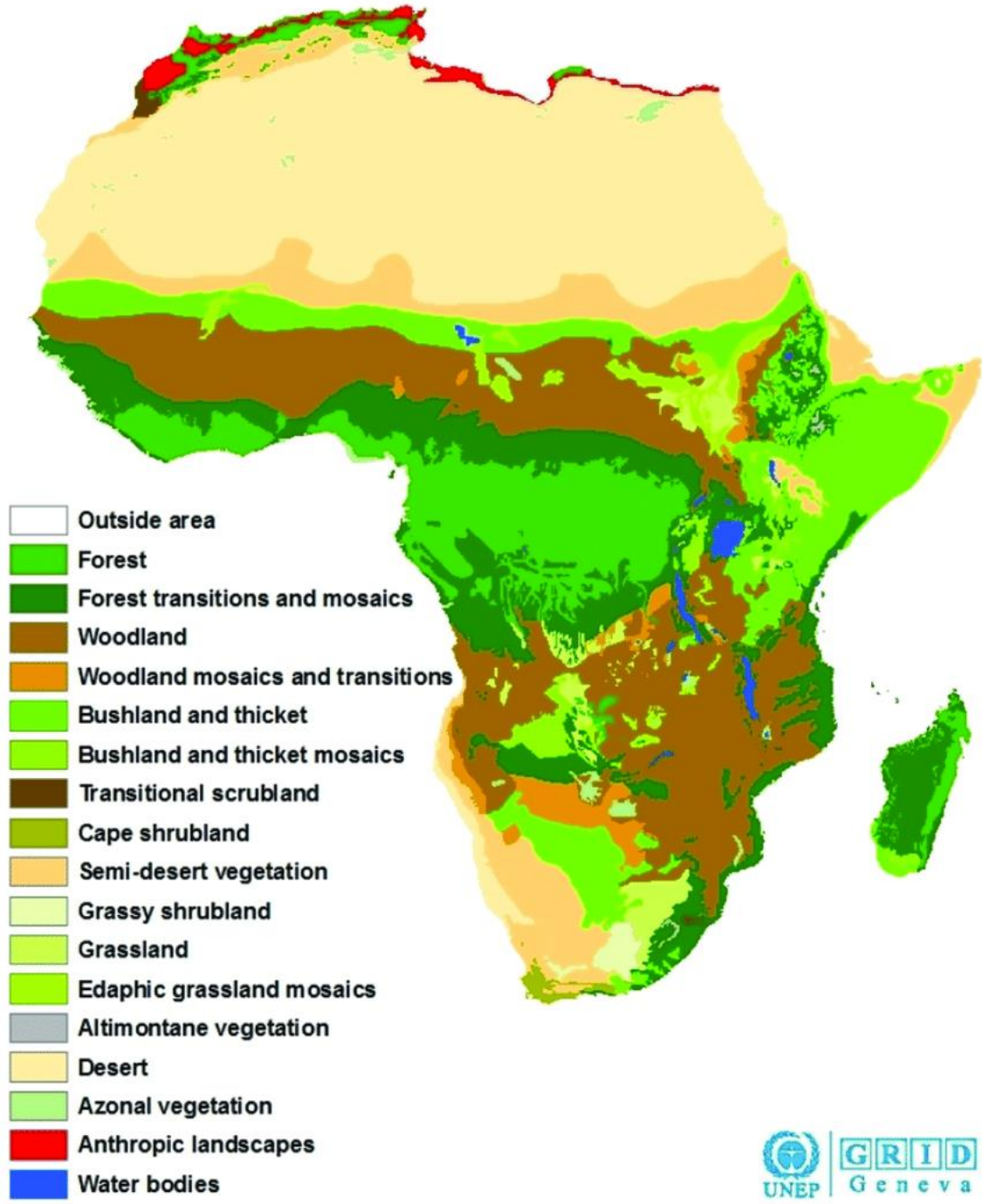
United Nations

System of Environmental-Economic Accounting for Agriculture, Forestry and Fisheries

(SEEA AFF)

Forest Resources of Africa

Discussion: why are forests important?



System of Environmental Economic Accounting

Discussion: Which one is most important?

Flow Account - Physical	Flow Account - Monetary
Stock Account - Physical	Stock Account - Monetary

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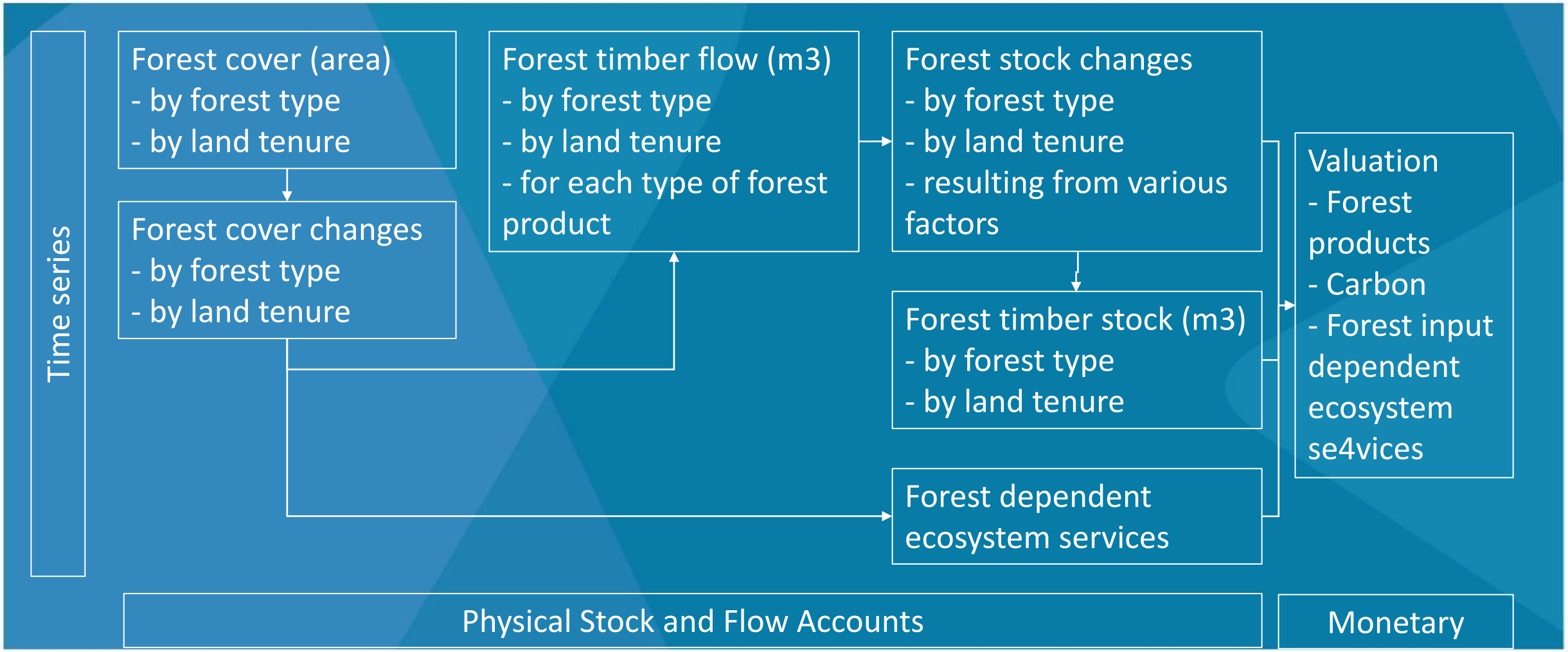
System of Environmental Economic Accounting

Possible Forest Account Architecture



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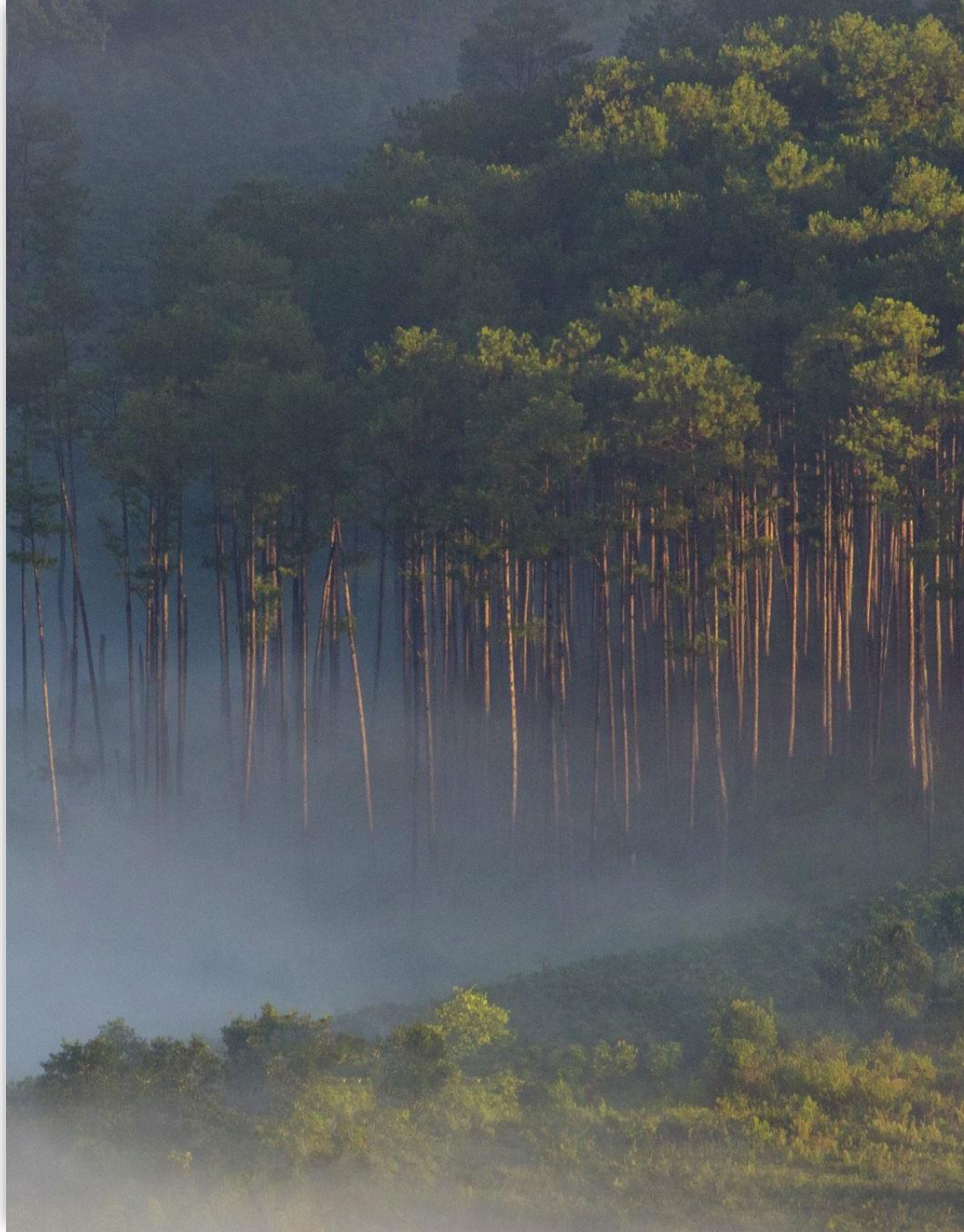
Why do forest resources change from year to year?

- - Harvesting for use of timber for various purposes
- - Illegal harvesting
- - Losses due to insect of disease
- - Losses due to wild fires
- - Land use change
- + Gains resulting from natural regrowth of existing forest resources
- + Gains from planting of new forest areas through afforestation or reforestation (e.g. REDD+ initiatives)

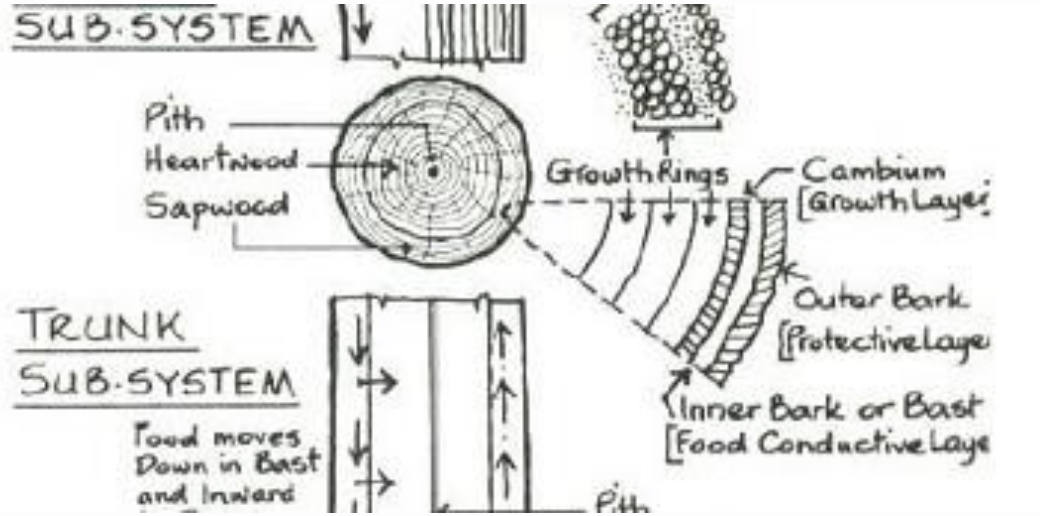


How does a tree grow?

- A tree grows by adding a layer of new wood fibre every year

- It grows both taller and expands in circumference

- We measure this growth with MAI (Mean Annual Increment) and this is reported as a volume/area number unique to each forest type and further may vary by growth area (climatic conditions, soil, slope)



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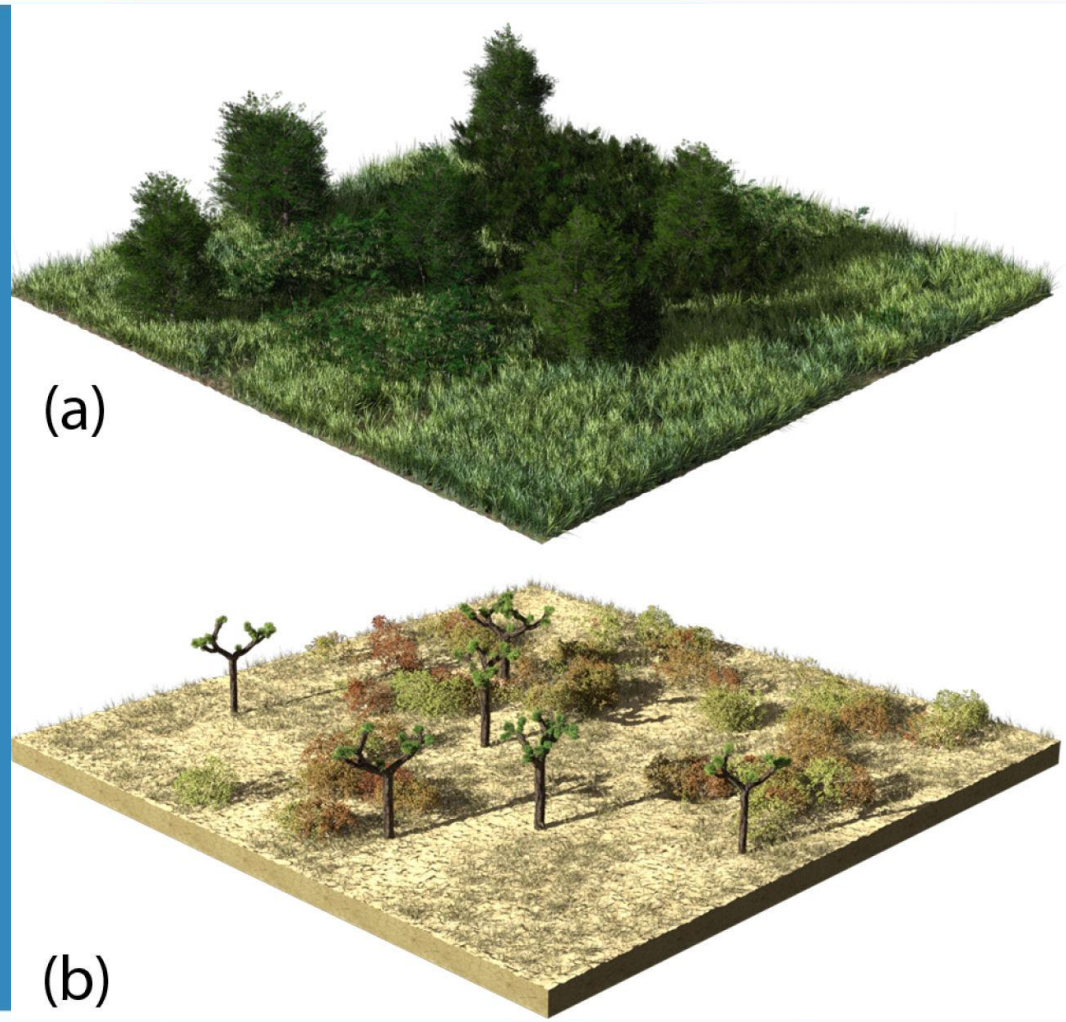
The time series need to account for different forest types separately



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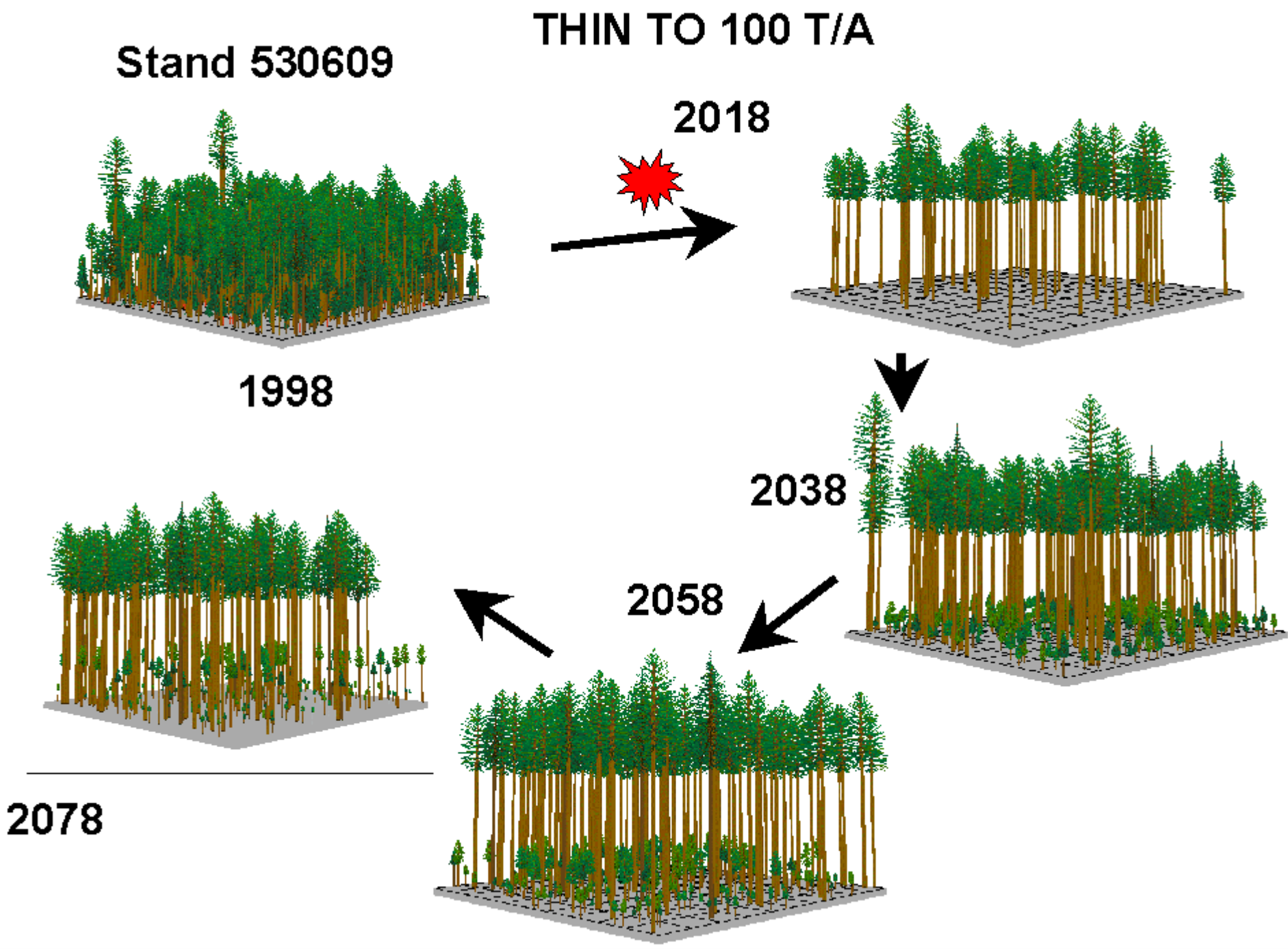
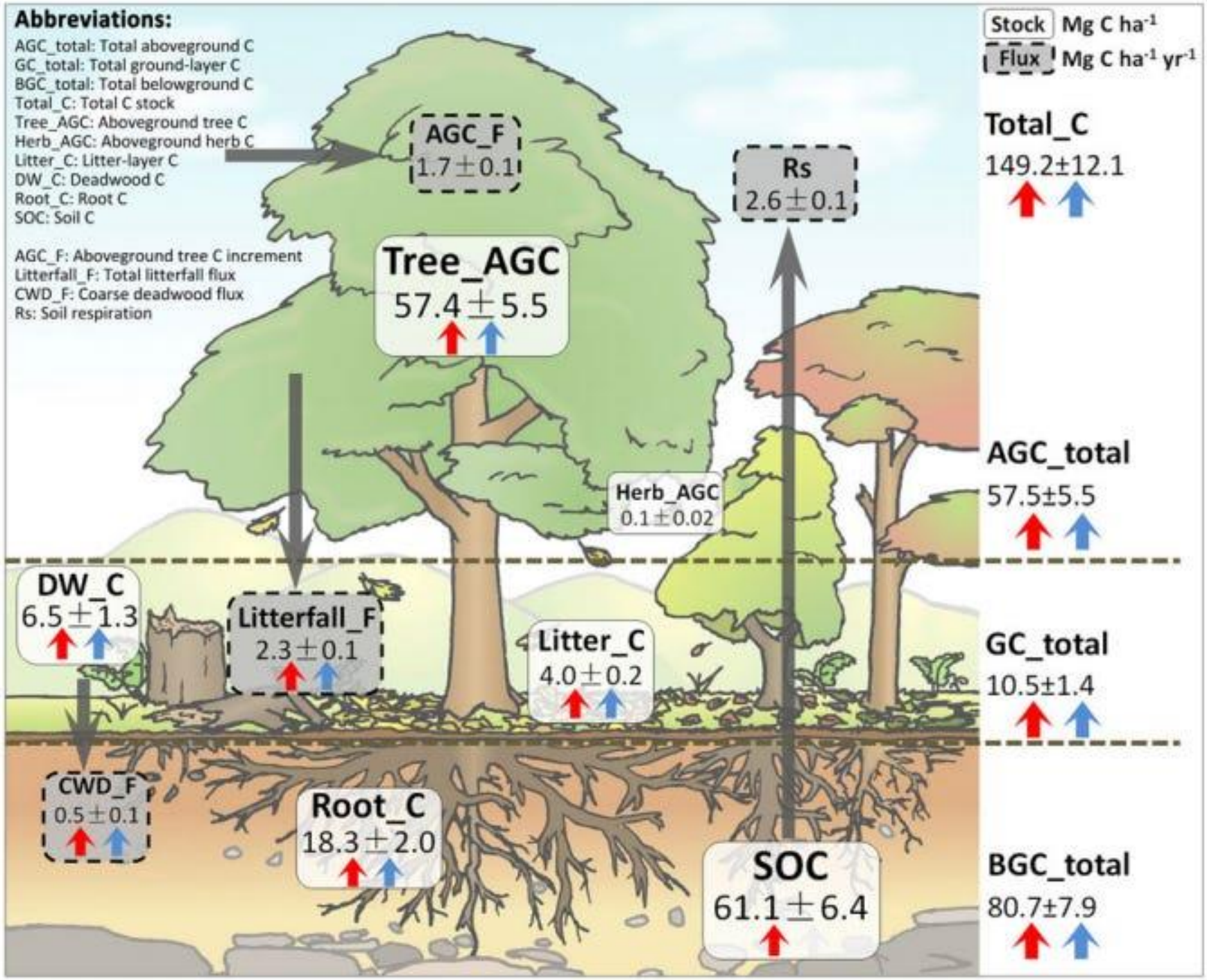
A forest account needs a time series structure to be meaningful
This enables us to do both Stock and Flow Accounts simultaneously



Visual representation of a forest account (for one year)

System of Environmental Economic Accounting

A forest account can easily be used to integrate a forest carbon account. This may be highly relevant for countries where DFN swaps may be possible.



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UNEP
UN-REDD
PROGRAMME
REPUBLIC OF KENYA
KENYA
Forest Service
The Role and
Contribution of
Montane Forests and
Related Ecosystem Services
to the Kenyan Economy

Examples

- Experience from Kenya, Uganda, Gabon, Cote d'Ivoire, Nigeria and Morocco – UNEP Studies