

Case study on Experimental Ecosystem Accounting in the Kyrgyz Republic

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Department
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of Global Change

Overview

1. Introduction – PEI-CTF project
 2. Importance of ecosystem accounting
 3. Types of ecosystem accounts
 4. Economic approaches to ecosystem accounting
 5. Piloting ecosystem accounting in the Kyrgyz Republic
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Introduction – PEI – CTF project

- Poverty-Environment Initiative (UNDP-UNEP)
- CTF project „Sharing of Czech Experience: Piloting SEEA-EEA in Kyrgyzstan“

Project outputs:

- Stakeholder consultation workshop (March 2016)
- Training seminars and joint desk work (May 2016, August 2016)
- Manuals and training materials
- Piloting experimental environmental accounting
- Implementation guide



System of Environmental Economic Accounting – Experimental Ecosystem Accounting

- An internationally agreed statistical framework to measure the environment and its interactions with economy
- The **SEEA Central Framework** was adopted as an **international statistical standard** by the UN Statistical Commission in 2012
- The **SEEA Experimental Ecosystem Accounts** complement the Central Framework and represent international efforts toward coherent ecosystem accounting

System of Environmental-Economic Accounting 2012 Central Framework

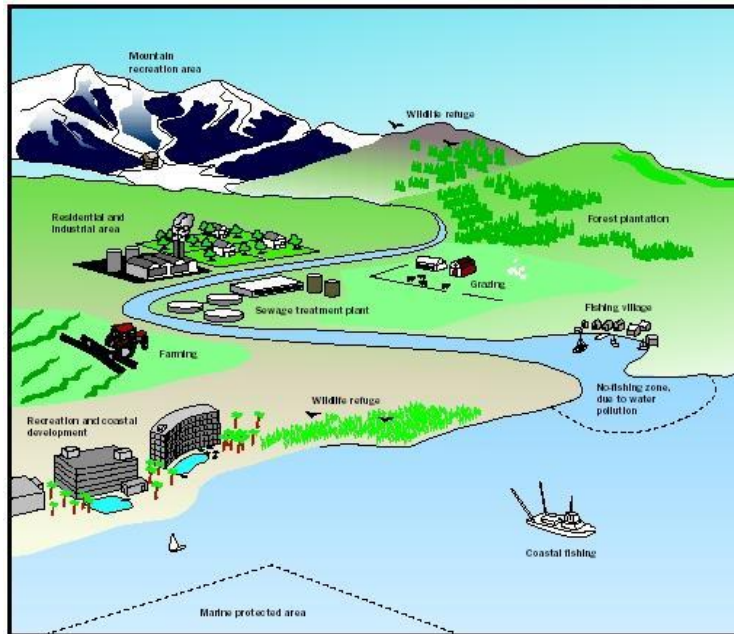


System of Environmental-Economic Accounting 2012 Experimental Ecosystem Accounting



The SEEA Experimental Ecosystem Accounting:

1. Spatial characteristics expressed in spatial units
2. Integrated or holistic view of multiple characteristics and interactions for each unit



- Land
- Water
- Carbon
- Biodiversity
- Ecosystem services

The EEA is focused on living (renewable) natural resources – **ecosystems and biodiversity**

Policy motivation to develop SEEA

- Supporting the implementation of sustainable development goals and related international processes
- Making ecosystem services visible for a national economy and development
- Measuring ecosystem degradation
- Attributing ES production and consumption to ecosystem and economic units



Convention on
Biological Diversity

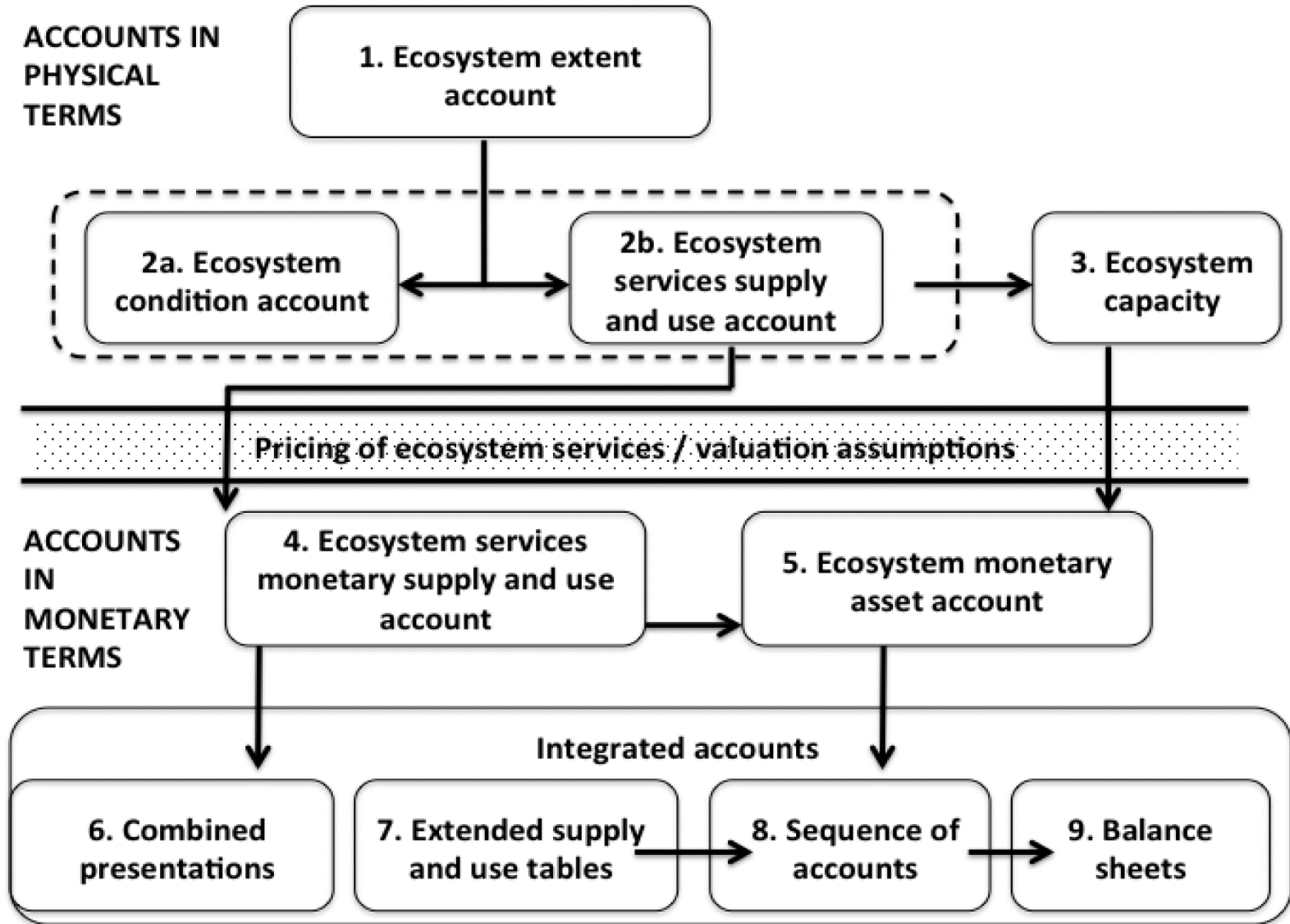
UNFCCC



The Economics
of Ecosystems
& Biodiversity



Types of ecosystem accounts



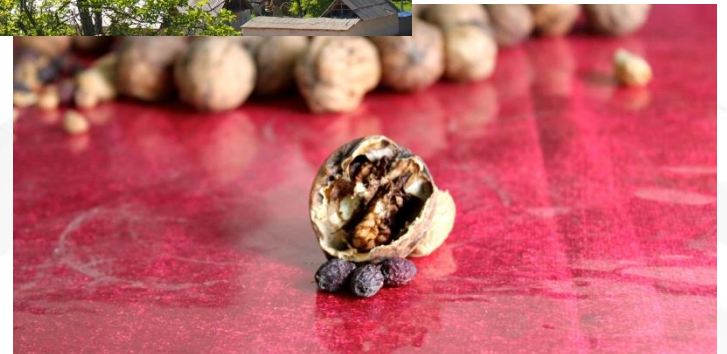
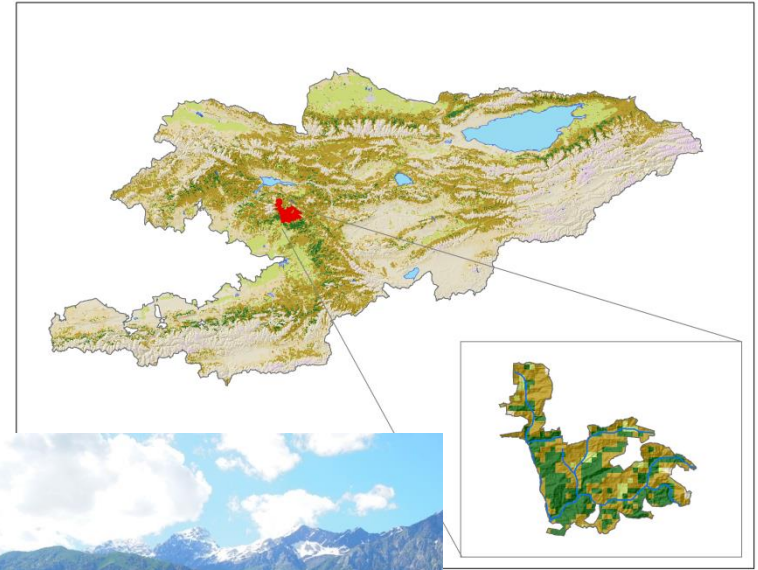
Economic valuation approaches

Economic valuation approach	Method
Market valuation	<u>Price-based</u> <ul style="list-style-type: none">• Market prices <u>Cost-based</u> <ul style="list-style-type: none">• Avoided damage cost• Replacement cost• Restoration cost• Opportunity cost <u>Production-based</u> <ul style="list-style-type: none">• Production function approach• Net factor income approach
Revealed preference methods	<ul style="list-style-type: none">• Hedonic pricing• Travel cost
Stated preferences methods	<ul style="list-style-type: none">• Contingent valuation• Choice modelling• Deliberative group valuation
Benefit tranfer methods	<ul style="list-style-type: none">• Unit tranfer• Value transfer• Value transfer function (met-analytic approach)

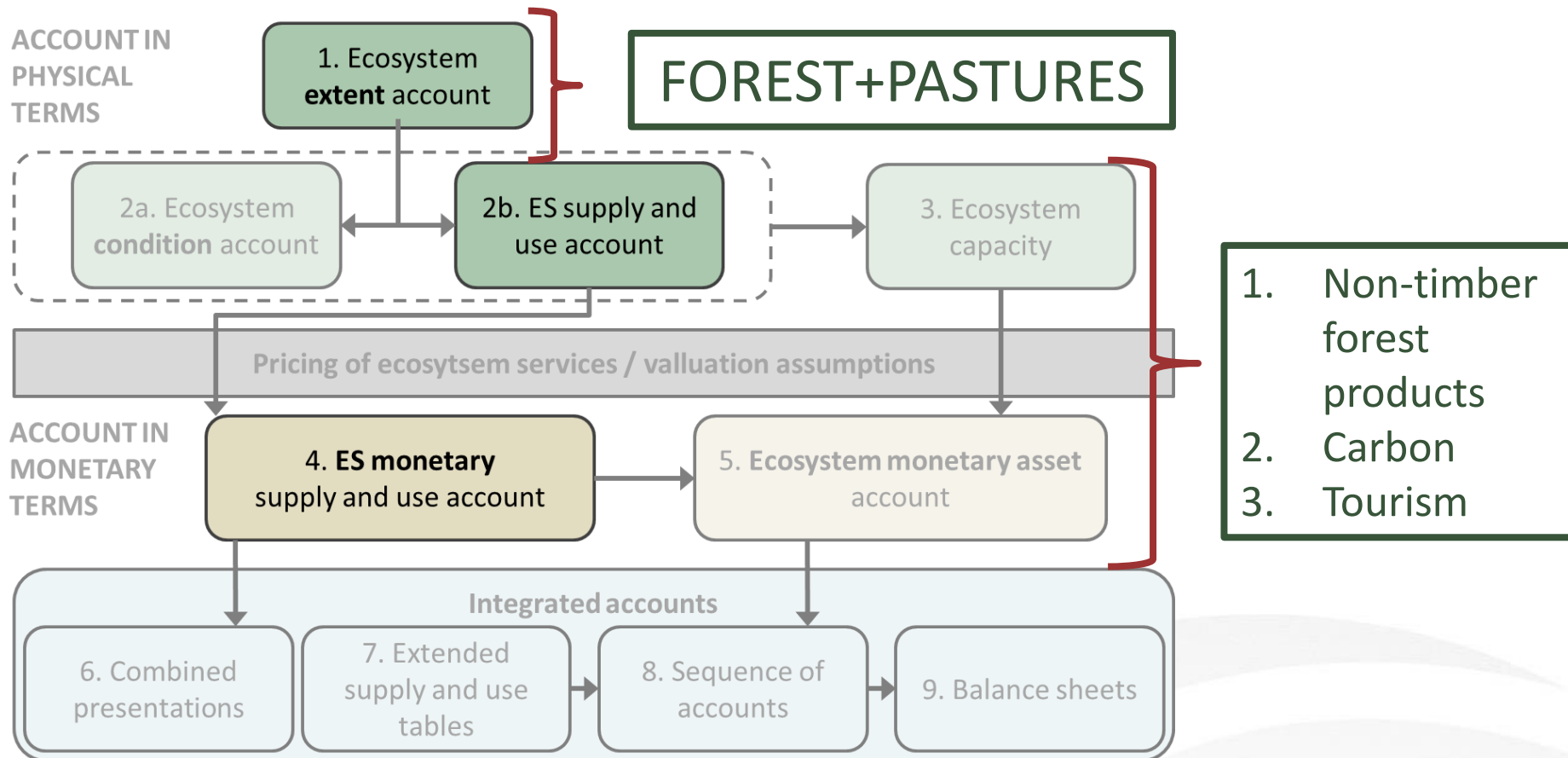
Source: The economics and valuing ecosystem services and biodiversity

Piloting EEA in the Kyrgyz Republic

- Kyzyl-Unkur area (Jalal-Abad region)
- World's largest **walnut forest**
- **Wide array of forest ecosystem services:**
 - Walnuts
 - Grazing
 - Bee keeping
 - Medicinal herbs
 - Regulating and cultural services
- **Economic importance** of forest ecosystem services for national GDP and local communities



EEA Piloting – Account Structure



Piloting EEA in the Kyrgyz Republic

Overview of approach

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graph TD; A[Overview of approach] --> B[Stakeholder engagement/participation]; B --> C[Data mapping]; C --> D[Data collection]; D --> E[Account structure and compilation]; E --> F[Further stakeholder consultation]; F --> G[Plan future extension and potential scaling up of accounts];
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Stakeholder engagement/participation

Data mapping

Data collection

Account structure and compilation

Further stakeholder consultation

Plan future extension and potential scaling up of
accounts

Stakeholder participation

1. Scoping workshop (March 2016)

- Priorities regarding SEEA-EEA piloting, expectations and needs
- Data mapping



Approach:
Group debates, group discussion exercises

2. Consultation workshop I (May 2016)

- Technical skills linked to compilation of SEEA-EEA accounts

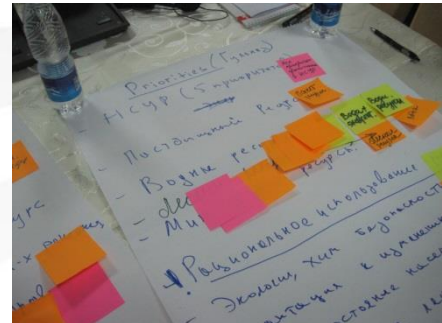


Approach:
Technical exercises, group work

3. Consultation workshop II (August 2016)

- Specific approaches to SEEA-EEA account compilation

Evaluated by participants through a survey



Thank you for your attention



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