Water and Mineral Accounts

Day 7: Tracking Flows and Stocks

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Day 7 Agenda

Morning (09:30 – 13:00)

- **Session 1: Water Accounts**
  - Physical Supply and Use Tables (PSUT)
  - Water Asset Accounts
  - Water Efficiency & Policy
- **Session 2: Mineral Accounts**
  - Stock & Depletion Concepts
  - Integrating RMB Statistics
  - Sustainability (Asset life)

Afternoon (14:00 – 16:00)

- **Session 3: Practical Exercise**
  - Constructing simplified Water Accounts
  - Mineral Asset Exercise

Day 7 Output

Draft Water SUT and Mineral Asset templates.

Water Accounts

From Source to Tap to Drain

Goal: Trace every drop of water from the environment to the economy and back.

The Physical Supply and Use Table (PSUT)

The "Double Entry" of Water:

Supply Table (Where it comes from)

- **Sources:** Environment (Rain, Rivers, Groundwater).
- **Providers:** Water Utility (WASAC).

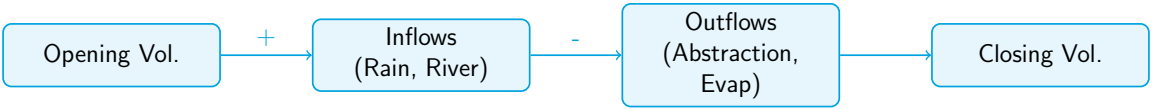
Use Table (Where it goes)

- **Users:** Agriculture, Industry, Households.
- **Returns:** Treated wastewater, losses.

Identity: Total Supply = Total Use

Water Asset Account

Tracking the stock in reservoirs and lakes.



Policy Question: Is the water level in Lake Kivu stable? Are we over-abstracting groundwater?

Mineral Accounts

Tracking Non-Renewable Wealth

Rwanda's "3Ts" (Tin, Tantalum, Tungsten) + Gold.

Concepts: Stock & Depletion

Depletion

Unlike forests, minerals do not grow back. Every tonne extracted is a permanent reduction in the asset.

Classifications of Stock (UNFC):

1. **Proven Reserves:** Commercially recoverable now.
2. **Probable Reserves:** Likely recoverable.
3. **Resources:** Identified but not yet commercial.

SEEA usually focuses on Class A: Proven Reserves.

Integrating Mining Data

The Challenge:

- Export data (Customs) is accurate.
- Extraction data (Pit-head) is often messy.
- Illegal/Artisanal mining often goes unrecorded.

Solution: Use "Reconciliation" methods.

- If Exports ¿ Production, then Production is underestimated.

Coffee Break

11:00 – 11:30

Afternoon: Practical Exercise

Task A: Water Balance Calculate the Water Use Efficiency for 3 sectors:

$$\text{Efficiency} = \frac{\text{Value Added (RWF)}}{\text{Water Used } (\text{m}^3)}$$

Task B: Mineral Asset Life Calculate how many years of Gold production are left:

$$\text{Asset Life} = \frac{\text{Closing Stock}}{\text{Annual Extraction}}$$

Drafting the Templates

We will distribute empty Excel templates for:

1. **Water SUT**
   - Row: Industries (ISIC)
   - Col: Water Sources
2. **Mineral Asset Account**
   - Row: Mineral Type (Cassiterite, Coltan...)
   - Col: Opening, Extraction, Closing.

Day 7 Summary

Key Takeaways

1. **Water Accounts** link the economy to hydrology. Essential for climate resilience.
2. **Mineral Accounts** track the liquidation of national wealth. Essential for fiscal sustainability.
3. **Data Quality:** Mining and Water sectors have good administrative data, but it needs "cleaning" for SEEA.

Tomorrow: Ecosystem Services & Valuation.

Murakoze Cyane!

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