Introduction

The National Footprint Accounts (NFA) Structure and Input: 1

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The National Footprint Accounts Dataset

- Input data type and source for each EF category
- Structure of the Accounts and input data
- High Level Overview of template
  - Summary pages
  - Land type pages
  - Reference: template & guidebook.
- Walk through Footprint Calculation

The National Footprint Accounts Dataset

Over 30 Total input Datasets to NFA

Primary Datasets:

- Production
  - FAOstat
    - Forestat
    - FishStat
    - ProdStat
  - International Energy Agency (IEA)*
  - Built (Corine, GAEZ, GLC)
- Trade
  - FAO Tradestat
  - UN Comtrade

The Cropland Footprint

Total cropland area required to produce crops consumed by people

Tonnes of crops harvested (t)

$$EF_{crop} = \frac{P}{Y_W} \times EQF$$

World average yield of each crop (t/ha)

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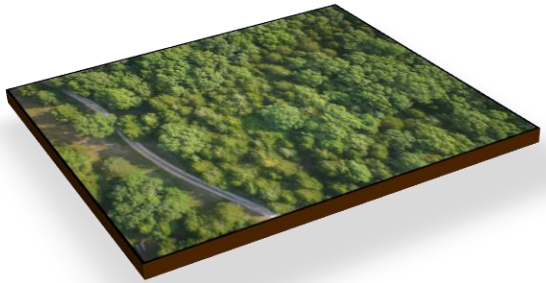
The Forest Products Footprint

Total forest area required to produce wood products consumed by people



Volume of Wood Harvested (m^3)

$$EF_{forest} = \frac{P}{Y_w} \times EQF$$

Net Annual Increment (m^3 wood/ha/yr)

The Grazing Land Footprint

Total pasture area required to feed livestock animals

Tonnes of pasture grass consumed by animals

$$EF_{grazing} = \frac{P}{Y_W} \times EQF$$

World Average Pasture land NPP

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The Grazing Land Footprint

Challenge: No data on grass demand from livestock animals

Solution: Derive an estimation with real data

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The Grazing Land Footprint

$$\mathrm{EF}_{grazing} = \frac{\textbf{Grass Demand}}{\text{World Pasture Yield}} \times \mathrm{EQF}$$

$$\text{Grass Demand} = (\mathrm{Head}_{livestock} * \mathrm{TFR}) - \text{Non pasture Feed}$$

Number of Livestock in a country

Total Feed Requirement per year

All other sources of feed (crops, etc)

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The Fishing Grounds Footprint

The Fishing Ground Footprint

Total ocean area required to produce the fish consumed by people

Tonnes of fish caught

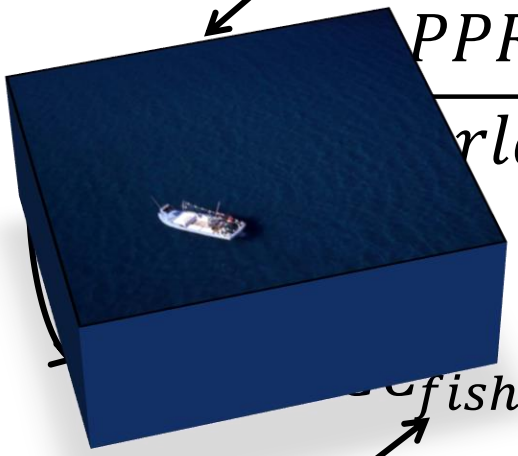
$$EF_{fish} = \frac{P}{Y_w} \times EQF$$

Sustainable yield of world average ocean ha

The Fishing Grounds Footprint

The Fishing Ground Footprint

Total ocean area required to produce the fish consumed by people



$$EF_{fish} = \frac{wt \cdot h}{yield} \times EQF$$

$$PPR_{t\,C\,pp/t\,fish} = \frac{cwcch}{rld\ PP_{t\,C\,ha/yr}}$$

$$* C_{fish} * DF * \left(\frac{1}{TE}\right)^{(TL-1)}$$

Primary Productivity Required

Primary Productivity Rate

Trophic Level of Fish

Carbon Content

Discard Factor

Transfer Efficiency

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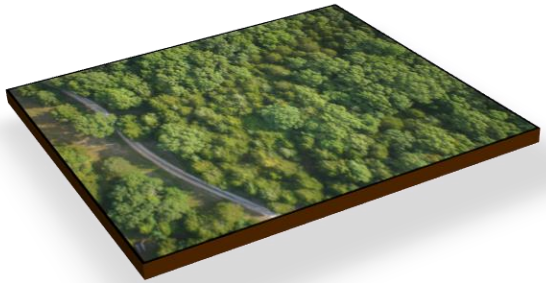
The Carbon Footprint

Total forest area required to sequester the carbon emitted by people



Tonnes of CO_2 emitted

EQF of forest land

$$EF_{carbon} = \frac{P}{Y_W} \times EQF$$

Carbon Sequestration Rate of World Average Forest

The Built-Up Land Footprint

The Built Up Land Footprint

Total area required to hold our buildings and infrastructure

EQF of cropland

$$EF_{built} = Area \times EQF$$

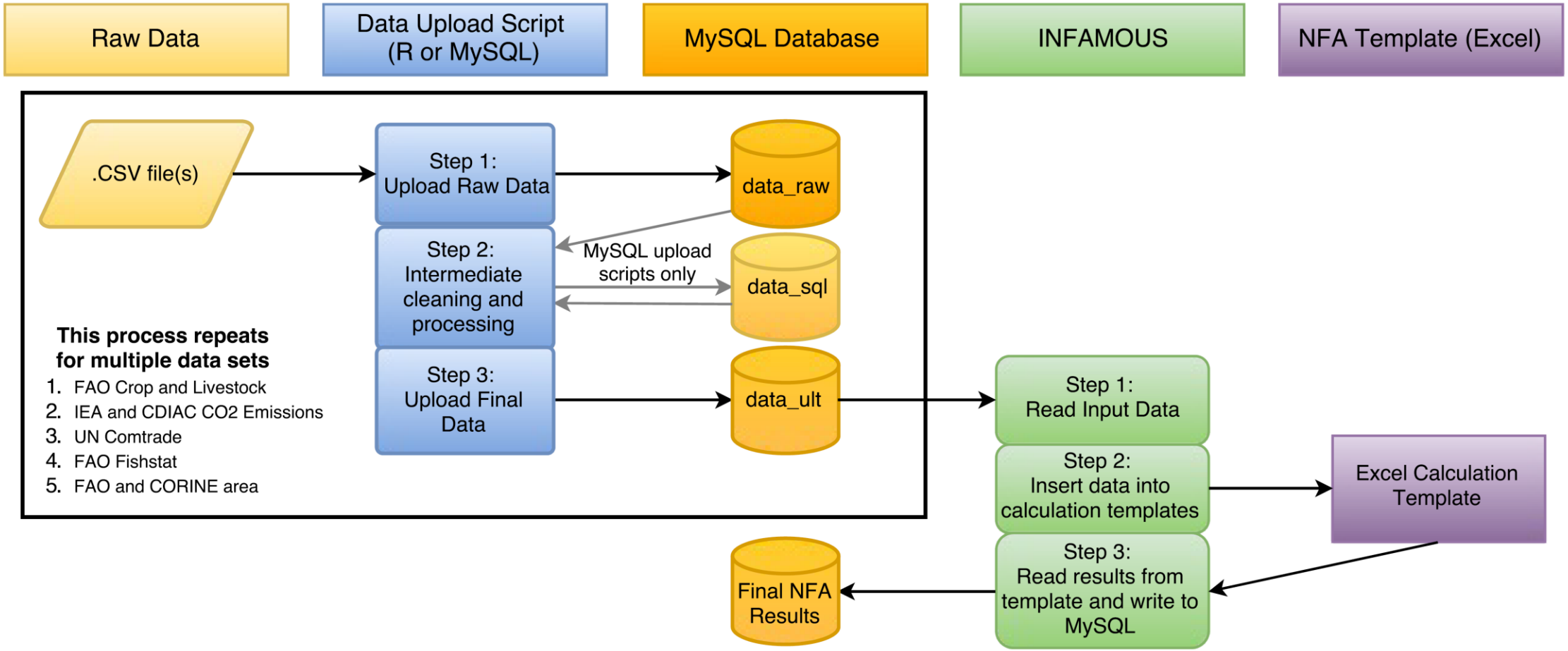
Total built-up area

NFA Data & Structure

Accounts of Ecological Footprint and biocapacity

- Over 250 countries, territories and the world.
- All years from 1961 to 2014
- Produced annually (July-December)
- Updated and improved through an ongoing process of research, and approval by an expert committee, and scientific peer review

NFA Data & Structure



NFA Data & Structure

See Country Workbook