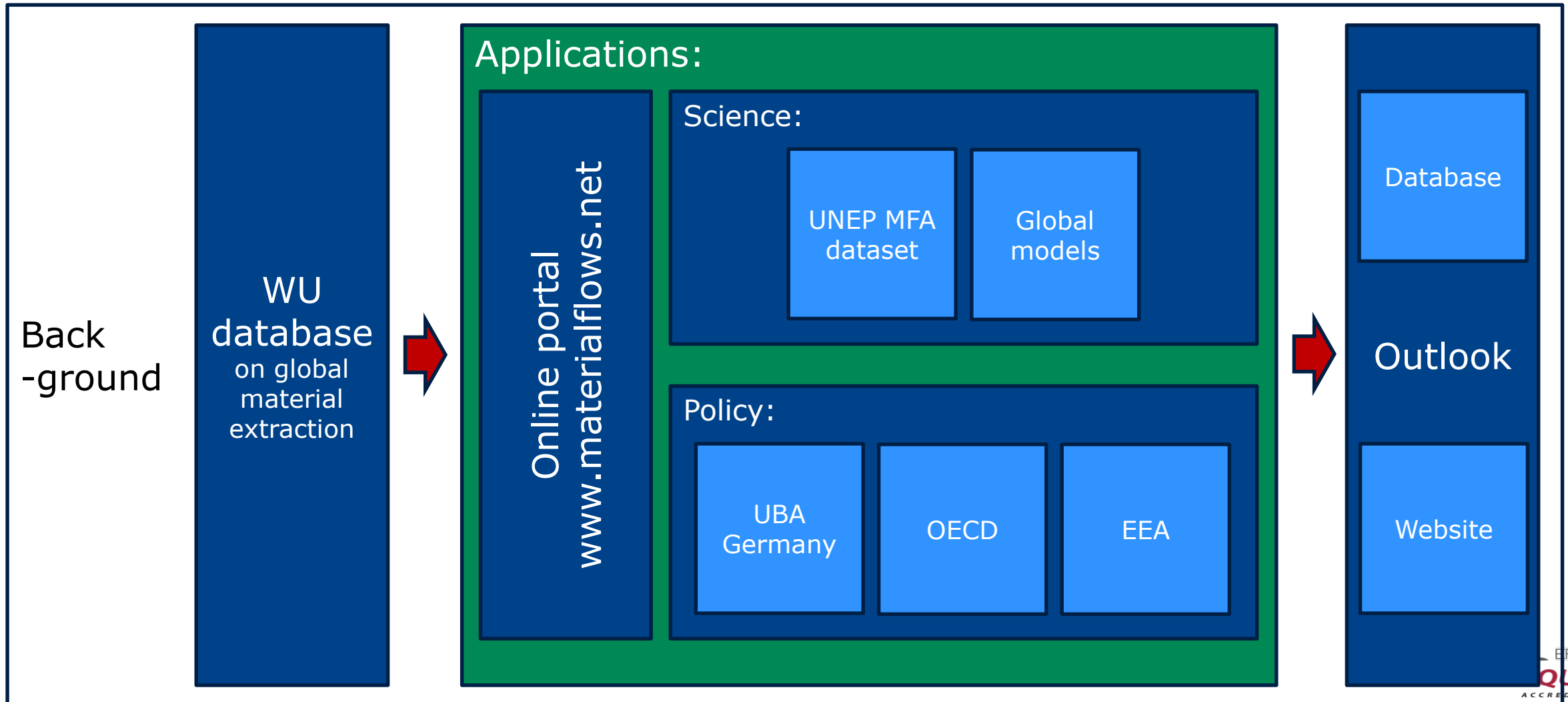


**[www.materialflows.net](http://www.materialflows.net)**  
**Providing global material flow data**  
**for research and policy use**

**Resource Conference Vienna, 21.11.2016**

**Dr. Stephan Lutter**

# Content

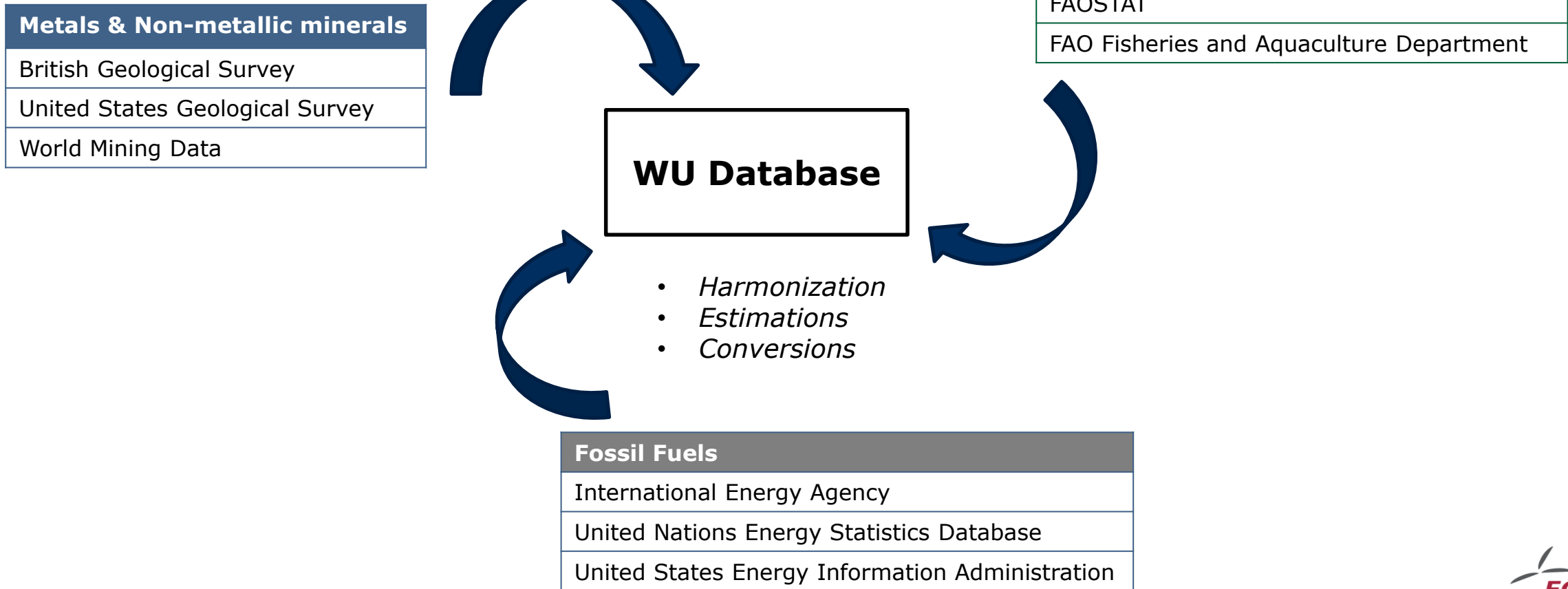


- Increasing demand for reliable data on material extraction, trade and consumption for all countries world-wide
- Policy makers:
  - Global: Evaluating progress towards achieving SDGs
  - EU: monitoring implementation of resource efficiency and circular economy
- Academia:
  - Assessing global patterns of material use and resource productivity
- Companies:
  - Data on supply chain-wide material requirements and potential risks

# WU database on global material extraction: overview

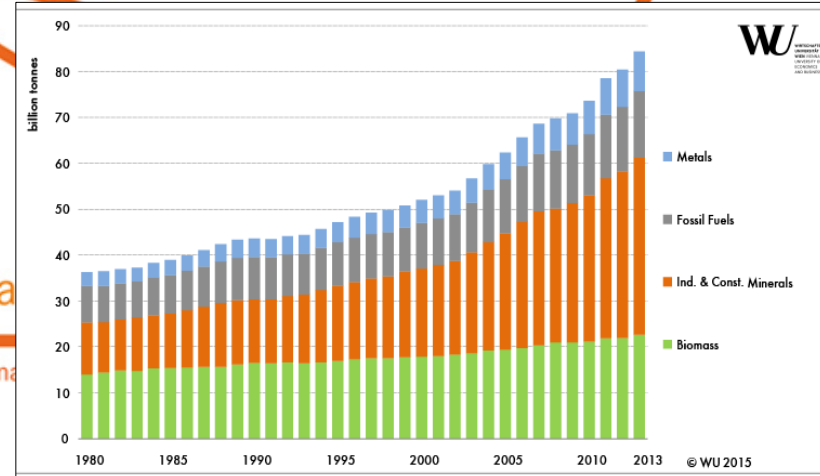
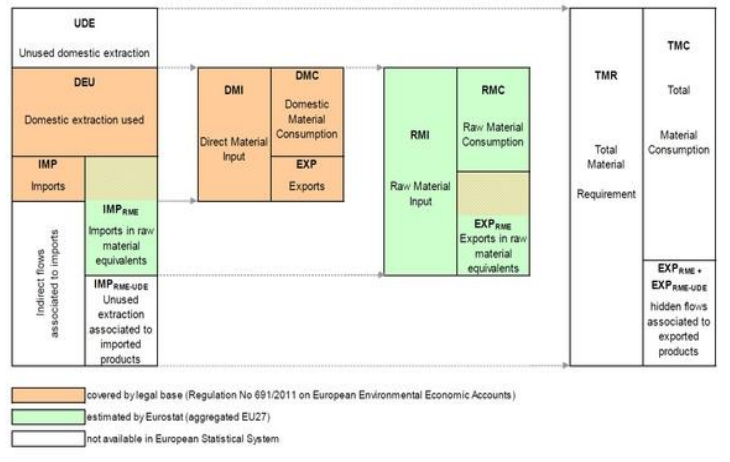
- Data on extraction of ~300 different raw materials:  
Biomass, metal ores, minerals, fossil fuels
- Used/unused extraction
- Net/gross values
- Unit: metric tonnes
- ~200 countries
- Time series from 1980-2013
- Based on official data from BGS/USGS, FAO, IEA, etc.

# WU database on global material extraction: compilation



# Applications: [www.materialflows.net](http://www.materialflows.net)

[Home](#) [Contact](#)



Flow Type:  Flow Sub-Type:  Reference Parameter:

Additional download specifications:

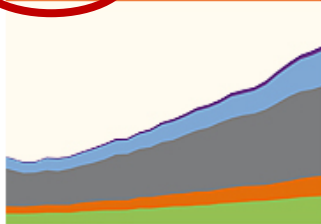
Year(s):  Country Group:

## Background



- ▶ Importance
- ▶ Accounting
- ▶ Main applications
- ▶ Policy relevance
- ▶ Objectives
- ▶ Users

## Trends



- ▶ Current Analyses
- ▶ Download slides
- ▶ Download fact sheets

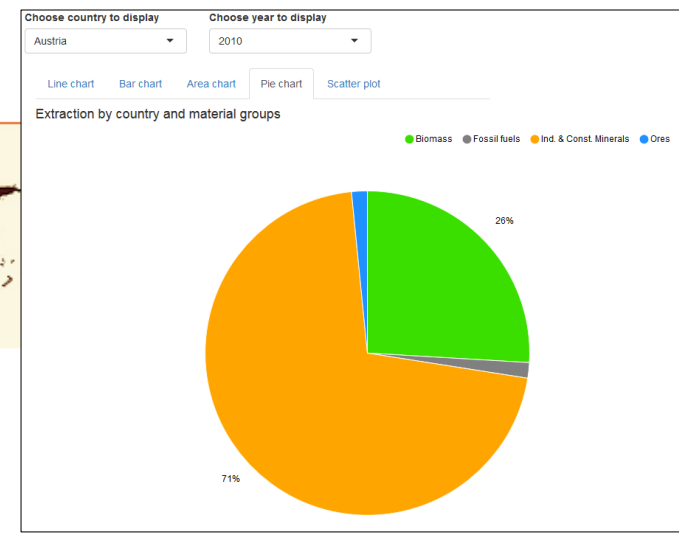
## Data

- ▶ Datadownload
- ▶ Data purchase
- ▶ [Technical Report \(pdf\)](#)
- ▶ Data update information

## Visualisation Tools



- ▶ MFA Worldmaps
- ▶ Gapminder
- ▶ Worldmapper
- ▶ Dynamic Visualisation [NEW]

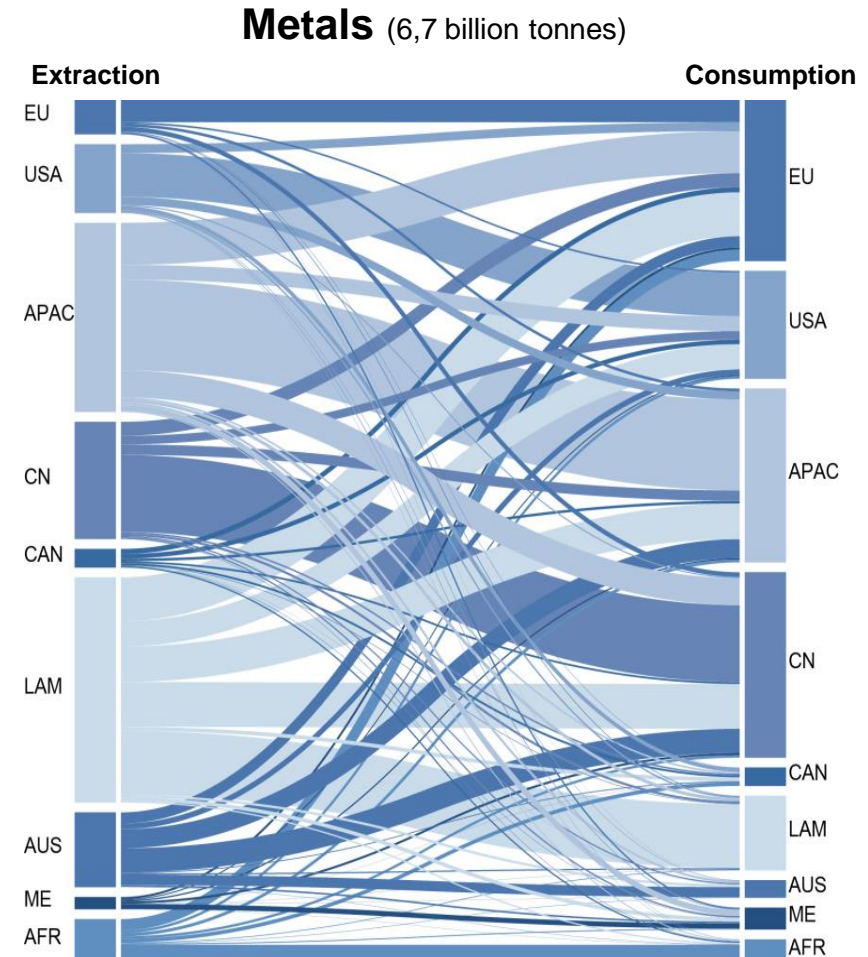


## **UN ENVIRONMENT reference dataset on material flows:**

- CSIRO, WU Vienna, Nagoya University, Sydney University
- Intended to help governments
  - understand how economic growth patterns influence resource use;
  - evaluate the impacts of policies adopted in the past;
  - and develop effective strategies to improve resource efficiency through targeted SCP policies and actions
- Aim:
  - standardise the data processing procedure for regular updates in the future
  - align underlying databases
- WU: fossil fuels, metals and minerals (domestic extraction and trade)

## Global environmental-economic models:

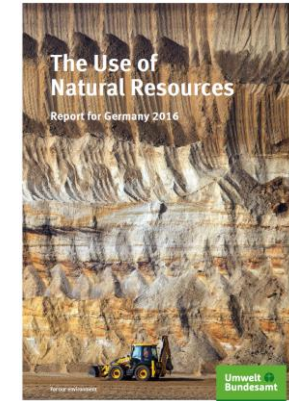
- „Environmental extension“ to economic input-output models
- E.g. EXIOBASE, WIOD
- Analysis of „material footprints“





# Applications: policy

- German Environment Agency (UBA):
  - 2016: The Use of Natural Resources: Report for Germany 2016
  - 2013: Update of national and international resource indicators
- OECD:
  - 2015: Booklet and Green Growth Report “Material Resources, Productivity and the Environment”
  - Ongoing work on harmonization of material footprint methodology
- European Environment Agency (EEA):
  - SOER 2010



## Database:

- Extension to time period 1970-2014
- Nowcasting data to 2016
- Further improvements: e.g. estimation of construction minerals
- Full harmonisation with UNEP database

## Website:

- Section on material footprints
- Dynamic Worldmapper

# Thank you for your attention!



VIENNA UNIVERSITY OF  
ECONOMICS AND BUSINESS

**Department for Socio-Economy**  
Institute for Ecological Economics  
Welthandelsplatz 1, 1020 Vienna, Austria

**DR. STEPHAN LUTTER**

T +43-1-313 36-5754

stephan.lutter@wu.ac.at  
[www.wu.ac.at/ecolecon](http://www.wu.ac.at/ecolecon)