



Applicability of Water Footprint in Malaysia

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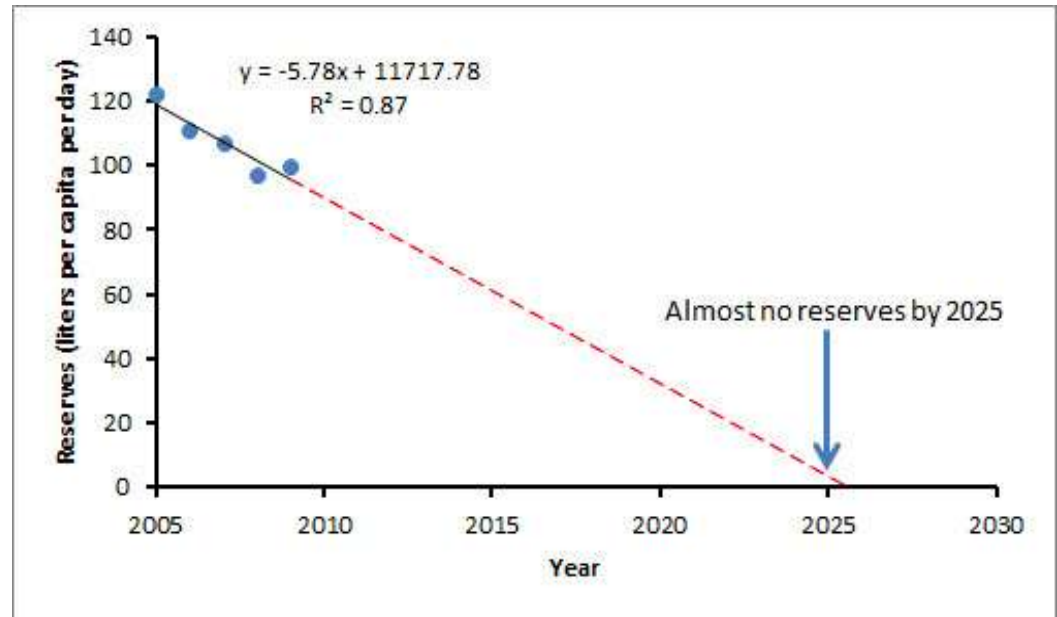
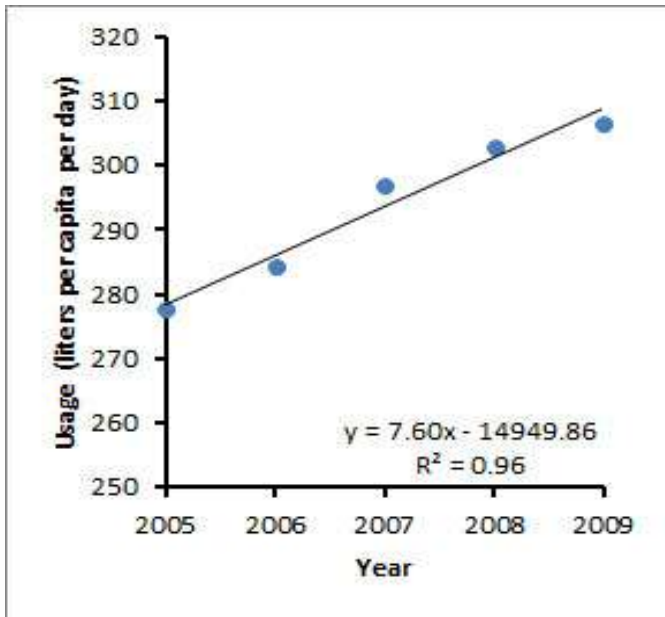
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Facts & Issues

- Consumable water is not just water
 - Treatment
 - Heating/cooling
 - Transport
 - (Bottling)
 - Wastewater treatment
 - Polluted water

Facts & Issues

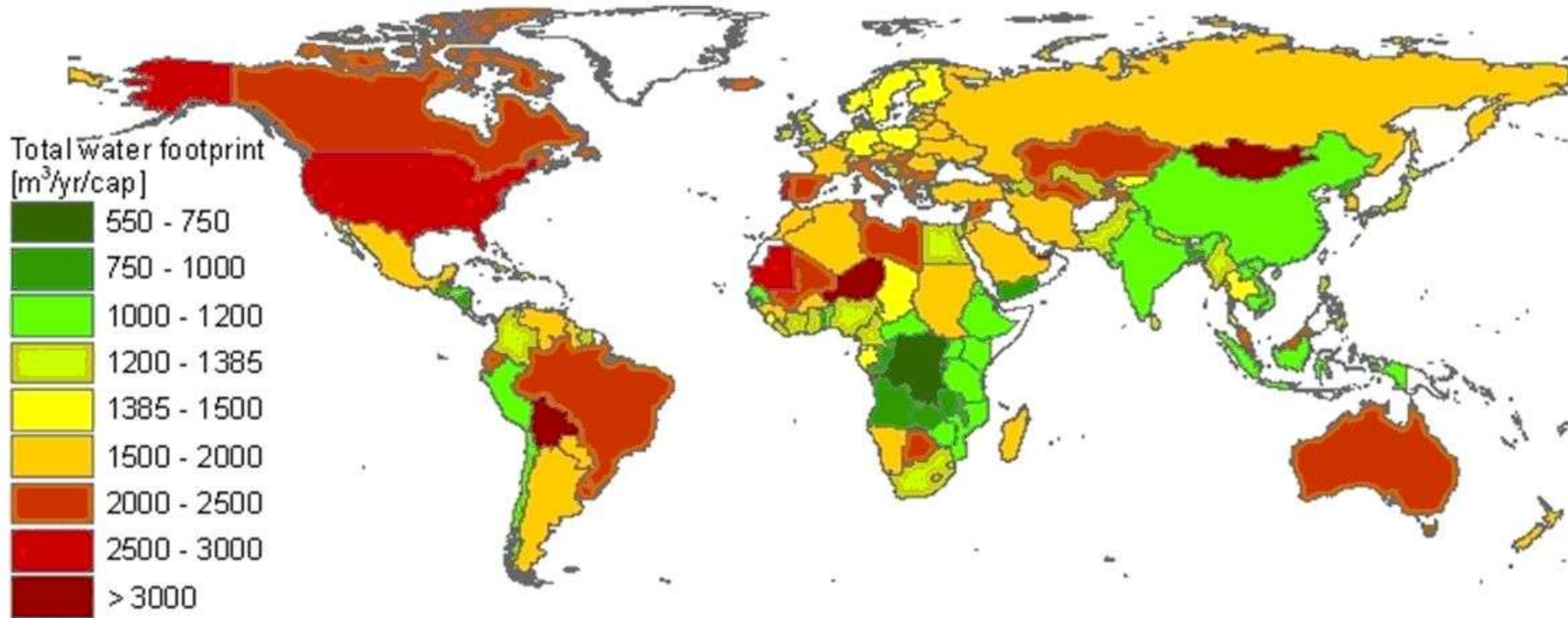
Malaysian Water Consumption and Reserves Depletion



Dept. of Statistics of Malaysia



Facts & Issues



Waterfootprint.org

Facts & Issues

Currently there is very little focus on water conservation in Malaysia

Ideas

- Water Footprint
 - Incorporation into
 - Industry production
 - Government policy
 - Consumer awareness
 - Why and How?

Footprints

- Quantification of the pressure we are applying to the earth through our activities
- Quantifications should be done in a life cycle perspective
- Footprints can be quantified within specific topics
- Footprints can be quantified for products, countries or regions

Footprint Families

- Ecological Footprint** (Wackernagel & Rees, 1996) **Def.:** human pressure on the planet in terms of the aggregate demand that resource-consumption and CO₂ emissions places on ecological assets.

Water Footprint (Hoekstra, 2002)
Def.: human appropriation of natural capital in terms of the total freshwater volume required (blue, green, grey) for human consumption.

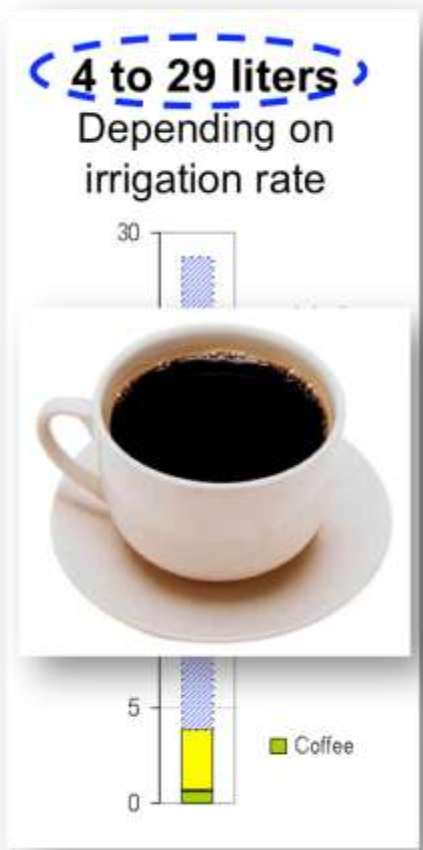
- Carbon Footprint** (multiple authors, ~2000 / 2008) **Def.:** human pressure on the planet in terms of the total GHG emissions (associated with an activity or accumulated over the life stages of a product) and human contribution to climate change.



Example - Coffee

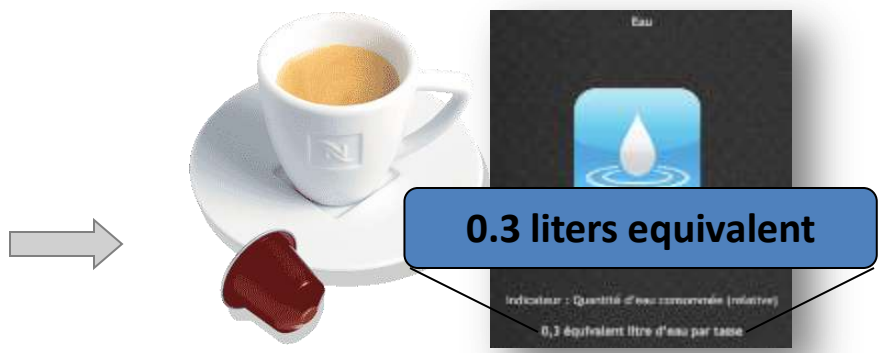


Chapagain and Hoekstra

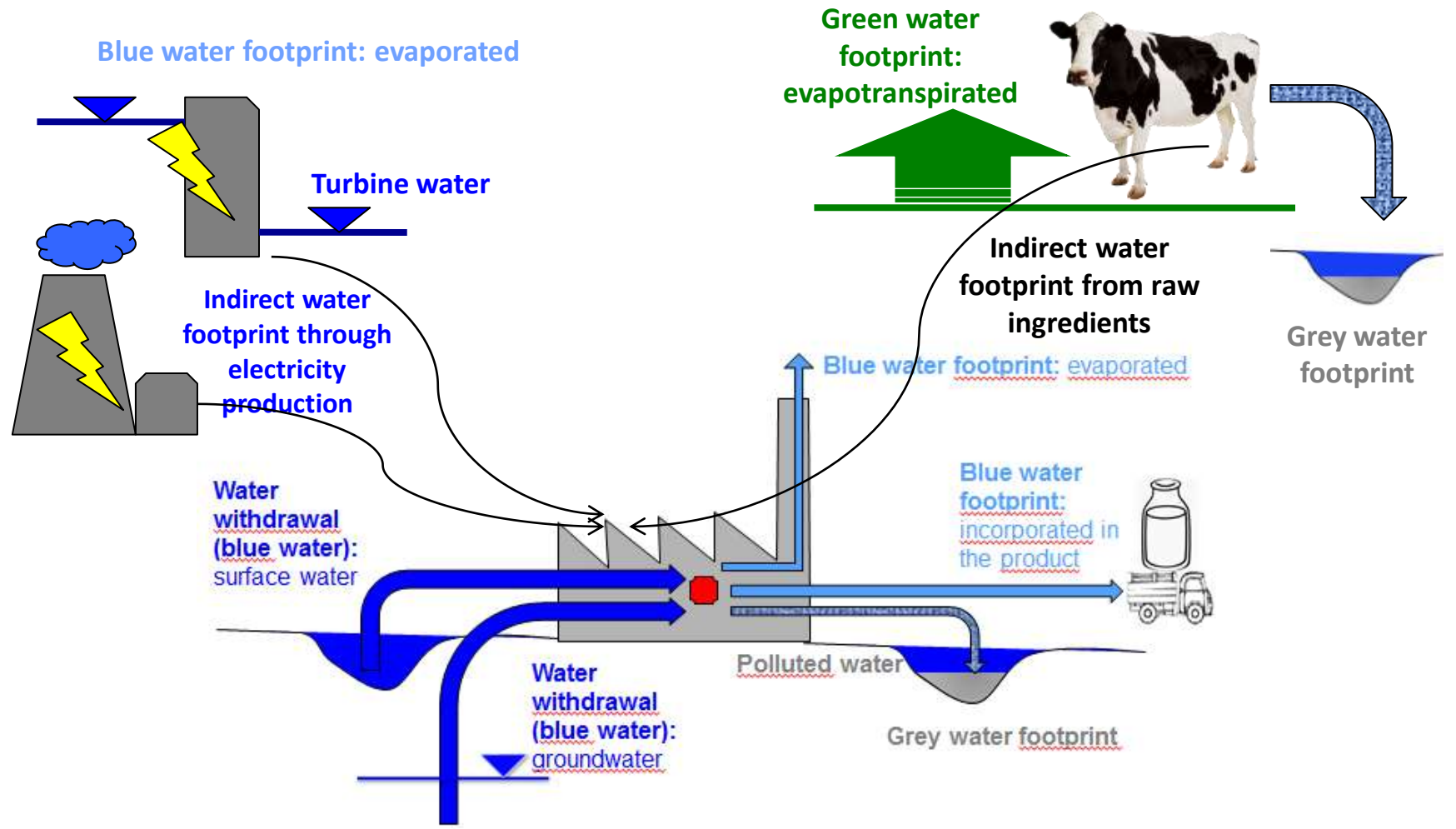


Humbert et al.

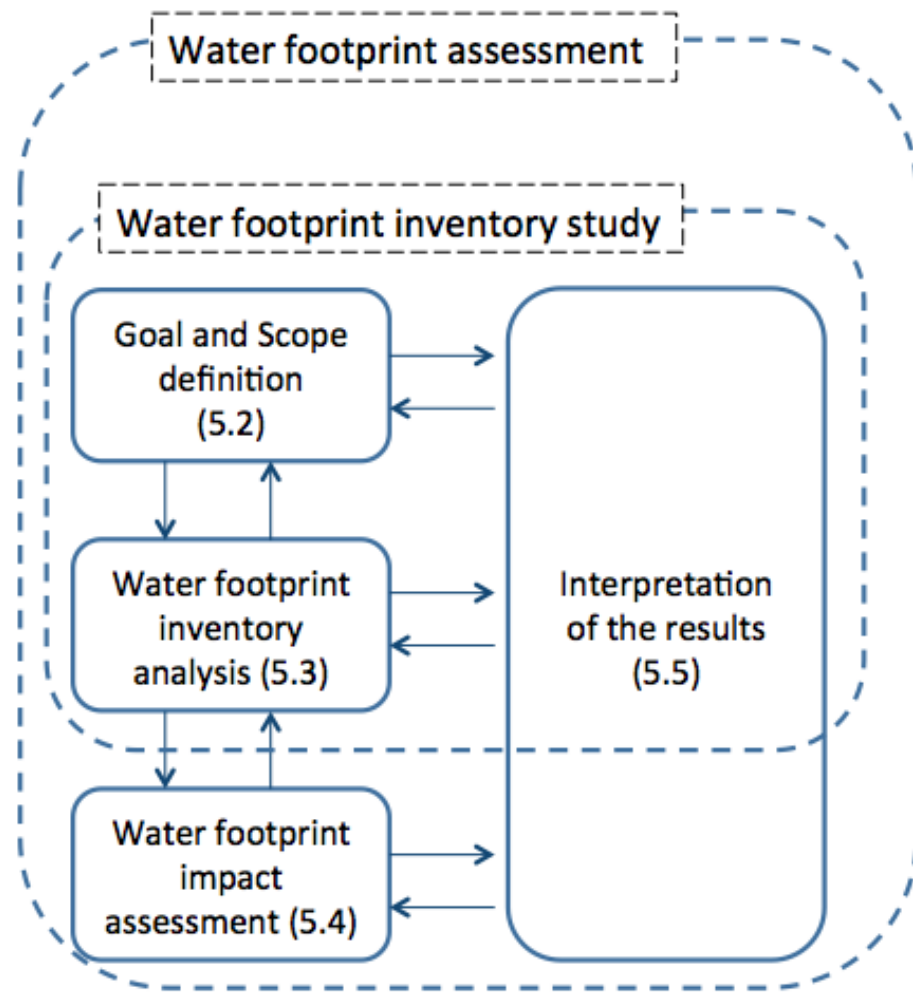
French labelling



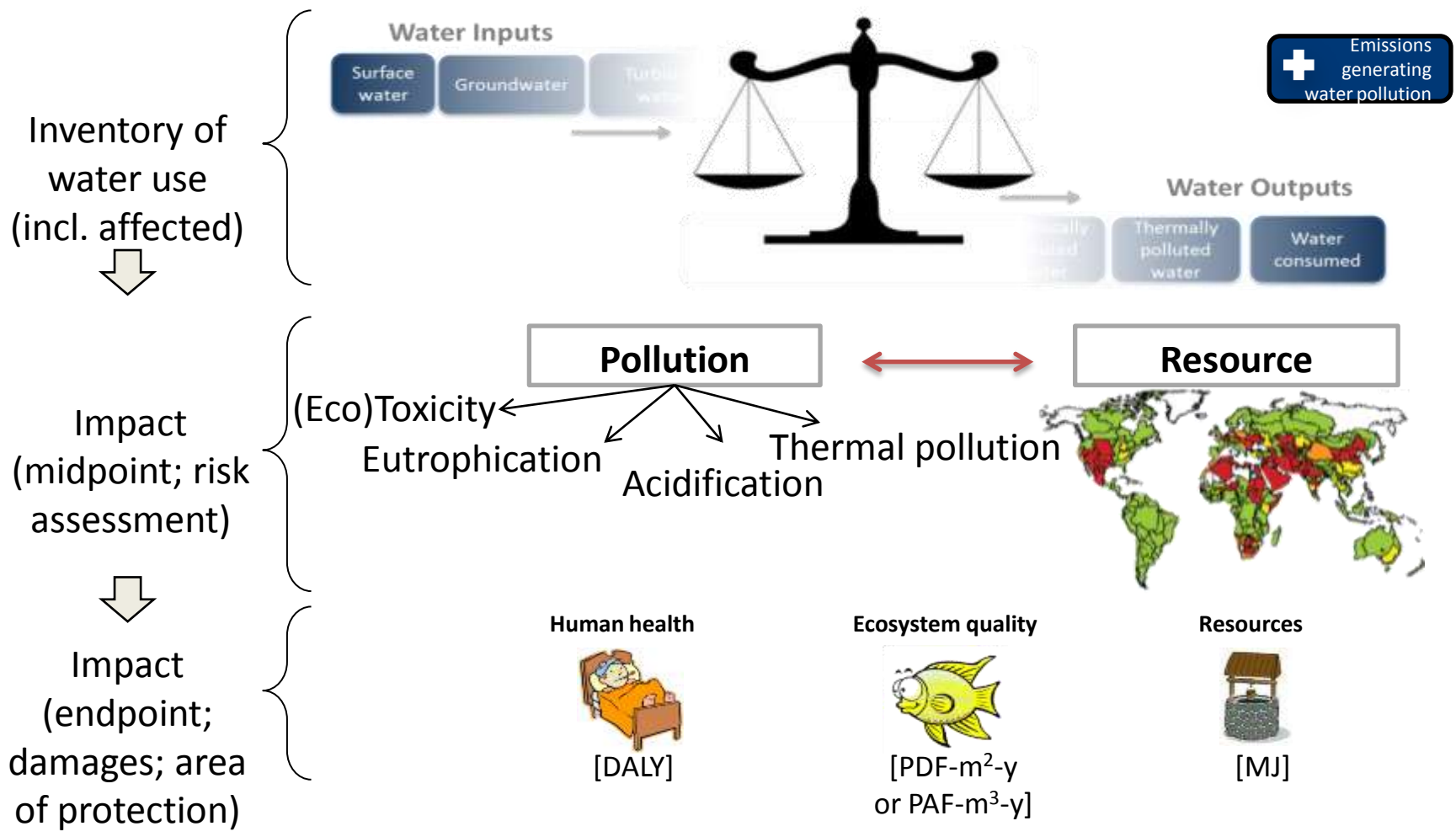
Water Footprint



Life Cycle Assessment



Water Footprint by LCA



Advantages of Water Footprint in Malaysia

- National standard for water consumption and impacts reporting enables
 - Awareness raising and product labelling
 - Hotspot identification
 - policy formulation
 - quantitative target setting

Industry Applications

- Level 1: Disclosure and Reporting
 - Transparency, marketing, goodwill
 - No deep understanding required
- Level 2: Risk Filter
 - Supply chain dependency and screening
 - Impacts, local water stress etc. must be understood
- Level 3: Planning and Decision-Making
 - Detailed production and supply chain management
 - In-depth understanding of life cycle impacts

Challenges

- Cheap water
- Added expense to companies – in the short term
- Lack of trained personnel
- Lack of academia-industry link
- Water footprint also new in Malaysian academia
- No pressure from local consumers



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Thank You

