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# **Bringing resource use into product policy**

**Dr A. Michael Warhurst,  
Resources & Consumption campaign  
Friends of the Earth Europe**

**[michael.warhurst@foe.co.uk](mailto:michael.warhurst@foe.co.uk)**

**<http://www.foeeurope.org/resources>**



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# Why is resource use important?

- “Over the 20th century, the world increased its fossil fuel use by a factor of 12, whilst extracting 34 times more material resources...
- Trends show, however, that the era of plentiful and cheap resources is over. **Businesses are facing rising costs for essential raw materials and minerals, their scarcity and price volatility are having a damaging effect on the economy.** Sources of minerals, metals and energy, as well as stocks of fish, timber, water, fertile soils, clean air, biomass, biodiversity are all under pressure, as is the stability of the climate system.
- Whilst demand for food, feed and fibre may increase by 70% by 2050, **60% of the world’s major ecosystems that help produce these resources have already been degraded or are used unsustainably.**
- If we carry on using resources at the current rate, by 2050 we will need, on aggregate, the equivalent of more than two planets to sustain us, and **the aspirations of many for a better quality of life will not be achieved.”**
  - “Roadmap for a Resource Efficient Europe”, European Commission, 20th September 2011
  - [http://ec.europa.eu/environment/resource\\_efficiency/index\\_en.htm](http://ec.europa.eu/environment/resource_efficiency/index_en.htm)



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# **Addressing resource use**

- **The EU is currently not measuring resource use, and product policy does little to promote resource efficiency**
- **Friends of the Earth has been working with Sustainable Europe Research Institute in Vienna to develop and effective measurement approach.**
  - **A system that will work for products or economies**
  - **A system that considers our global resource consumption**
- **Our research led to four indicators [1, 2]:**
  - **Global material footprint**
  - **Water footprint**
  - **Land footprint**
  - **Carbon footprint**
- **This type of approach has been backed by the Commission:**



# Indicators in the Resource Efficiency Roadmap

- **In the Roadmap itself:**
  - "In order to launch this process, two levels of indicators are provisionally formulated:
    - 1. A provisional lead indicator - "Resource Productivity" - to measure the principal objective of this Roadmap, of improving economic performance while reducing pressure on natural resources;
    - 2. *A series of complementary indicators on key natural resources such as water, land, materials and carbon, that will take account of the EU's global consumption of these resources.*
- **Staff working paper, Part 2, Page 69:**



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# Indicators

The Commission intends to use, improve or develop the following concrete indicators:

	<i>Production / territory perspective</i>	<i>Consumption / global supply chain perspective</i>
Land	Artificial land or built-up area (km <sup>2</sup> ) – available with restrictions in time series	Indirect land use / embodied land for agricultural and forestry products (km <sup>2</sup> ) – to be developed
Water	Water exploitation index <sup>166</sup> (WEI, %) – available with restrictions on completeness of data and regional/temporal resolution (river basin/intra-annual variations)	Water footprint – to be updated and improved or Embodied water – to be developed
Carbon	GHG emissions (t) – available	Carbon footprint – estimates available from scientific sources

This dashboard of indicators – in conjunction with the lead indicator – has the advantage that it focuses on clear stocks or flows of main resources: materials, land, water and carbon. As such it can be easily understood, measured and communicated.



# Indicators and product policy

- **Each of these four indicators can be applied to products**
  - They link to costs in the supply chain
  - They are closely linked to environmental and social impacts.
- **These indicators are already being used for products - though rarely as a group at the moment:**
  - **Water Footprint**
    - Well established, some variability of methods
      - E.g. Water Footprint Network
  - **Carbon footprint**
    - Well established, some variability of methods
      - E.g. BSI PAS 2050
  - **Material use/footprint**
    - A range of different approaches
  - **Land footprint**
    - A less developed (though quite simple) approach



# It's not just what's in the cup...

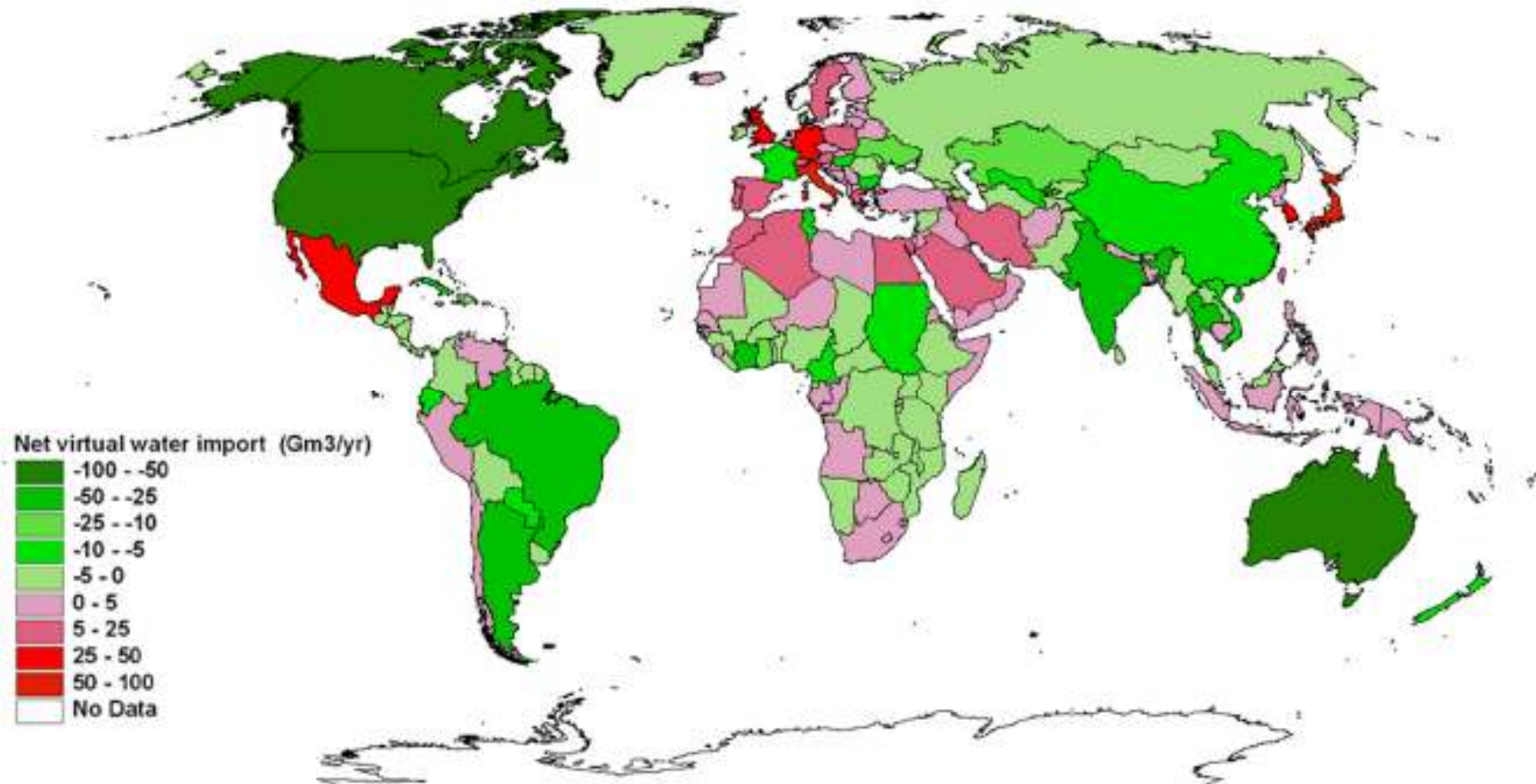


Source: Water Footprint Network, 2009 - <http://www.waterfootprint.org/>



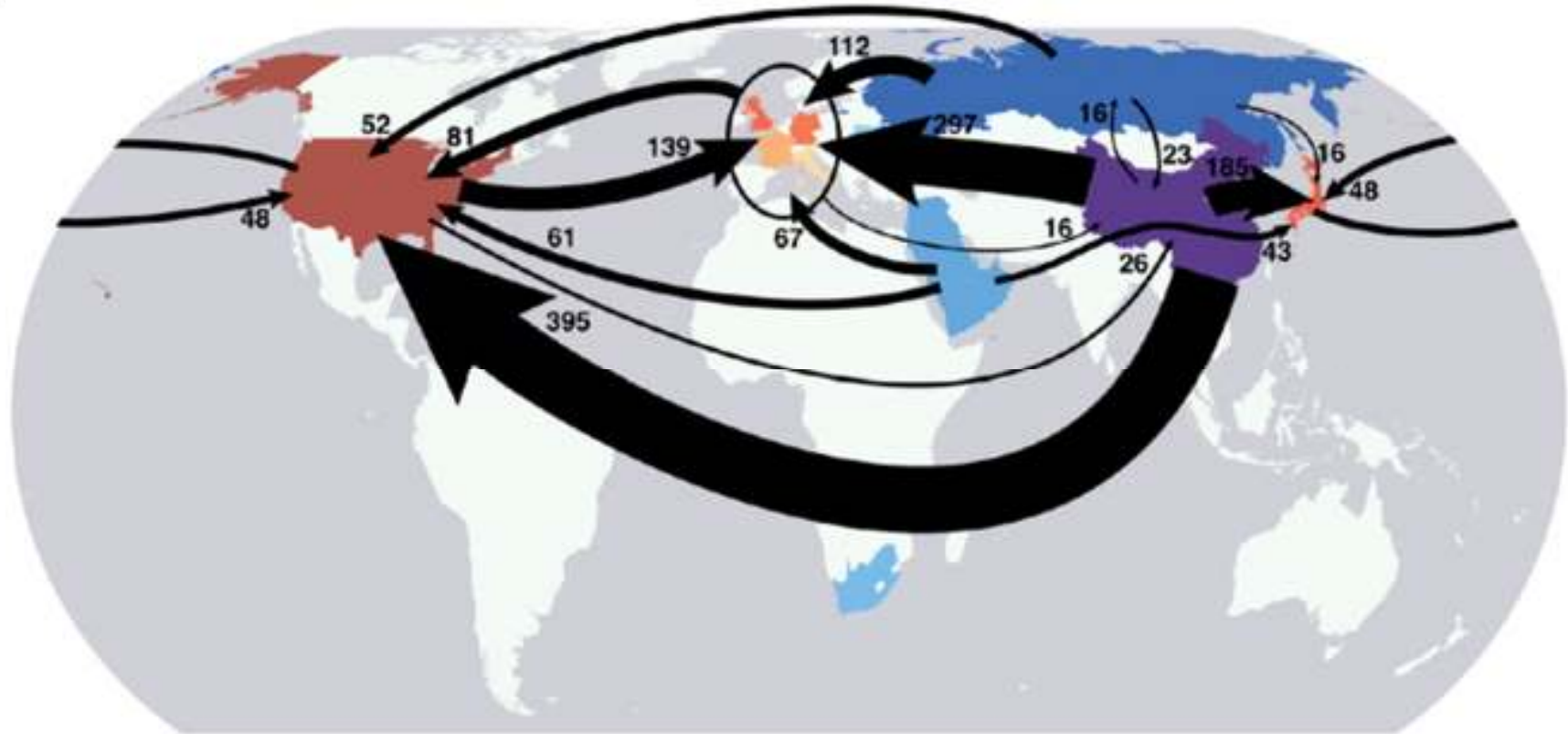
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# Imports and exports of virtual water, 2000



Source: Water Footprint Network, 2009 - <http://www.waterfootprint.org/>

# Main global fluxes of carbon in goods



Largest interregional fluxes of emissions embodied in trade (Mt CO<sub>2</sub> y<sup>-1</sup>) from dominant net exporting countries (blue) to the dominant net importing countries (red). (Davis and Caldera, 2010 [3])



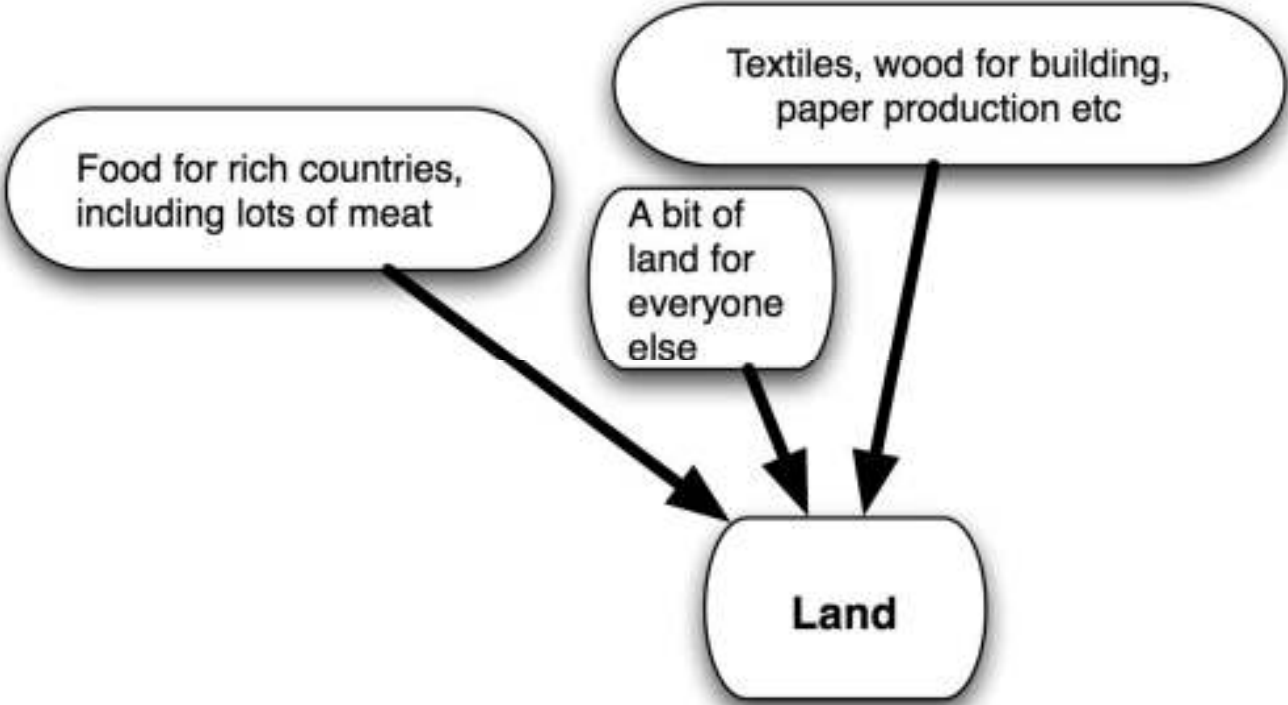
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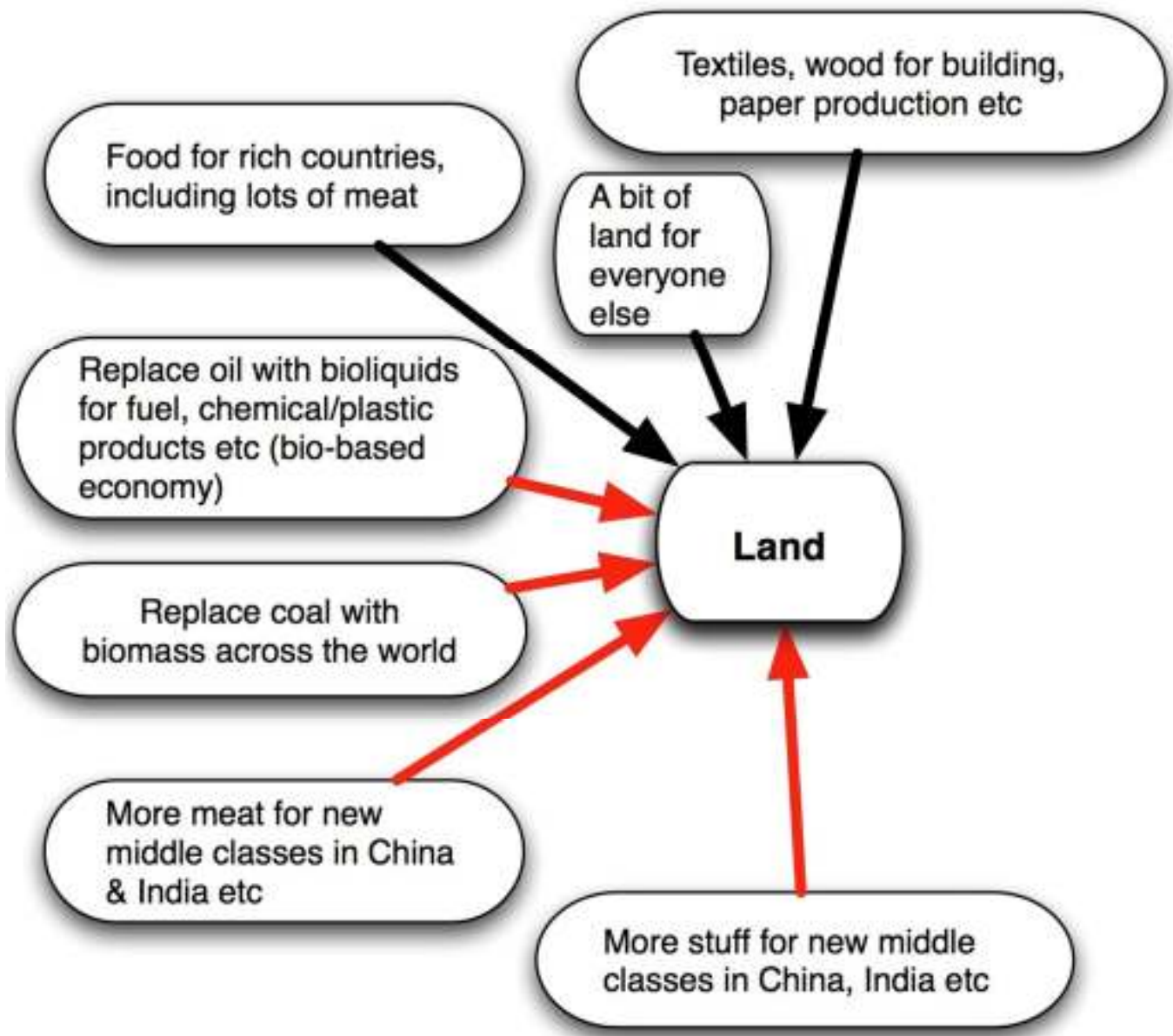
# **Land footprint?**

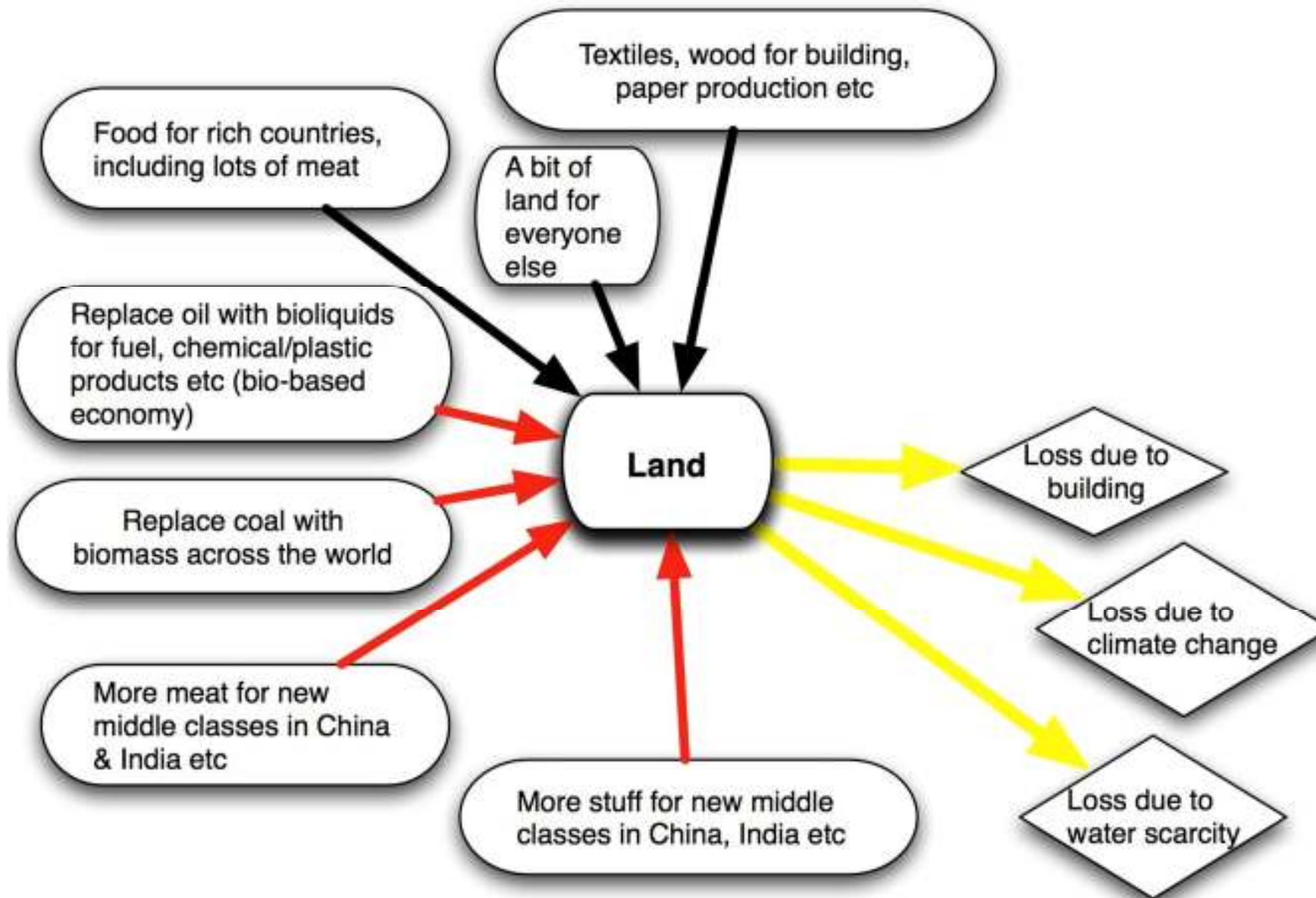
***‘Buy land, they’re not making it any more’***

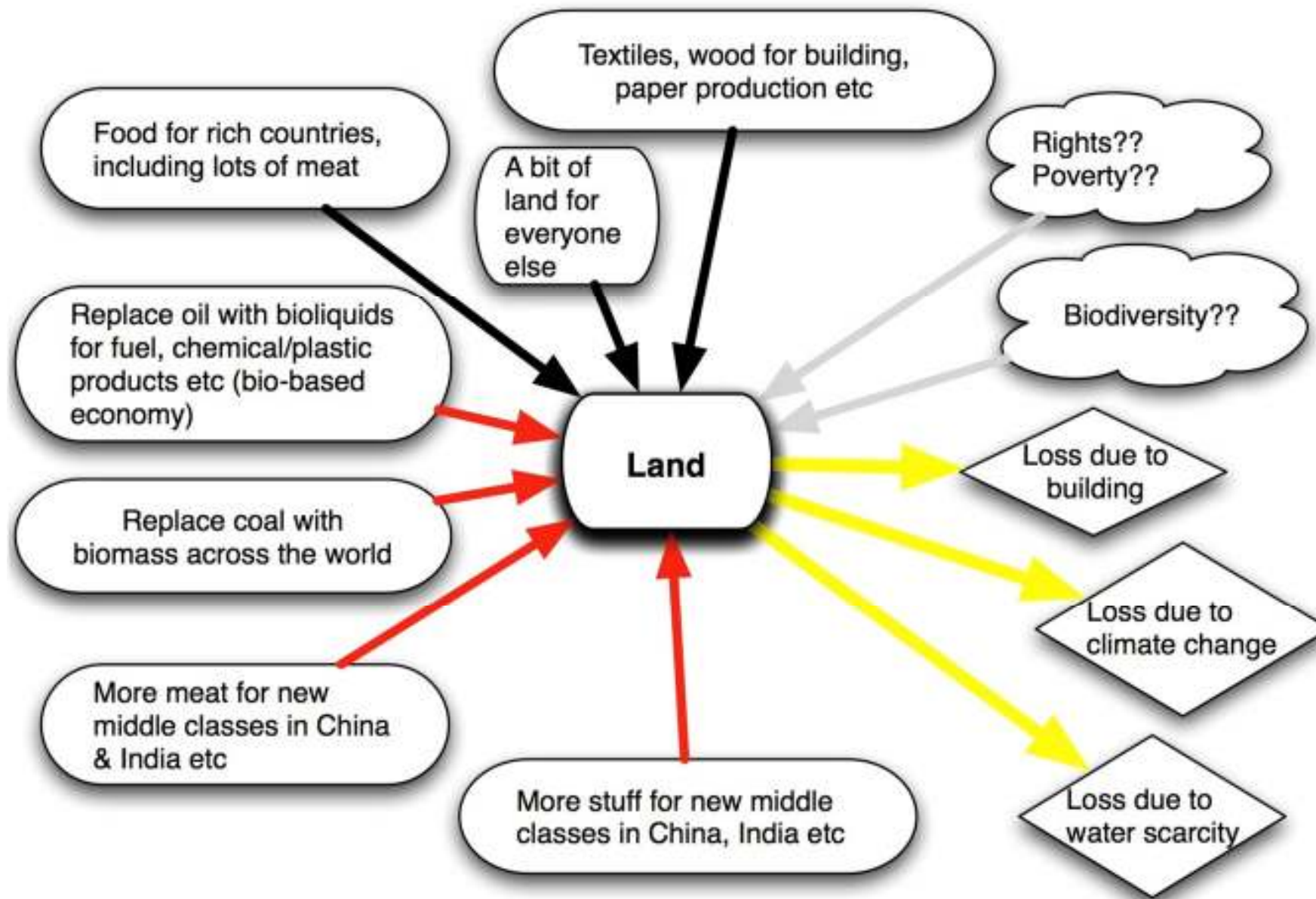
**Mark Twain**

- **European consumption depends on land outside Europe for e.g.**
  - Producing food – and feed for livestock in Europe
  - Producing textiles, minerals, fuels etc
- **Land has tended to be neglected in resource efficiency analyses**
  - but it’s quite important..

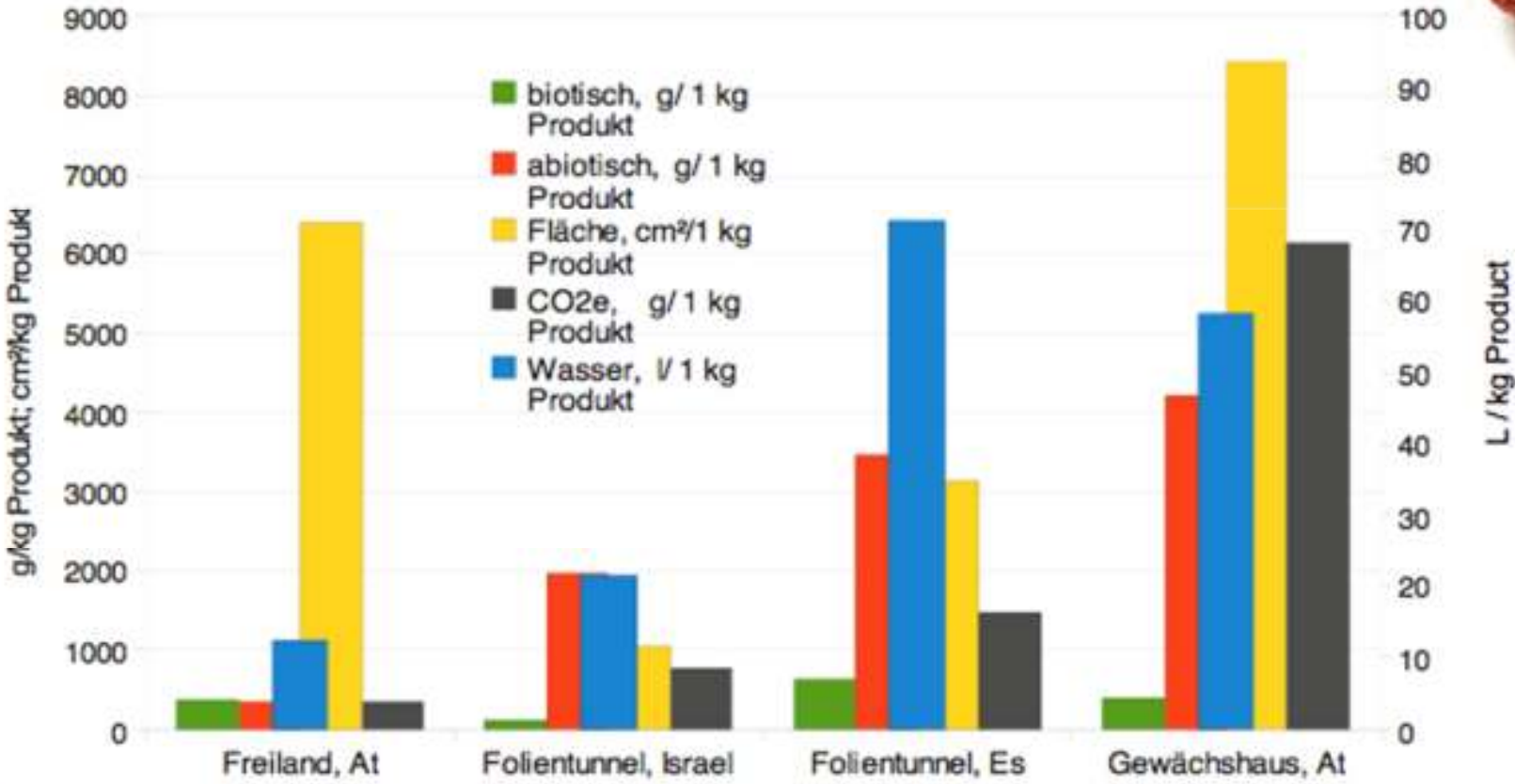








# Comparing strawberries:





# **Why put resource use in product policy?**

- **Resource use is important**
  - It has costs
  - It has impacts
- **Resource use measurement through supply/value chains can help reduce these costs and impacts**
  - Making the products more resistant to variability in resource prices
  - Making the products ‘greener’



# How to put resource use into product policy?

- **We are discussing ideas with a range of stakeholders**
  - We want to advocate something that can really deliver
- **Key components**
  - Standardisation of the four indicators (e.g. by Commission)
  - Communication through supply chains, through to ‘professional’ customers (e.g. public sector) & in some cases consumers.
- **Key debates:**
  - **What voluntary, what obligatory?**
    - Thresholds for companies or products? Sectors?
  - **Separate from current ecodesign directive?**
    - As a different approach & to avoid disruption of current directive?
  - **Measures to reduce resource use?**
    - Specific - e.g. longevity, reusability/recyclability



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# Conclusions

- **Resource use is measurable**
  - **But some methodologies need further standardisation**
    - This will help avoid duplication of work in supply chains
- **Products are a key part of reducing our resource use**
  - There will be major financial, social and environmental benefits
- **We would like to see the Commission start a process on resource use and product policy**
  - But in the meantime we are starting our own one
  - Contact [becky.slater@foe.co.uk](mailto:becky.slater@foe.co.uk) if you want to be involved.
- **For more information:**
  - <http://www.foeeurope.org/resources>
    - *NB: Conference on Europe's resource use on 8-9<sup>th</sup> November, with a session on product policy.*



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# References

1. “How to measure Europe’s Resource Use”, Sustainable Europe Research Institute for Friends of the Earth Europe, July 2009:  
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[http://www.foe.co.uk/resource/briefings/measuring\\_resource\\_use.pdf](http://www.foe.co.uk/resource/briefings/measuring_resource_use.pdf)
3. Davis, S. J., & Caldeira, K. (2010). Consumption-based accounting of CO2 emissions. Proc Natl Acad Sci USA, 107(12), 5687-5692.