

Module 2.2 - UA for reducing the city ecological footprint

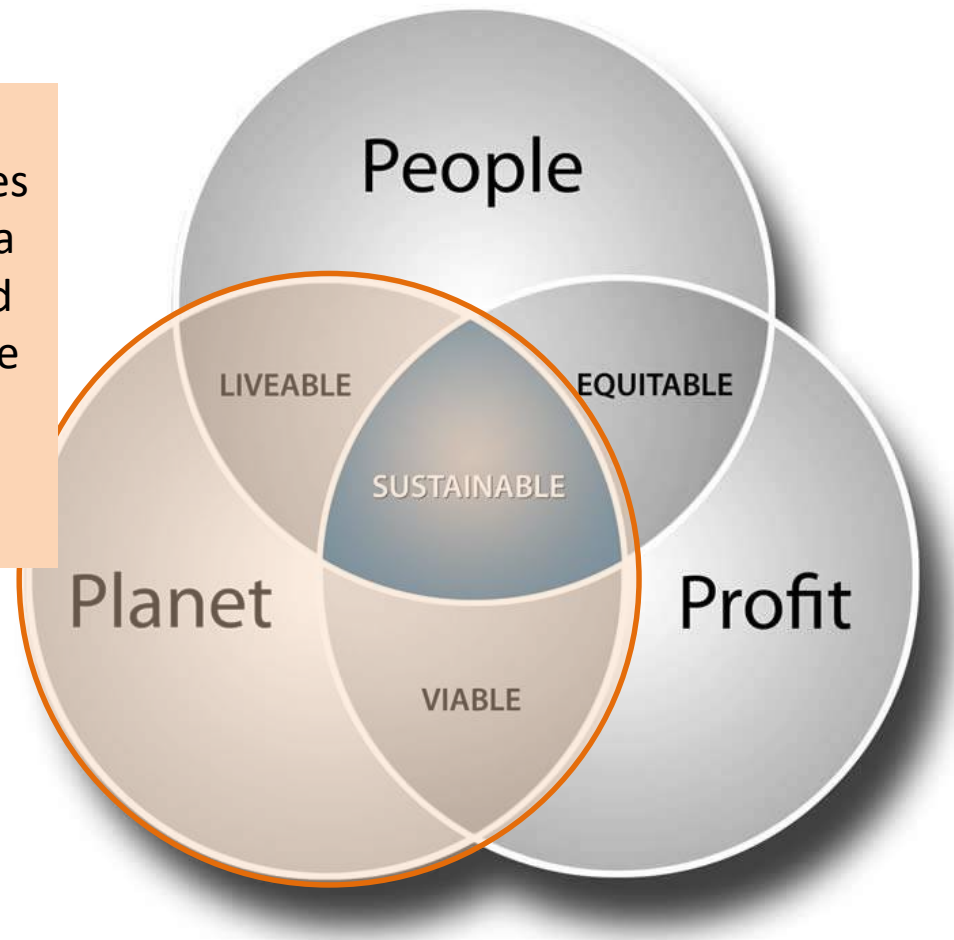
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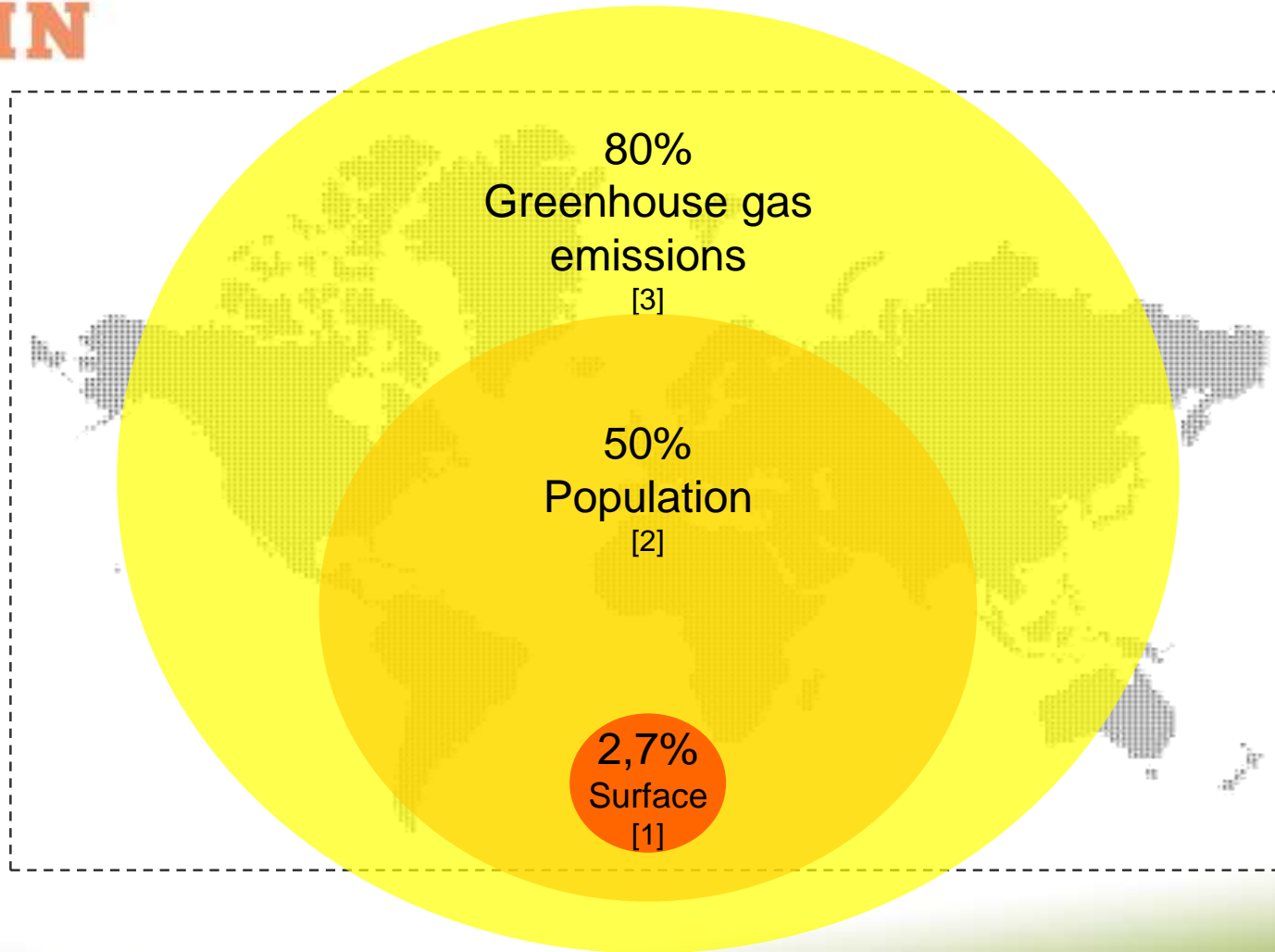
Ecological footprint

Ecological footprint

“the impact of human activities measured in terms of the area of biologically productive land and water required to produce the goods consumed and to assimilate the wastes generated” (WWF).



Environmental relevance of cities



[1] UN (2007) Urban population, Development and the Environment. Department of Economic and Social Affairs.

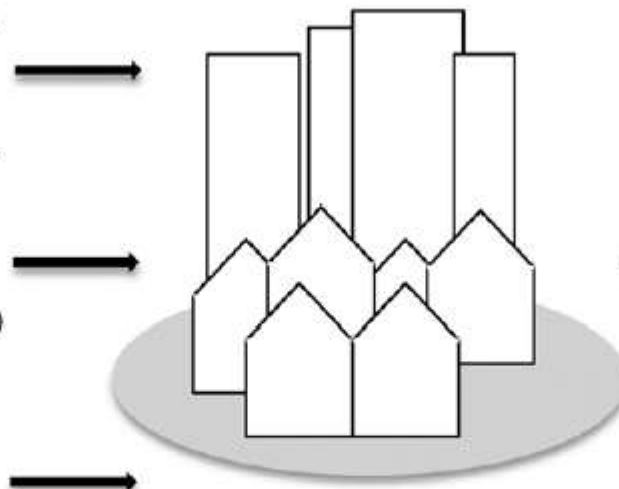
[2] UN (2008) World Urbanization Prospects: The 2007 Revision Population Database.

[3] Ash C, Jasny BR, Roberts L, Stone R, Sugden A (2008) Reimagining cities - Introduction. Science 319(5864): 739-739.

Urban metabolism

- Food:** vegetables, fruits, meat, fish, oils, sugar, tea, dairy, grains
- Water:** residential, commercial, industrial
- Transport Fuels:** gasoline, diesel
- Building Energy:** electricity, thermal energy: coal, coke, kerosene, natural gas, fuel oil (heavy and light)
- Metals:** steel, aluminum
- Plastics:** polyethylene terephthalate, polystyrene, polypropylene, polyethylene (high and low density)
- Paper:** newsprint, cardboard
- Glass:** clear, green, brown packaging
- Rubber:** natural and synthetic
- Electronics:** white goods (stoves, fridges, etc.), consumer electronics (laptops, stereos, etc.), batteries
- Construction Materials:** wood, concrete

Metabolic Flows

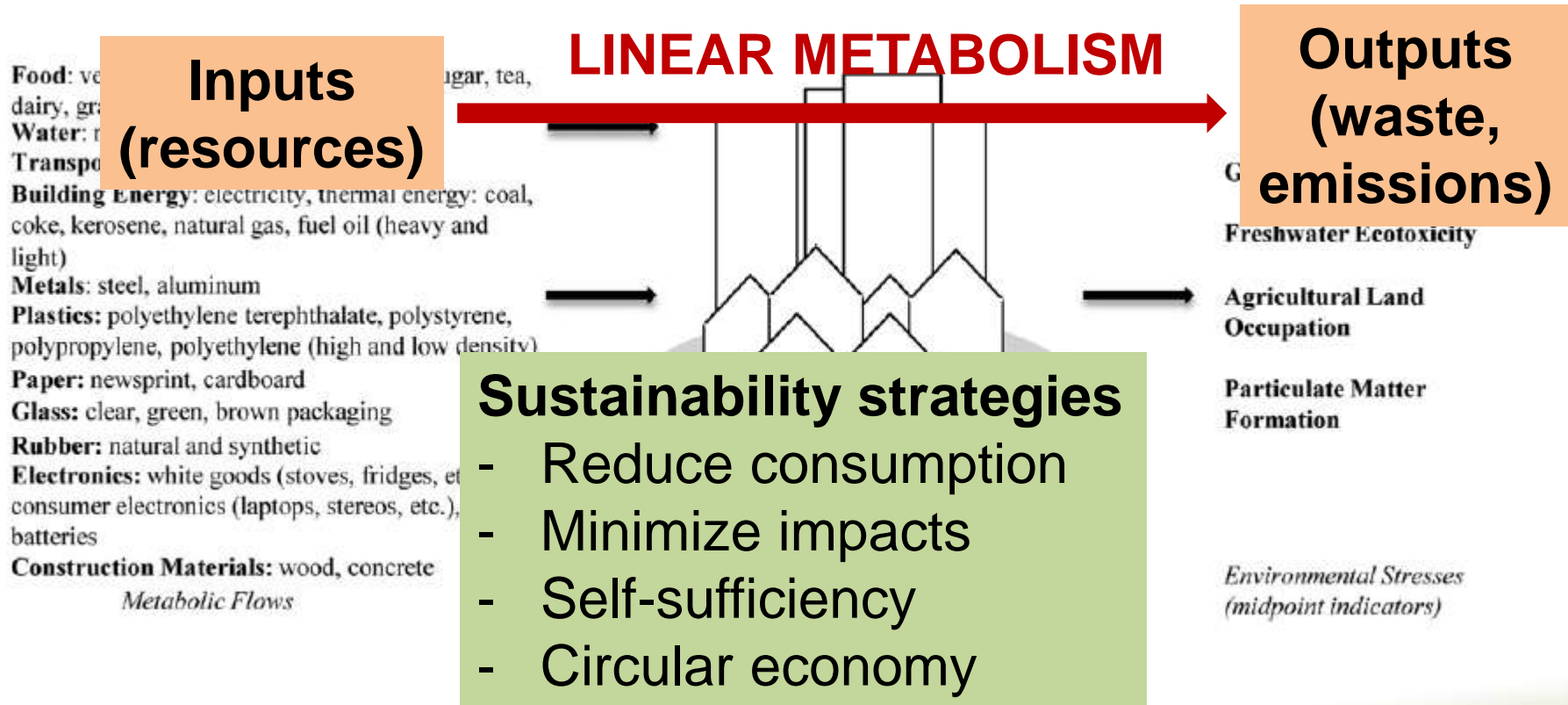


Urban Area

- Global Warming Potential**
- Freshwater Ecotoxicity**
- Agricultural Land Occupation**
- Particulate Matter Formation**

*Environmental Stresses
(midpoint indicators)*

Urban metabolism



Urban agriculture in the urban metabolism

Agron. Sustain. Dev. (2016) 36:9
DOI 10.1007/s13593-015-0348-4



REVIEW ARTICLE

Urban versus conventional agriculture, taxonomy of resource profiles: a review

Benjamin Goldstein¹  • Michael Hauschild² • John Fernández³ • Morten Birkved⁴

READ SECTIONS 1 AND 2 OF THE FOLLOWING ARTICLE:

Goldstein, Benjamin, et al. "Urban versus conventional agriculture, taxonomy of resource profiles: a review." Agronomy for Sustainable Development 36.1 (2016): 1-19.

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