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Ecological footprint tax for the development of local agribusiness

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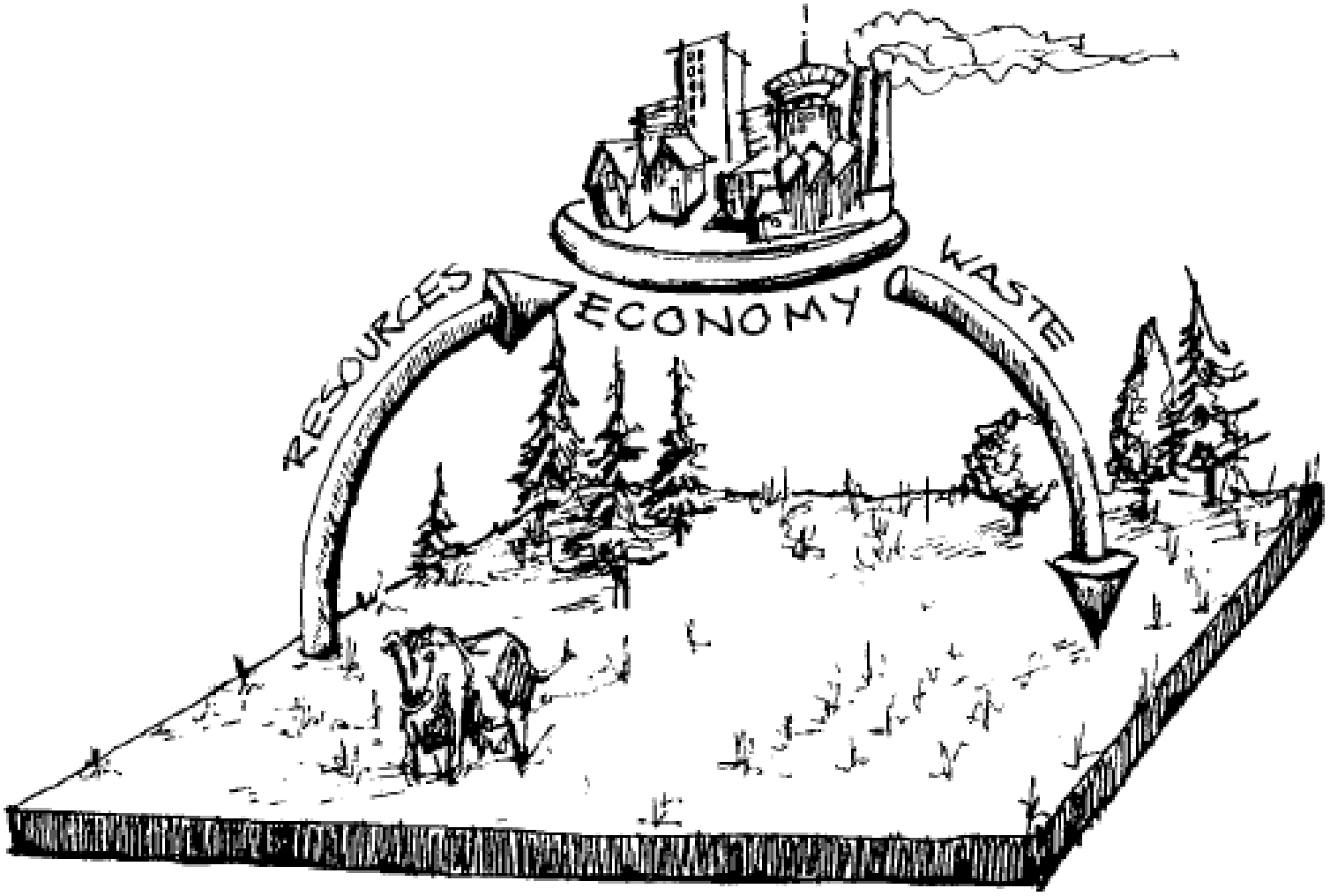
By local:

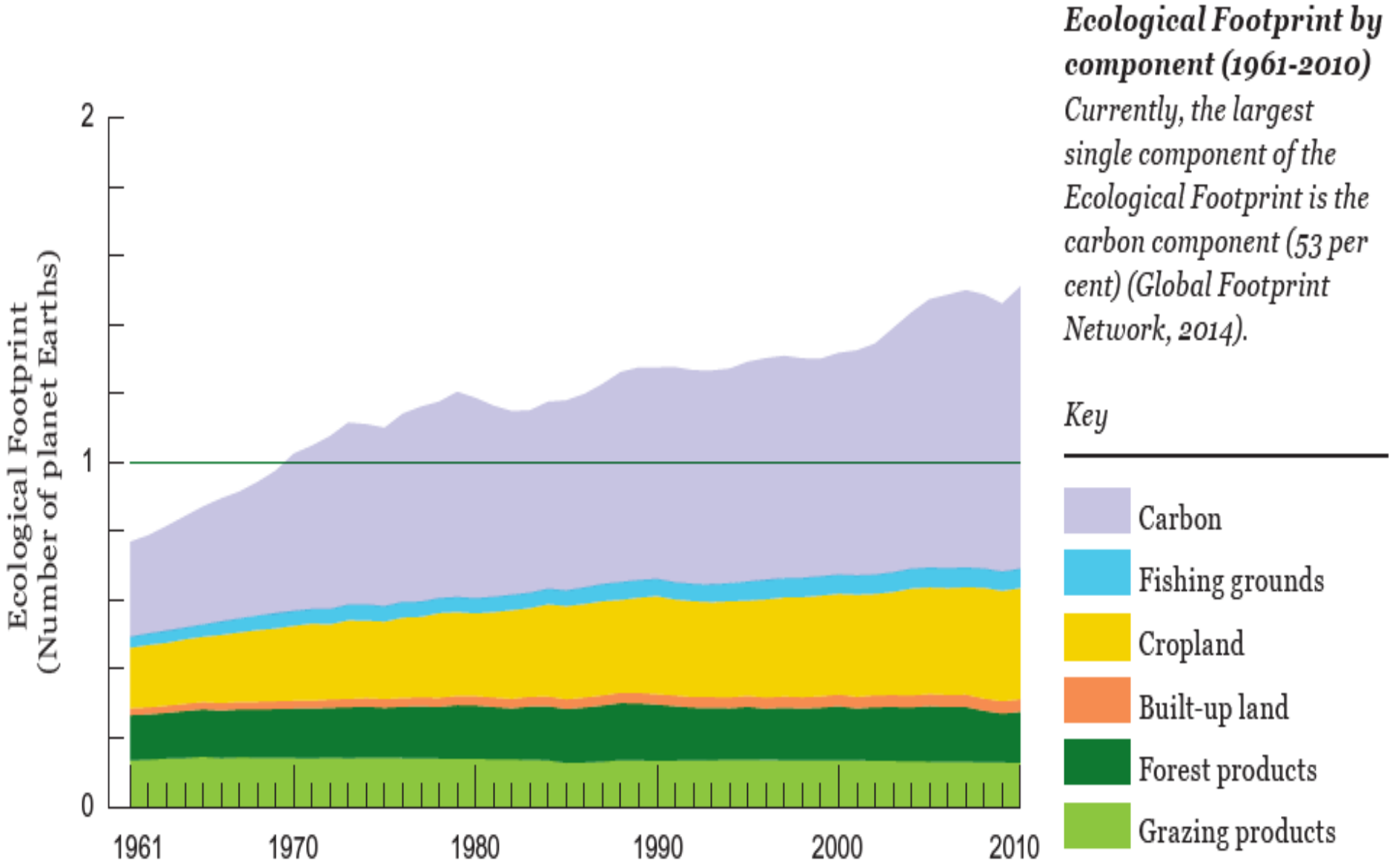
- save farmers

- take care of your health

The original concept of ecological footprint

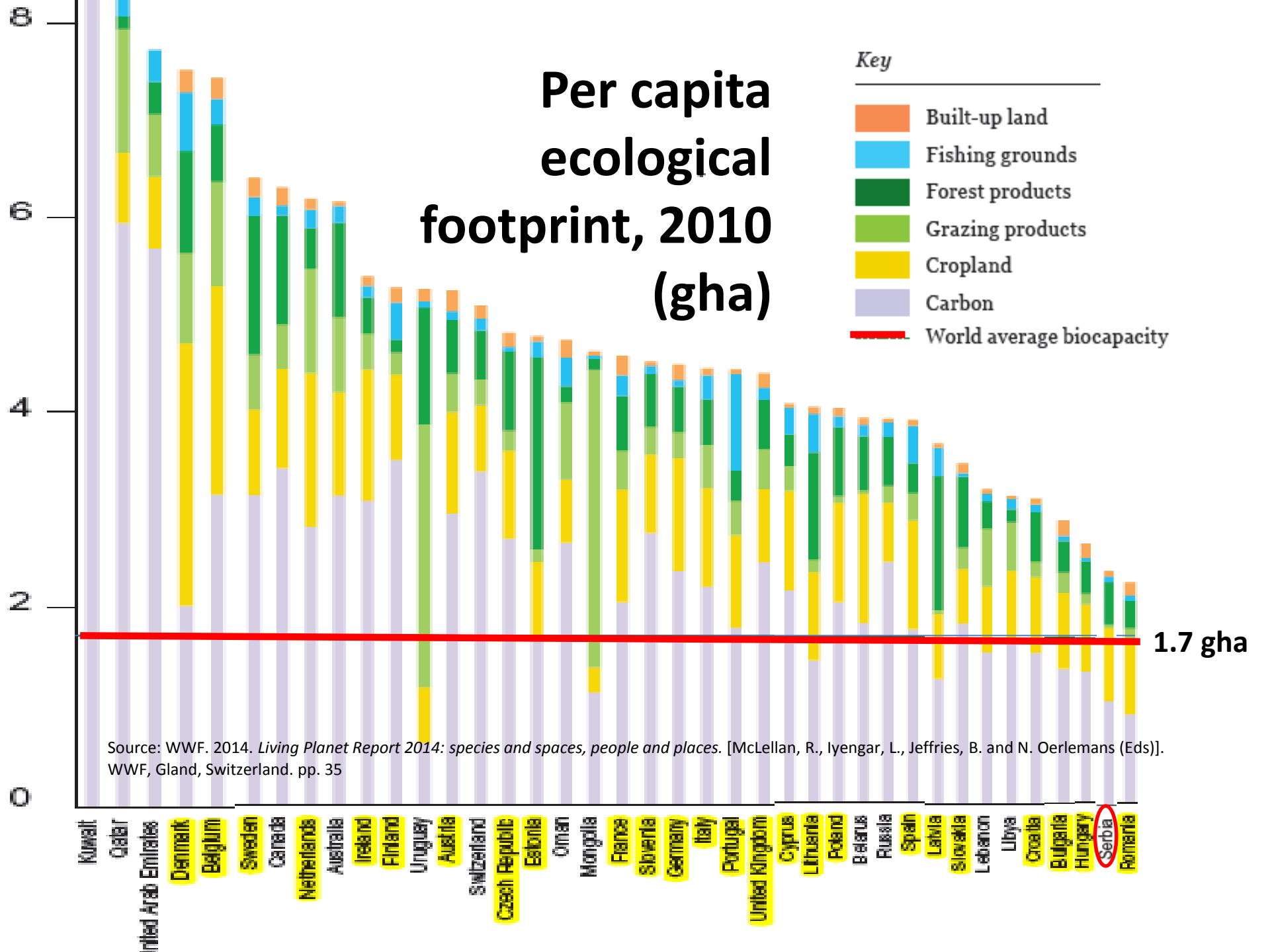


Source: REES, W., & WACKERNAGEL, M. 1996. Urban ecological footprints: why cities cannot be sustainable—and why they are a key to sustainability. *Environmental impact assessment review*, 16(4): 223-248, p.228



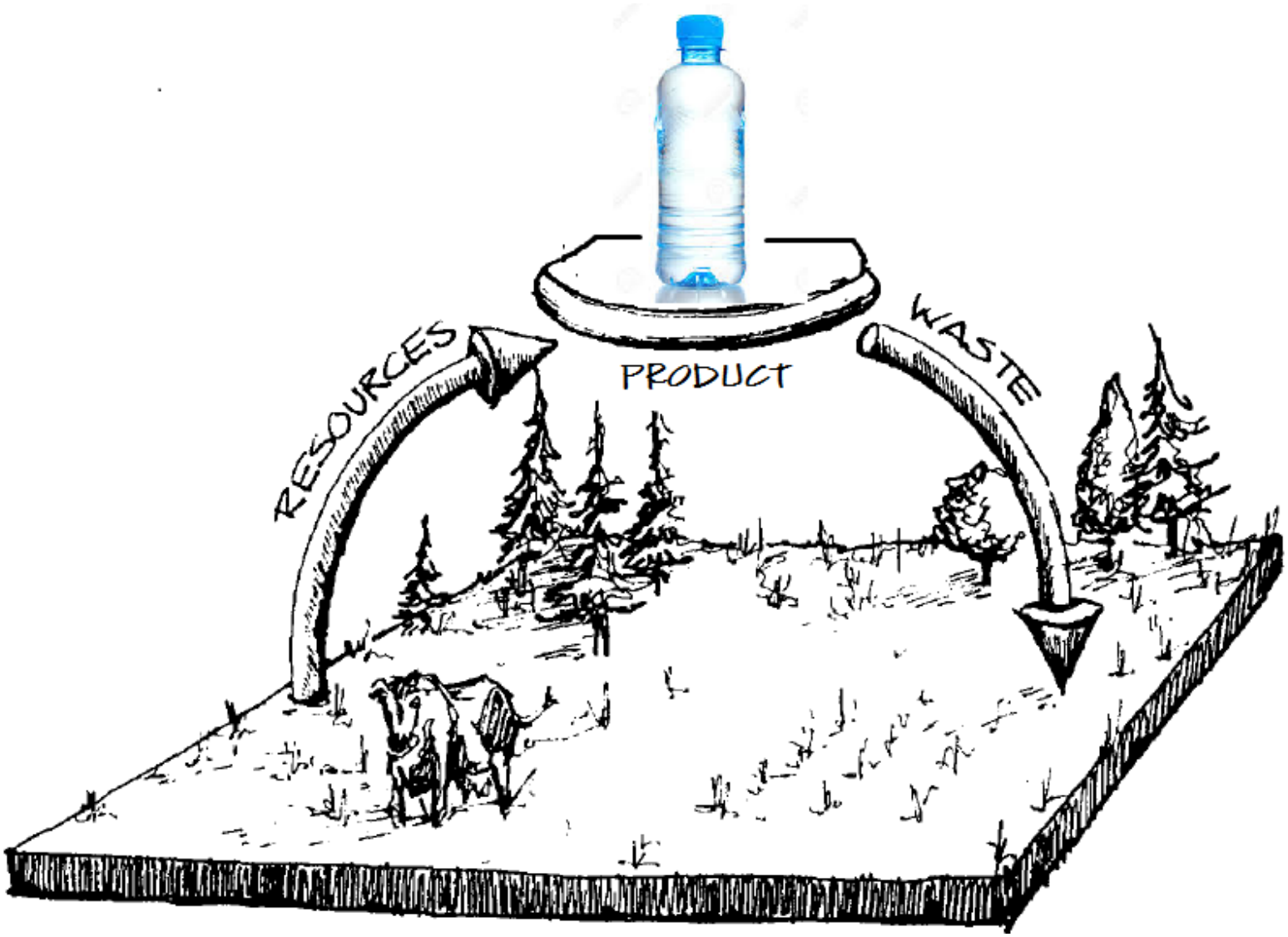
Source: WWF. 2014. *Living Planet Report 2014: species and spaces, people and places.* [McLellan, R., Iyengar, L., Jeffries, B. and N. Oerlemans (Eds)]. WWF, Gland, Switzerland. pp. 32

Per capita ecological footprint, 2010 (gha)



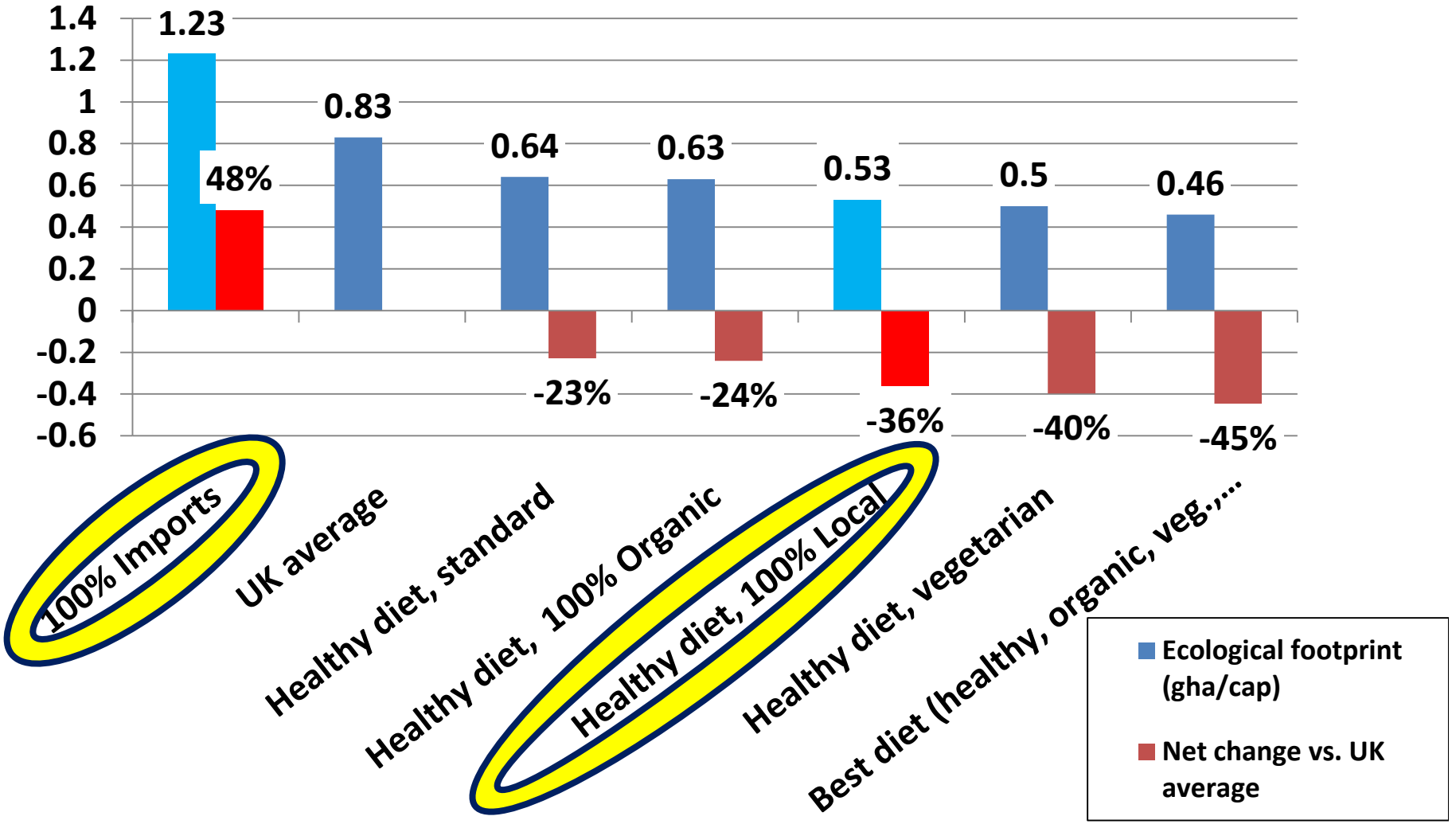
Source: WWF. 2014. *Living Planet Report 2014: species and spaces, people and places.* [McLellan, R., Iyengar, L., Jeffries, B. and N. Oerlemans (Eds)]. WWF, Gland, Switzerland. pp. 35

The narrowed concept of ecological footprint



Source: Own compilation based on REES, W., & WACKERNAGEL, M. 1996.

How a diet can reduce the food footprint in the UK?



Source: Own compilation based on FREY, S. & BARRETT, J. 2007. *Our health, our environment: The Ecological Footprint of what we eat*. Paper prepared for the International Ecological Footprint Conference, Cardiff, 8-10 May 2007: Stepping up the Pace: New Developments in Ecological Footprint Methodology, Applications. [Online]. Available at: https://www.researchgate.net/profile/John_Barrett7/publication/253389771_Our_health_our_environment_The_Ecological_Footprint_of_what_we_eat/links/00b7d53c564c333134000000.pdf [Accessed 2017, February 04].

The damage inflicted by man to nature tends to correlate with household income (Kerkhof et al., 2009), and this is also true for food consumption. This is explained partly by the abundance, partly by the quality and composition of (i.e. high proportion of premium and/or imported products in) the food consumption patterns of the upper income deciles (Csutora et al., 2011).

KERKHOF, A. C., NONHEBEL, S., & MOLL, H. C. 2009. Relating the environmental impact of consumption to household expenditures: an input–output analysis. *Ecological Economics*, 68(4), 1160-1170.
CSUTORA, M., TABI, A., and VETŐNÉ MÓZNER, Z. 2011. A magyar háztartások ökológiai lábnyomának vizsgálata (*Investigation of the Hungarian households' ecological footprint*). [Online]. Available at: http://unipub.lib.uni-corvinus.hu/471/1/CSM_TA_VMZS_ff2011.pdf [Accessed 2017, February 04].

The most important options for a reduction of environmental impacts are the refusal of air-transported products, a preference for organic products and a reduction in meat consumption.

JUNGBLUTH, N., TIETJE, O., & SCHOLZ, R. W. (2000). Food purchases: impacts from the consumers' point of view investigated with a modular LCA. *The International Journal of Life Cycle Assessment*, 5(3), 134-142

Potential benefits of eating local foods

- flavour,
- savour,
- freshness,
- general quality,
- nutrient content (with some exceptions*),
- all are better and higher when picked at their peak of ripeness
- + fewer additives – flavour enhancers, humectants, preservatives, etc. all posing potential threat to human health – are needed in a short chain

*** Most crops are susceptible to nutrient loss when harvested early and transported from longer distances. But apples, oranges, grapefruit and carrots are exceptions to this as they can keep their nutrients even if they are imported from distant countries. (McGill University, 2017)** McGILL UNIVERSITY. 2017. *The benefits of eating local foods*. [Online]. Available at: https://www.mcgill.ca/foodservices/sustainability/green/local [Accessed 2017, February 05].

Simplification:

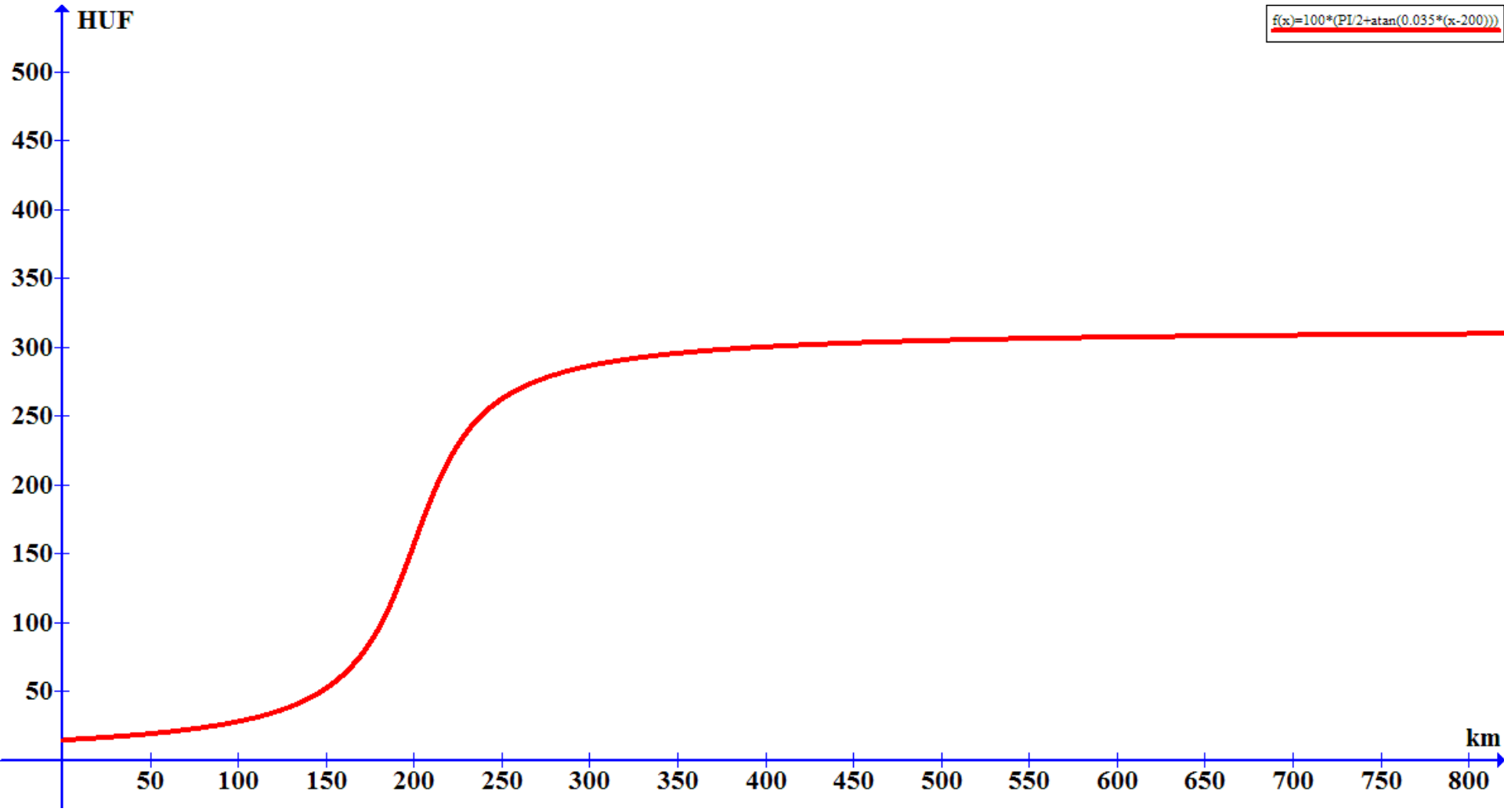
- Geographical distance btw. prod. & consump. (i.e. shopping);
- Organic or conventional;
- Whether transported by airplane or not.

Justification:

- They meet the goals of:
  - supporting local production (farmers and food industry),
  - preserving the nature,
  - promoting healthy diet,
  - bringing in an element of justice through;
- They show strong correlation with ecological footprint;
- Easy to identify them from the commercial documents accompanying the products.

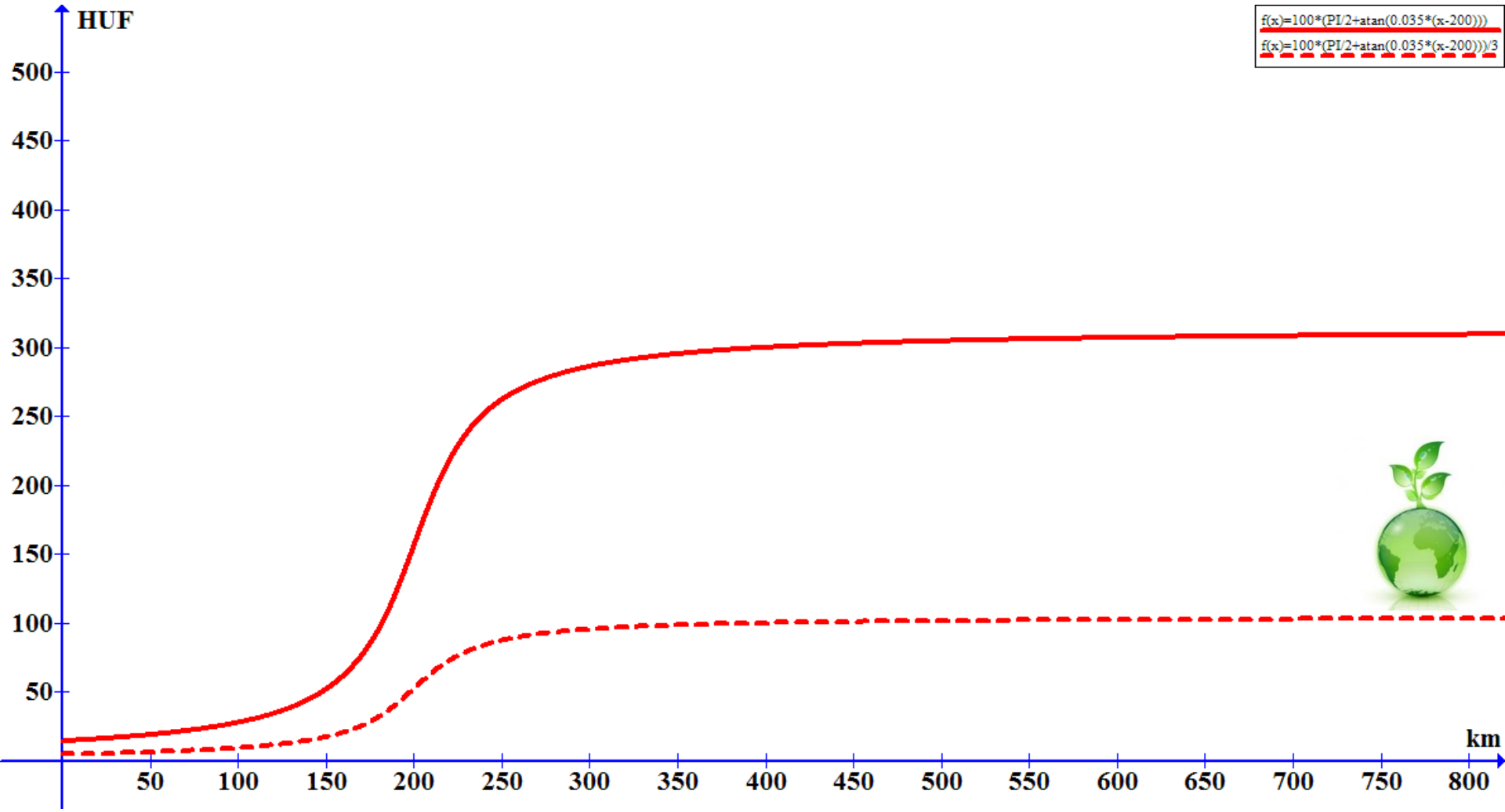
Ecological footprint tax (EFT)

on certain agri-food products with **one preferential group of producers** based on the **geographical distance** between the area of production and consumption



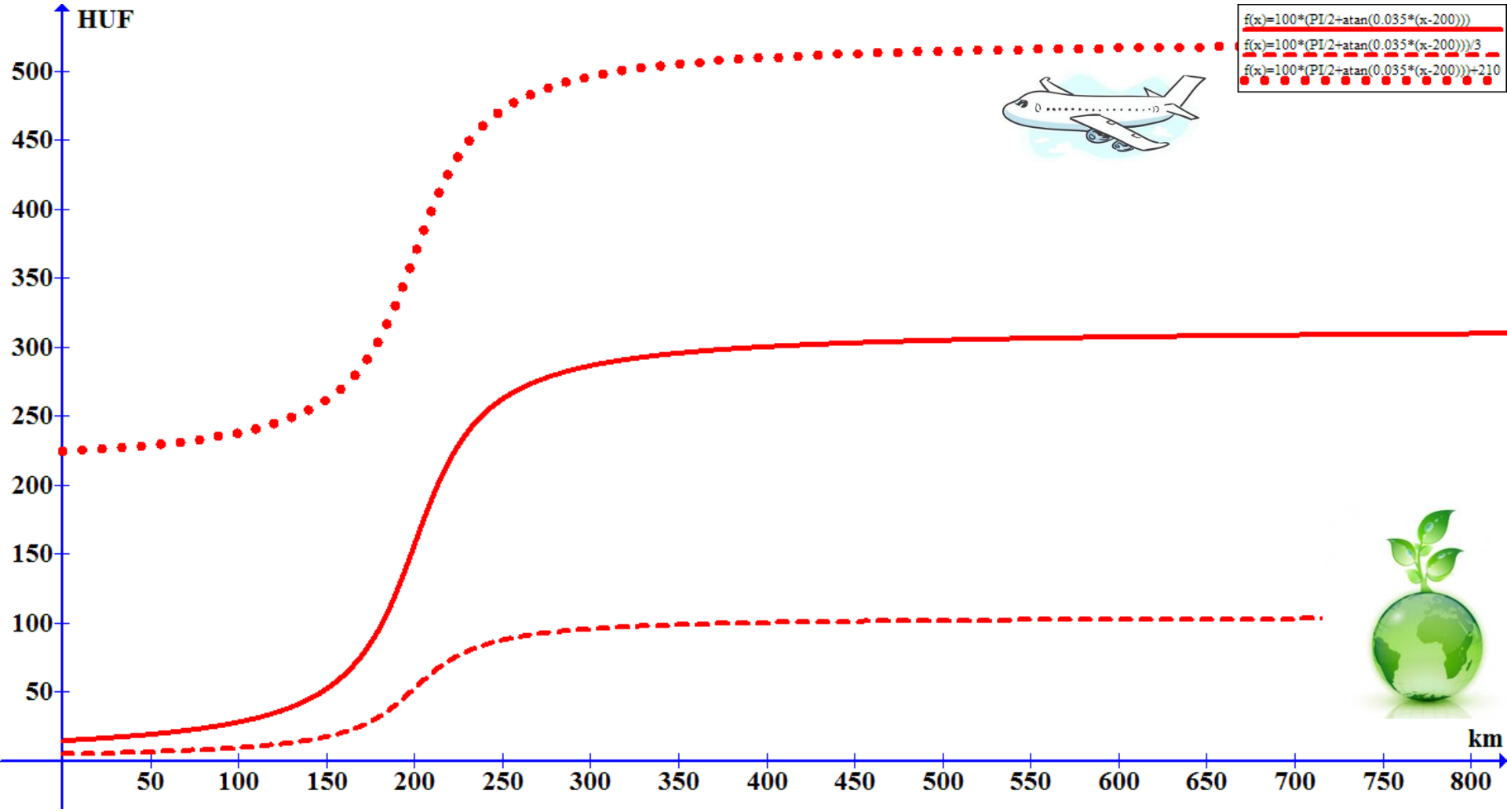
EFT with one preferential group of producers

(dashed line applies to organic products)



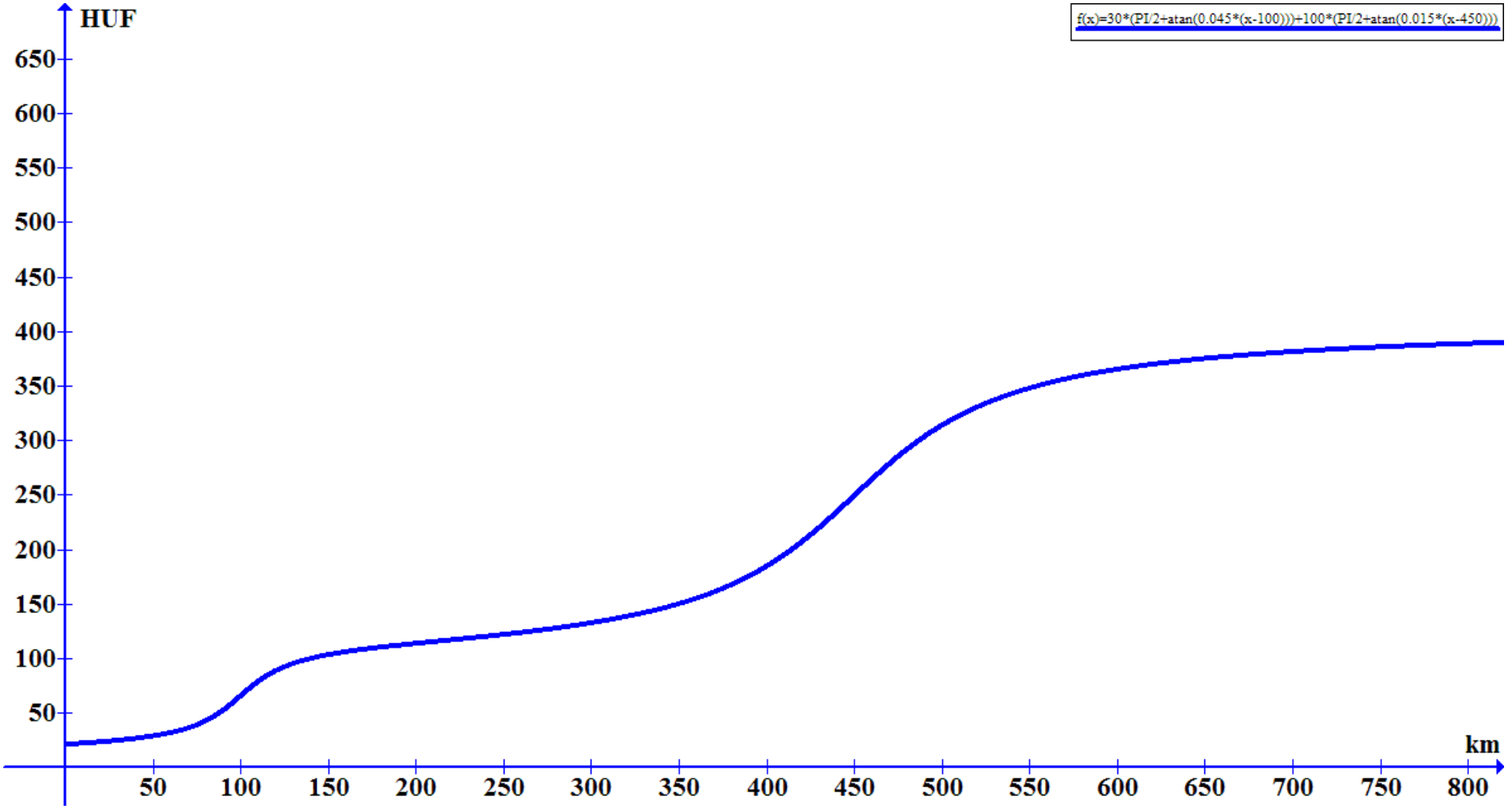
EFT with one preferential group of producers

(dashed line applies to organic, dotted line to air-transported products)



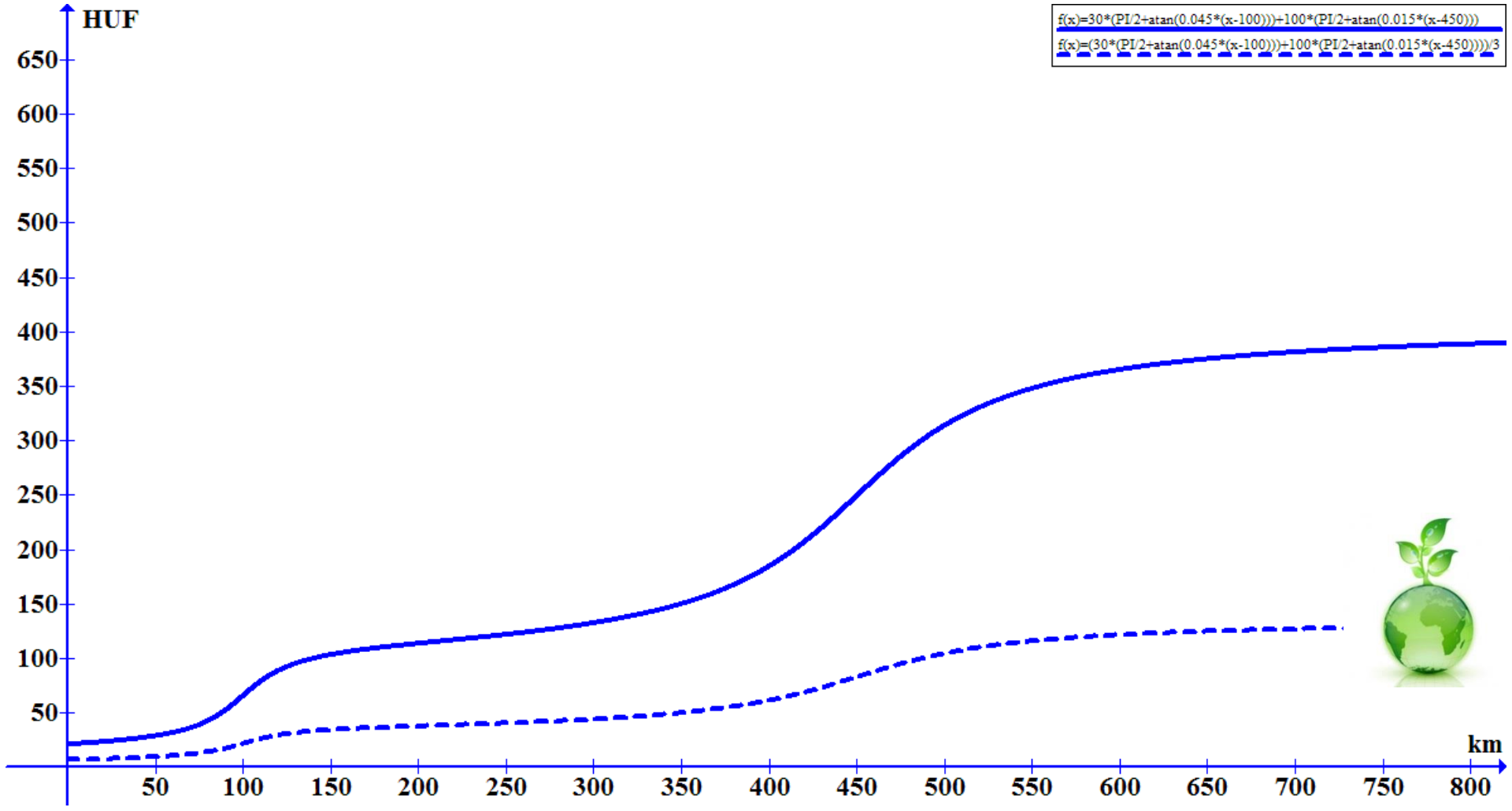
Ecological footprint tax (EFT)

on certain agri-food products with **two preferential groups of producers** based on the **geographical distance** between the area of production and consumption



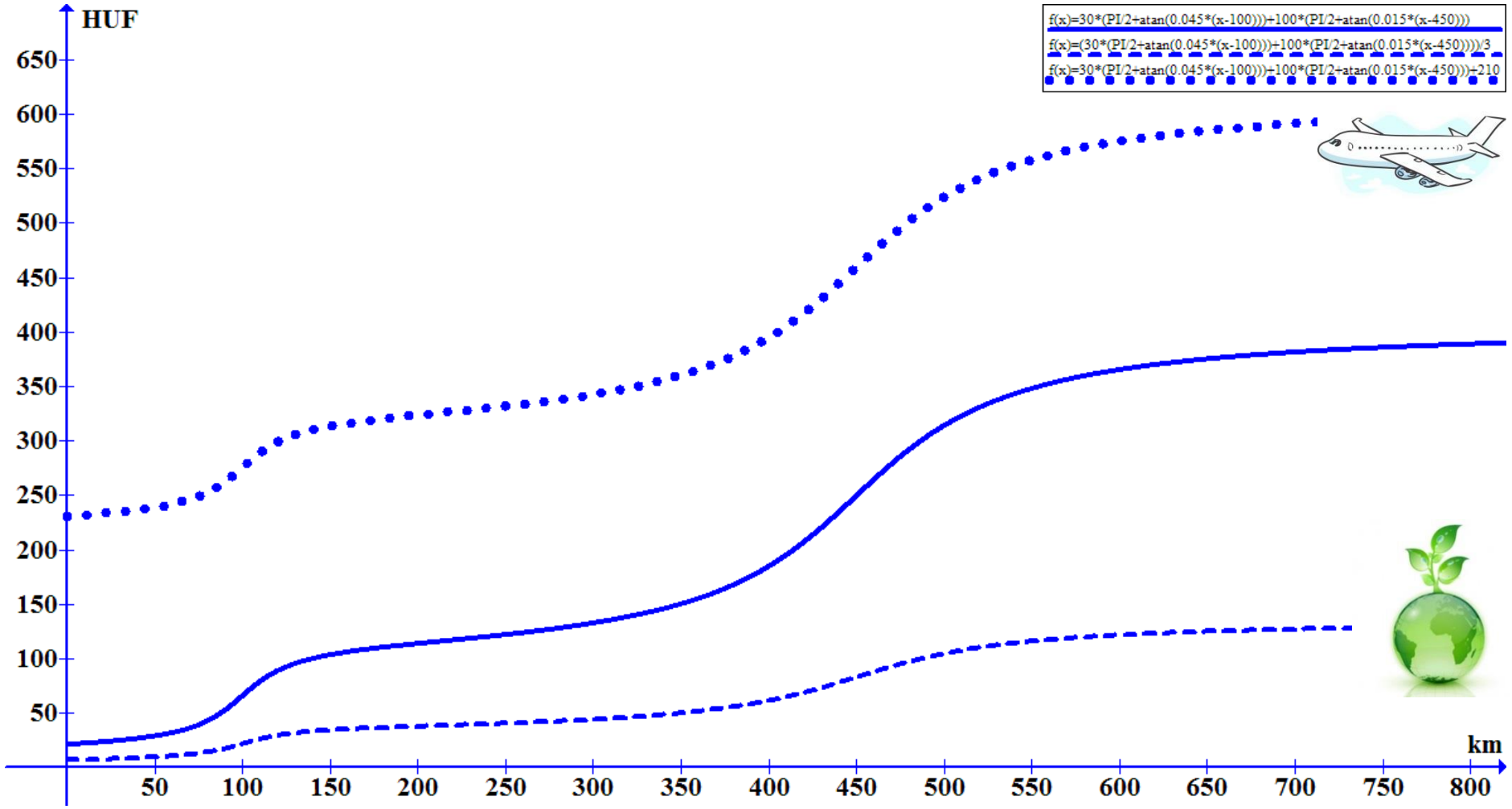
EFT with two preferential groups of producers

(dashed line applies to organic products)



EFT with two preferential groups of producers

(dashed line applies to organic, dotted line to air-transported products)



VAT = value added tax

based on the surplus value, added to the price on the work at each stage of production

EFT = VLT = value lessened tax

based on the lessened value, related to the damage caused to the natural environment