

# The environmental impact of nutrition transition in three case study countries



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# Objective of paper

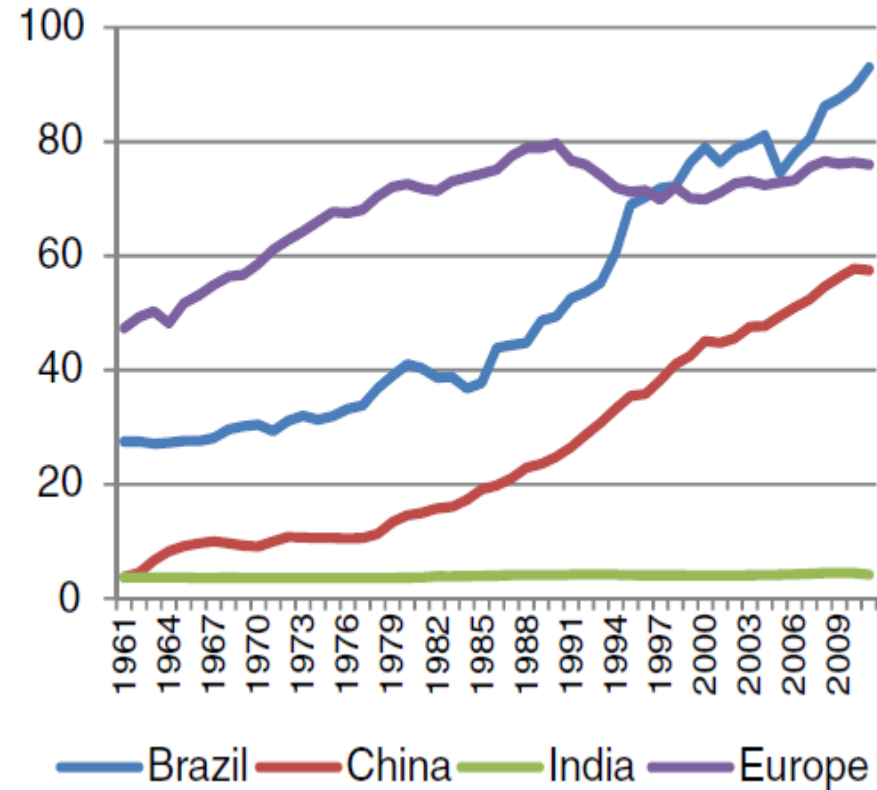
*to estimate environmental impacts of changes in the supply of food commodities in three case study countries (Brazil, China, India), as a first step in the process of identifying which environmental indicators might be considered a priority for measurement as the momentum of the nutrition transition increases in other developing countries*



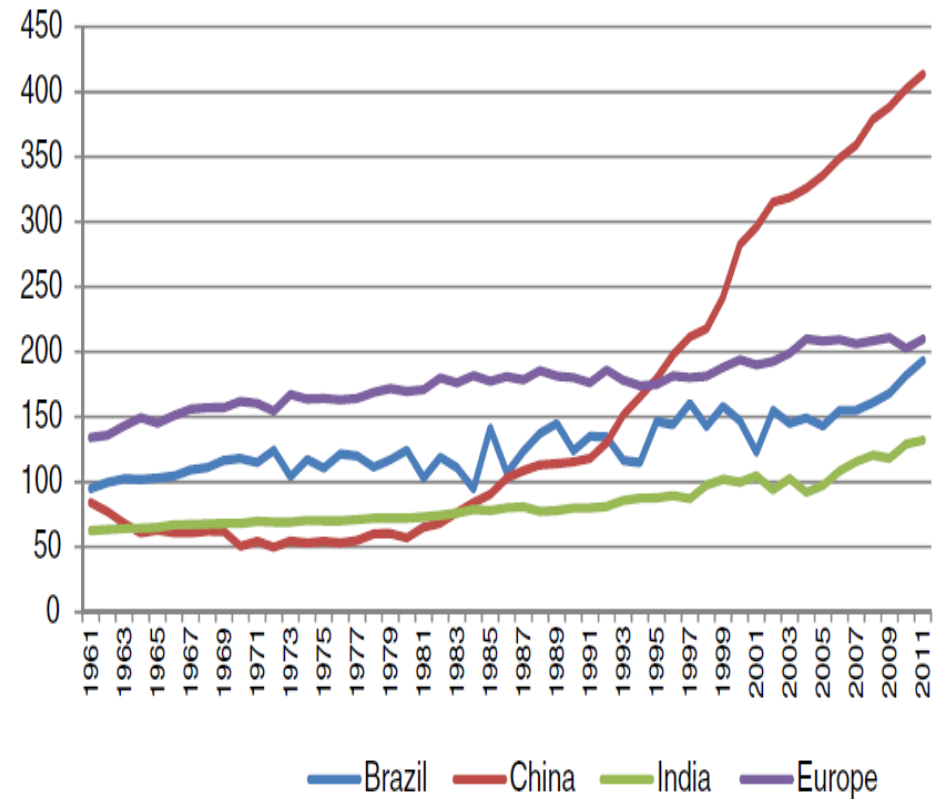
- What are recent trends in the supply of food components per capita in the 3 case study countries, separating out the impact of changes in diet from those of population growth?
- What is the environmental impact of these major changes within the 3 countries?
- *What is the impact of trade of these changes on the likely location of environmental impact?*

# Trends in consumption per capita per yr

**a** Trend in meat supply in kg.capita<sup>-1</sup>.yr<sup>-1</sup>

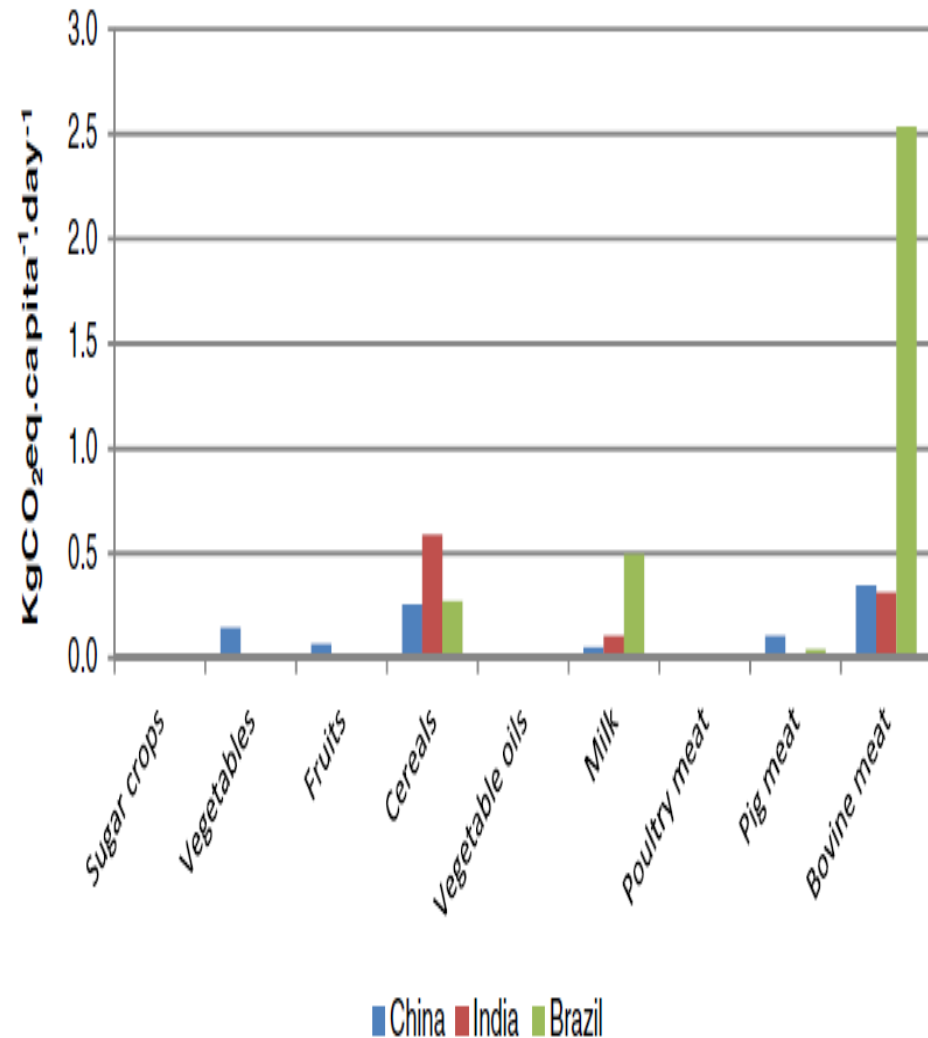


Trend in fruits and vegetables supply in kg.capita<sup>-1</sup>.yr<sup>-1</sup>

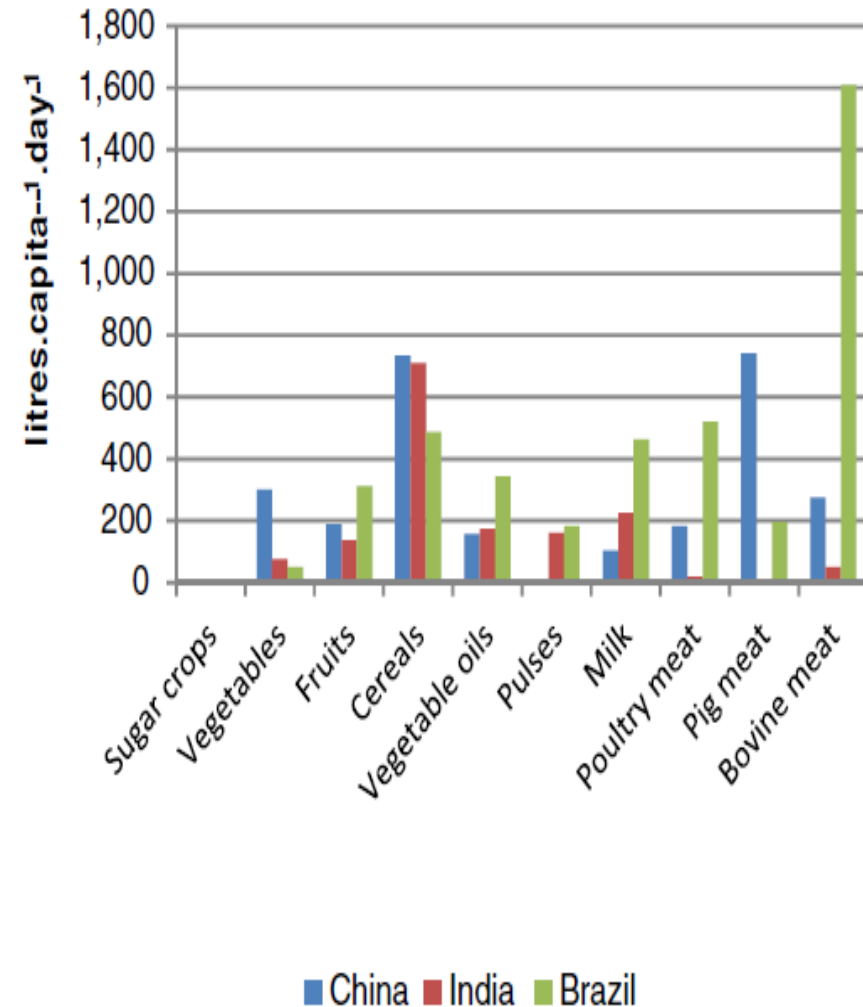


# Impact on GHGs and water

e GHG emissions

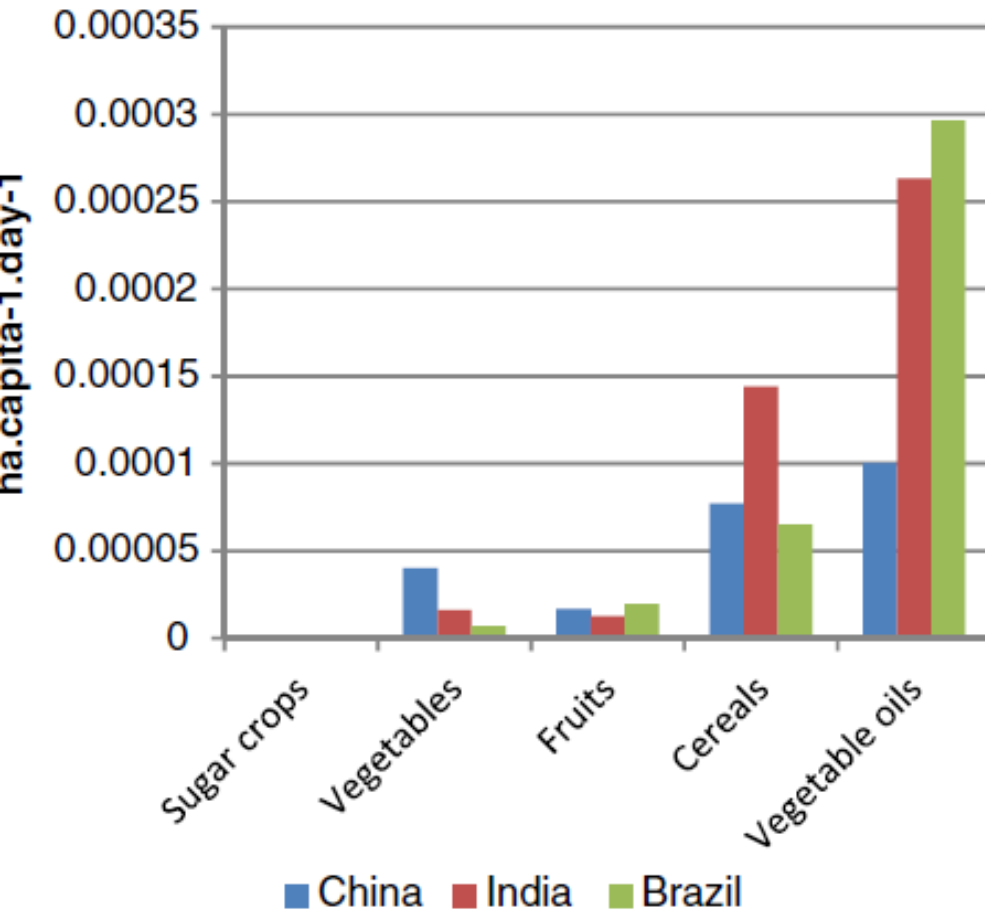


a Water footprint

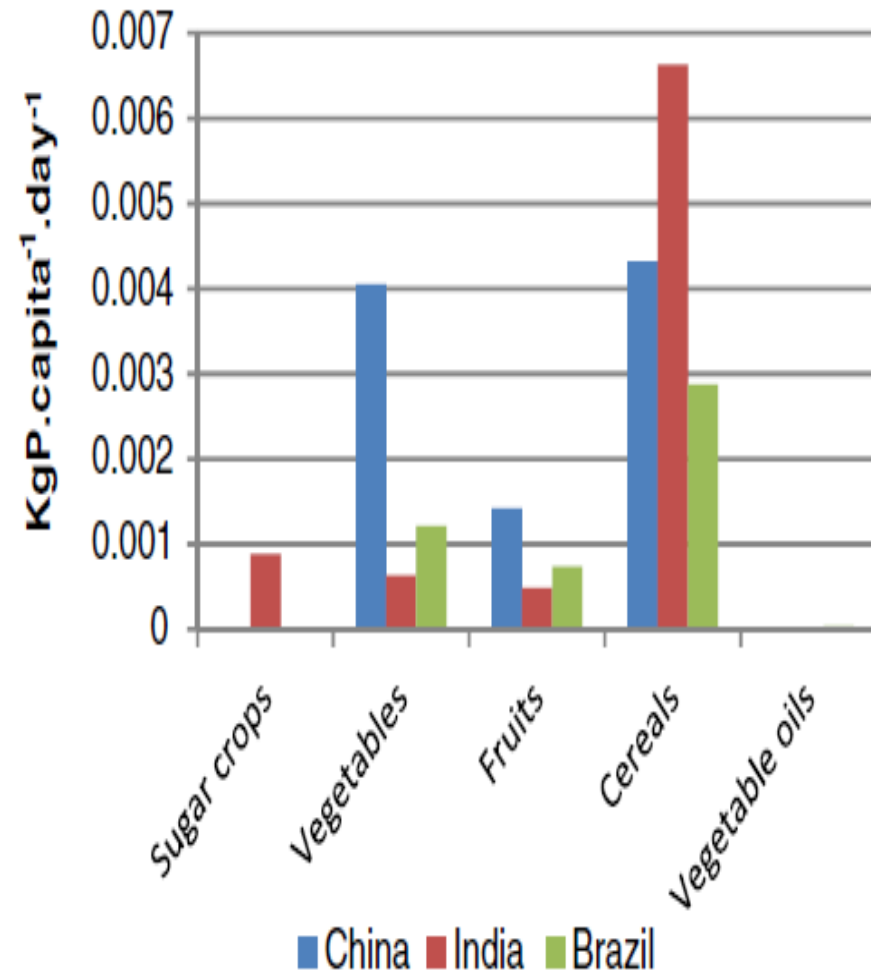


# Impacts on land area and P use

**b** Land area



**d** Phosphorus (P) use



# Input requirements and GHGs per kcal produced

		<b>N applied</b>	<b>P applied</b>	<b>Land area</b>	<b>GHG emissions</b>
Vegetables	China	0.047	0.0181	0.1785	0.635
	India	0.019	0.0114	0.2866	0.193
	Brazil	0.043	0.0320	0.1799	0.430
Fruit	China	0.050	0.0158	0.1863	0.748
	India	0.013	0.0074	0.1923	0.128
	Brazil	0.009	0.0050	0.1318	0.088

- Environmental impact of nutrition transition is not well studied
- Environmental impacts should be considered alongside nutrition and health impacts
- Need to consider range of environmental indicators not just GHGs
- Different trends in different countries are important



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