



Embodied phosphorus flow analysis based on the international trade of agricultural products and food

Presented by:
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Sustainable P strategies & global
governance



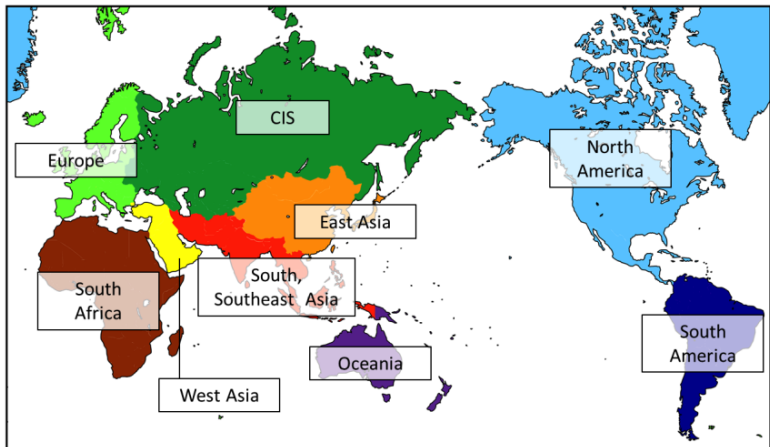
Embodied phosphorus flow analysis based on the international trade of agricultural products and food

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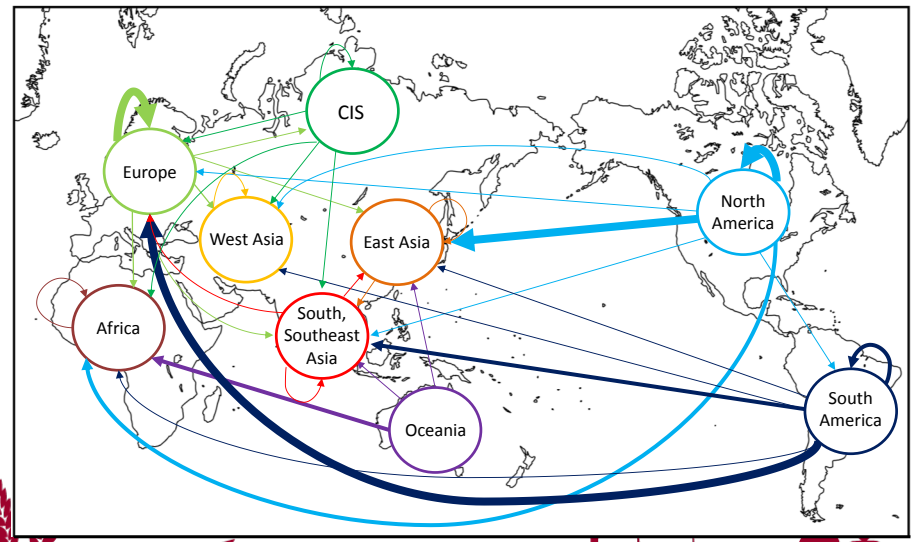
Research project funded from the Ministry of the Environment, Japan [Contract No. K2307].
“Integrated model development on phosphorus cycle”
Project leader: K. Matsubae (Tohoku univ.)

Data: BACI (Base pour l'Analyse du Commerce International, CEPII)
Year: 2005



Agricultural, forest, livestock, and fishery products

Total flow: 2104kt-P



P consumption (Top 5)

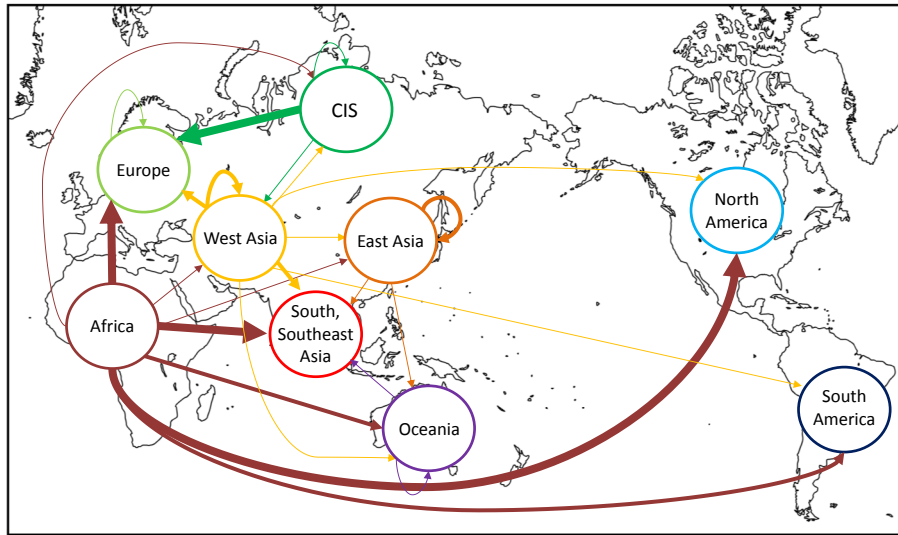
	kt-P
China	2,001
USA	1,176
Indonesia	739
Maraysia	730
Russia	577

	kg-P/capita
Spain	5.1
USA	4.1
Indonesia	3.6
Italy	3.5
Turkey	3.1

10~50 50~100 100~ Unit: kt-P

Phosphate Ore

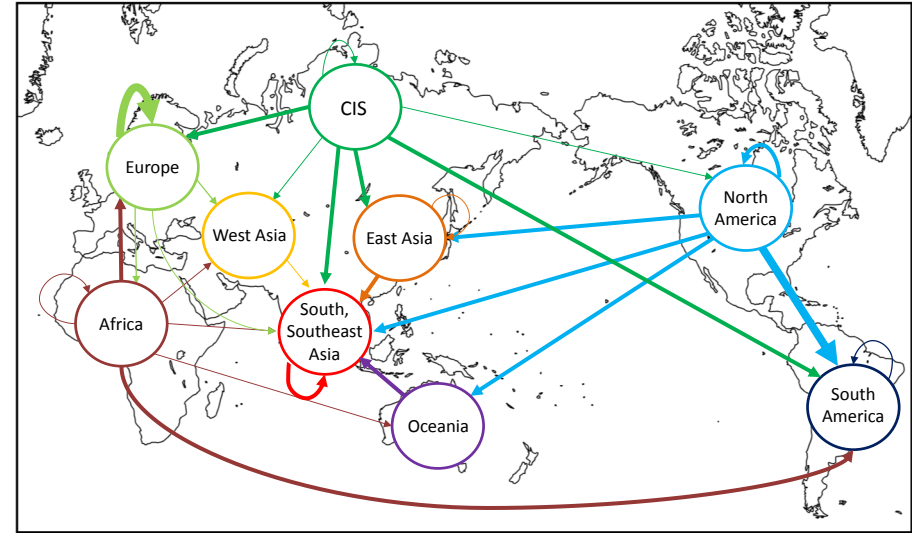
Total : 5021kt-P



→ 10~100 → 100~500 → 500~ Unit: kt-P

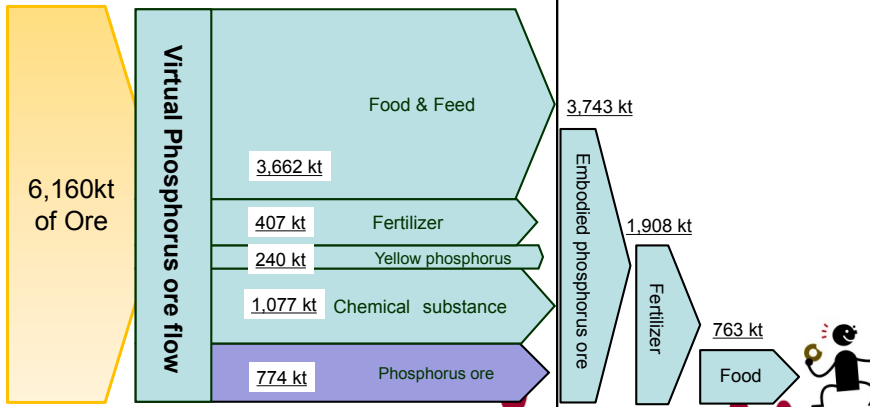
Fertilizer

Total : 6112kt-P



→ 50~100 → 100~500 → 500~ Unit: kt-P

Virtual Phosphorus Ore Flow in Japan



Matsubae et al. (Chemosphere, 2011)

For Research Network

International Workshop on Sustainable Phosphorus Governance from Asian Perspective

- ✓ 25, May 2012, Sendai, Japan
- ✓ 20, November 2012, Yokoyama, Japan

EcoBalance 2012

- ✓ 20-23, November 2012, Yokohama, Japan