Announcement of NTNU-CSC PhD Scholarship - template

Type of scholarship: exchange PhD

Period of the scholarship: August 2020 – July 2021

Short description of the scholarship:
Phosphorus (P) is a non-substitutable, non-renewable and geographically restricted but essential resource for food production. Nowadays, almost 75% of phosphate rock are used for fertilizer production, the remainder for industrial and others uses, such as the food and cosmetic industries. Phosphorus resource management has been one of the challenges towards global sustainability. Recent concerns prevail about phosphorus flow pathways and consequences due to the geographically decoupled production and consumption systems. The aim of this study is to investigate consumption based P footprint and consequences in inter-regional trade in order to assist the overall planning and management of P from a spatial-analysis perspective. The objectives include (1) to analyze P flows and footprint pattern in inter-regional/provincial trade for a selected case(s) (e.g., China, Norway or global); (2) to identify potential consequences and driving forces for the P flows and footprint pattern; and thereby (3) to discuss implications for sustainable P flow management. The methods in this study include Substance/Material Flow Analysis (SFA/MFA), Footprint, Multiregional Input-Output Analysis (MRIO) and Structural Decomposition Analysis (SDA). The results of the study are expected to facilitate a better planning and management of phosphorus at multiple scales, in a global sustainability context.

Qualification and requirement:
- Master in engineering or natural science or equivalent
  In addition, for all applicants the following applies:
- Fluent English language, both written and spoken with certificates of TOEFL minimum 95 or IELTS minimum 6.5
- Chinese citizenship documents (copy of his/her passport or national ID of P.R. China
- CV
- A motivation letter

Deadline for submission of application: 20 February, 2020

Scholarship: 17’000 NOK/month for a period of 12 months

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