

# Book of Abstracts

## Taking Stock of Industrial Ecology ISIE Conference 2015

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## Using Material Flow Analysis to promote Regional Green Economy Strategies in Vietnam

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Vietnam is a fast developing country with a strong economic growth. The expected nationwide economic growth rate in the next 15 years is 7% per year. Mining is a sector of high importance as raw material extraction provides a basis for the processing industry, for energy supply, and – last but not least – for the construction sector. The share of mining industry is 11 % of the Vietnamese GDP (2011).

However, like many other dynamic national economies, Vietnam is currently experiencing a severe threat to its natural environment due to increasing mining activities. The nature of mining processes has negative impacts on ecosystems and the provision of ecosystem services both during mining operations and after mining has ended. For example, typical externalities are landscape devastation, soil degradation, loss of biodiversity, as well as air and water pollution. Often land use conflicts emerge as a result of the degradation of cultivated land. This is especially true for mining regions which are located close to fast growing metropolitan areas like Ha Noi where, additionally to other mining activities, the construction industry causes a high demand on the extraction of stones, gravel and sand as building materials.

The main objective of the intended project MAREX, financed by the German Ministry of Education and Research, is to contribute to sustainable development in Vietnam by improving the management of mineral resource extraction, considering aspects of urban-rural nexus respectively urban-rural symbiosis in the context of strong urbanization associated with an increasing demand of building material in cities like Ha Noi and increasing mining activities in the hinterland, particularly in Hoa Binh province. Due to the project is still at the beginning, the paper focus conceptual and methodological aspects.

Starting with the theoretical Framework of Green Economy and the Vietnam national Green Growth Strategy the paper will reflect the potential of MFA to contribute to a regional specification of the National Green Growth Strategy. In MAREX project, material flow analysis will be done in order to assess current and future demand for building materials. The concept pursued provides a frame for a comprehensive approach that allows to take into consideration all relevant steps of resource consumption – mining, processing, usage within the built environment and recycling/deposit. Moreover, it provides starting points

to support discussion on technical, environmental, socio-economic and planning issues related to material flows.