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## China as a new shaper of international development: the environmental implications

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## **Editorial**

### **“China as a new shaper of international development: The environmental implications”**

**for the journal Environment, Development and Sustainability**

**Edited by Frauke Urban<sup>1</sup>, Giles Mohan<sup>2</sup> and Sarah Cook<sup>3</sup>**

#### **1. China as a rising power and new shaper of international development – environmental implications in Africa, Asia and Latin America**

The emergence of China as a global player challenges the pre-existing dominance of the OECD<sup>4</sup> countries (Humphrey and Messner, 2006; Ikenberry, 2008). China is likely to continue to be a crucial force for global change in coming decades in terms of political, economic, social and environmental issues. The implications of China's rise are expected to be most significant for Low and Middle Income Countries, but the outcomes will also affect China's relations with traditional donors and the understanding of the process of international development (Gu, Humphrey, and Messner, 2008; Humphrey and Messner, 2006; Kaplinsky and Messner, 2008).

While the issues of China as a rising power and new shaper of international development are increasingly explored at the political and economic level, very little analysis is available for the environmental impacts that China has on Low and Middle Income Countries. It is well understood that China plays a major role in relation to climate change, energy use and natural resource use at the global level (see e.g. Urban 2009, Urban et al, 2009; Wang and Watson 2009, Cai et al 2007; IEA, 2007-2012). However, China's environmental impacts on Low and Middle Income Countries is underexplored.

China's rapid economic growth and population growth has created a series of pressures which has forced the country to engage more closely with a number of Low and Middle Income Countries. First, China's growth has depleted scarce domestic natural resources and so part of its 'Going Out Strategy' encourages overseas investment to access natural resources such as energy and minerals (Mohan and Power 2008, McDonald et al 2009). Secondly, as some sectors of the Chinese market become relatively saturated the first generation of large state-owned enterprises liberalised under the post-1979 reforms need to internationalise and acquire new markets (Huang, 2008). Thirdly, China's rapid technological advances – such as in energy and IT - have made it possible to expand overseas. These three drivers – resource access, new markets, and technological advances – come together in the environmental sector, for example in relation to hydropower and forestry.

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As the environmental perspective has so far been neglected in academic literature relating to China's rise as a global player, this Special Issue addresses this gap and assesses the impacts of China's rise on Low and Middle Income Countries and the implications for research, policy and practice in the field of environment and development. The Special Issue is a collection of articles that address key issues related to water –particularly hydropower– (see the papers by Hensengerth, 2012; Urban et al., 2012), forestry (see the papers by Huang et al, 2012; Fearnside et al, 2012) and land (see the paper by Zhao, 2012), as well as over-arching issues of Corporate Social Responsibility (CSR) for reducing environmental impacts of Chinese enterprises (see the paper by Tan-Mullins and Mohan, 2012). The findings are based on research on China's overseas policies and practice as well as those of host country governments in Africa, Asia and Latin America.

In addition to the dominant focus on political and economic issues related to China's rise and the implications on Low and Middle Income Countries, there is a dominant geographic focus on China and Africa. Most existing research and most literature in this field tend to be Africa-centric (see e.g. Alden et al 2008; Bräutigam, 2009; Chen and Orr, 2009; Davies et al, 2008; Foster et al, 2008; Gill and Reilly, 2007; Mohan, 2008; Mohan and Power, 2008; Obiorah, 2007; Tan-Mullins et al, 2010), whereas other geographic regions such as Asia and Latin America remain largely under-researched. This Special Issue aims to broaden the regional scope, by including some articles on Asia and Latin America.

Due to the relative novelty of the field of China as a new shaper of international development and the environmental implications, most current research draws on literature analysis, secondary data analysis and conceptual framings, whereas the empirical basis for much of this research is still on-going. Data availability is a problem at present, which explains to some extent why this important field of study is currently under-researched. This Special Issue is based on research contributions for a project entitled "China as a new shaper of international development" funded by the UK Economics and Social Research Council ESRC (ESRC Grant Reference: RES-075-25-0019), which was one of the first projects to focus on China's environmental implications overseas, rather than only its political and economic implications. This is currently followed up by a research project entitled "China goes global: A comparative study of Chinese hydropower dams in Africa and Asia" funded by the UK Economics and Social Research Council ESRC (ESRC Grant Reference: ES/J01320X/1), which is the first systematic and comparative analysis of the social, economic, environmental and political impacts of Chinese hydropower dam projects in Low and Middle Income Countries and builds on the work done for the hydropower papers presented here. Further empirical findings in this field will be available in the coming years.

The structure and content of this Special Issue are elaborated below.

## **2. China's environmental impacts in Low and Middle Income Countries: Corporate Social Responsibility (CSR)**

The Special Issue begins by addressing a cross-cutting issue relevant for the environment, development and sustainability, namely the need for corporate environmental responsibility of Chinese State-Owned Enterprises in Africa. Tan-Mullins and Mohan (2012) draw upon empirical data collected in China and Africa, and evaluate Chinese overseas CSR and its effectiveness in reducing environmental impacts in parts of Africa. China has rapidly expanded its environmental footprint in Africa, largely because of its burgeoning economic

presence through trade and aid projects such as infrastructure and public works. These large-scale projects, commonly managed by State-Owned Enterprises (SOEs), tend to be in sectors that are environmentally sensitive such as oil and gas exploration and construction of major infrastructure. At the international level, global financial institutions along with growing pressure from civil society organisations are encouraging China to demonstrate a commitment to addressing the environmental impacts of its overseas projects. At the domestic level, growing awareness of such issues has generated an emerging trend of Chinese entities promoting and adopting CSR initiatives. These moves seek to improve the environmental and social impacts of Chinese overseas investments. However, Tan-Mullins and Mohan (2012) suggest that the outcomes of Chinese overseas CSR strategies - particularly in environmental protection- vary widely due to the operating procedures of the Chinese SOEs in combination with specific local political and social structures. In general environmental protection is weak and so there is a need for the Chinese and African governments to create a legislative and institutional framework to address Chinese investment in Africa especially in the area of natural resource extraction.

### **3. China's environmental impacts in Low and Middle Income Countries: Water and Hydropower Issues**

In addition to the need for corporate environmental responsibility of Chinese enterprises, environmental norms are important for Chinese overseas investments in natural resources, such as energy, water and minerals. The hydropower sector is an example where China is the world leader and has indeed started to 'dam the world' (Bosshard, 2009:43). The paper by Hensengerth (2012) therefore examines the role of environmental norms in Chinese overseas investment in hydropower dams, exemplified by Sinohydro's involvement in the Bui Dam in Ghana. While the investment of Western companies in hydropower dams in the global South is decreasing due to changing notions of sustainability in the West, the investment of Chinese companies in hydro dams in Africa, Southeast Asia and Latin America is accelerating at great speed. The emergence of Chinese companies in international markets in the context of China's 'Going Out Strategy' has sparked a debate on whether China can be considered a norm-changer in international development. Hensengerth (2012) argues that the role of international norms in Chinese investment is dependent on two factors: the contractual arrangements under which Chinese companies operate abroad, and the political institutions of host countries.

The paper by Urban et al (2012) examines China's investment in the hydropower sector in the Greater Mekong Sub-Region in Southeast Asia. The Mekong River's richness in natural resources offers large benefits to its populations; nevertheless it also raises the interest of foreign investors. Recently, Chinese firms, banks and government bodies have increasingly invested in large hydropower projects in the Greater Mekong Sub-Region. Fuelled by the Chinese government's 'Going Out Strategy' and in search for climate-friendly low carbon energy, cheap electricity and access to a growing market, Chinese institutions turn to Southeast Asia where they are currently involved in more than 50 large hydropower projects in Cambodia, Laos, Myanmar and Vietnam as contractors, investors, regulators and financiers. These Chinese institutions have influence on environmental and social standards and practices as well as on diplomatic and trade relations in the host countries. Currently, there are major gaps in understanding who is engaged, why, how and with what impacts. The paper therefore assesses the motives, actors, beneficiaries and the direct and indirect

impacts of China's investments in large hydropower projects in the Greater Mekong Sub-Region. Urban et al (2012) find that Chinese hydropower dams in Southeast Asia have different dynamics than those in Africa, due to their proximity to China which enables electricity exports and contributes to meeting China's growing energy demand.

#### **4. China's environmental impacts in Low and Middle Income Countries: Forestry Issues**

The next paper addresses China's engagement in forestry issues in Latin America. Fearnside et al (2012) explore China's role in deforestation in Latin America. Brazil's Amazon region contains vast natural resources including land, timber, minerals and hydroelectric potential. China's strong economy and large demands relative to domestic supplies of these resources means that China has become Brazil's largest trading partner, primarily for natural resources. The paper examines how China influences deforestation in Brazilian Amazonia in a variety of ways, including through the direct influence of Chinese enterprises through land purchases and other mechanisms. Fearnside et al (2012) find that it is particularly the rapid rise in exports of soy and beef products to China that are two of the major drivers of Amazonian deforestation in Brazil. The paper further argues that Chinese purchases of agricultural and forest land and Chinese imports of commodities such as timber and aluminum also cause environmental impacts in Amazonia. Chinese financing and investment in Amazonian infrastructure such as railways and mineral processing facilities have additional impacts.

The paper by Huang et al (2012) discusses who is importing forest products from Africa to China and addresses issues to enhance legality and sustainability. Global forest product value chains are increasingly subject to regulatory requirements, such as legality and sustainability certification. For African forest products, a shift in the export destinations of forest products towards China, the leading timber product manufacturer, has raised concerns that social and environmental product and process standards are declining. Aggregate drivers of this shift have been documented, yet there has been little enterprise-level analysis of Chinese actors in African timber imports based in China. This paper provides an initial analysis, highlighting implications for existing and emerging regulatory initiatives. The paper concludes that given China's growing domestic market for finished wood products, sustainability certification requirements driven by the United States (US) and the European Union (EU) will not be sufficient to ensure improved sourcing by Chinese firms.

#### **5. China's environmental impacts in Low and Middle Income Countries: Land Issues**

The next paper in this Special Issue focuses on land issues between China and Africa. Zhao (2012) suggests that while China-Africa development cooperation in the rural sector has received increased attention by researchers and policy-makers, this is weakly linked to land tenure and foreign investments to understand the role of land in sustainable resource use and investments. The paper discusses China-Africa cooperation in rural development, ongoing land tenure reforms in Africa and elaborates how China's own development model, especially concerning land tenure reform, shares similar trajectories with Africa, which has important implications for the effectiveness of Chinese investments in African land. Zhao

(2012) concludes that there is an urgent need for lesson learning among Chinese and African policy-makers and investors towards tailoring development cooperation to more appropriate land tenure systems for sustainable resource use to the mutual benefit of Chinese and African stakeholders.

## 6. Conclusion

China has become a rising power and a new shaper of international development; nevertheless this has environmental implications for Africa, Asia and Latin America. China causes undoubtedly growing environmental pressures at the national and international level, such as its large contribution to climate change due to its rapidly rising greenhouse gas emissions, its surging energy demand and its growing access to overseas natural resources such as water, energy, forests and land in Africa, Asia and Latin America. Nevertheless there is so far little research that analyses the environmental implications of China's rise for Low and Middle Income Countries. This Special Issue therefore elaborates a new agenda, which deserves further empirical research in the future.

This Special Issue demonstrates that Chinese enterprises, financiers and government authorities are actively engaged in shaping the future of development, environment and sustainability processes in Low and Middle Income Countries in Africa, Asia and Latin America. This often follows complex patterns and is manifested in the increasing numbers of Chinese dams being built in Low and Middle Income Countries, direct and indirect links to deforestation and contentious issues related to land tenure. Nevertheless, there are also signs of Chinese actors engaging increasingly with environmental norms, environmental guidelines and corporate environmental responsibility strategies. After all, parts of the environmental performance of Chinese actors can be influenced by the political institutions of the host countries, hence legislative and institutional frameworks for environmental protection are needed both on the Chinese side and the side of host countries in Africa, Asia and Latin America.

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