

# China goes global

**Dr Frauke Urban** is aiming to increase knowledge on the understudied effects of China's current strategy of constructing large dams in low and middle income countries – delivering the first systematic and comparative analysis of the social, economic, environmental and political impacts of Chinese dam projects



**China's rapid economic growth has presented a number of environmental challenges. Can you detail how the country is working to address these?**

China's rapid growth is depleting scarce domestic natural resources, including energy and water. Part of China's 'Going Out Strategy' therefore encourages overseas investment to access these supplies. This goes hand-in-hand with several Chinese domestic markets becoming saturated, hence firms need to internationalise and gain access to new markets.

This is the case for Chinese hydropower firms. Domestic dam development has caused adverse environmental and social impacts within China's borders, such as the displacement of approximately 1 million people for the Three Georges Dam. Building and investing in dams overseas enables Chinese hydropower firms to prosper without negative domestic impacts.

**Why have you decided to focus on the analysis of the social, economic, environmental and political impacts of Chinese dam projects in low and middle income countries?**

The large dams sector is a fascinating yet contentious industry, for example because

of its branding as a climate-friendly sector, which is only partly justified. Dams are symbols of modernity, progress and development. They have the potential to significantly improve energy security and deliver much needed energy generation capacity to enable the development of countries that suffer from energy poverty, such as Cambodia.

At the same time, dams have been controversially debated for several decades due to their social and environmental impacts. The standards and sustainability of large dams are still rather low with regards to their social and environmental impacts. For example, the Bakun dam in Sarawak, Borneo, has been built on land in a tropical rainforest that, according to customary rights, belongs to indigenous people and is home to endangered species. Some of the indigenous people were semi-nomadic before the dam, but their land was flooded and they had to resettle into sedentary homes at resettlement sites. Our project aims to address these negative impacts of large dams and to support the development of more sustainable practices.

**How have previous studies fared in examining the environmental consequences of China's internationalisation, and how does your research aim to change this perception?**

The issues of China as a rising power and new shaper of international development are increasingly explored at the political and economic level. However, there is very little analysis regarding the environmental impacts China has on low- and middle-income countries.

Many current studies draw on desk-based research, rather than on in-depth empirical research. In addition, some of the research conclusions are undifferentiated and argue that China is a threat, has a poor environmental record and simply exports its bad practice overseas.

Our in-depth empirical research shows that the reality is in fact much more differentiated and multifaceted with many factors influencing the sustainability of Chinese overseas dams. At the same time, more research is needed to affirm or reject these generalist claims.

**Why is an interdisciplinary approach important for your work?**

Research in specific environmental disciplines is often siloed, meaning that energy experts work on energy issues, water experts work on water issues, and land experts work on land issues. Research regarding large dams, however, brings these silos together due to the complex environmental, social, political and economic issues that have to be taken into consideration.

**What are some of the expected outcomes and applications of the project?**

The project aims to be of use for Chinese dambuilders, financiers and regulators, national and local government authorities, UK hydropower firms and donors, research institutions and academia. Our project also helps local communities – many of which were not properly consulted about dam building and its impacts – to have a voice internationally.

We are also working closely with the NGO community, most importantly International Rivers. Our work involved the participation of many government officials, dam-builders and other institutional representatives from China, Cambodia, Malaysia, Ghana, Nigeria and the UK. Hence the project has potential to be influential at an international level.

Academically, it will lead to an improved understanding of China as a rising power and a new shaper of international development, with a particular focus on the social and environmental impacts of large infrastructure projects such as dams. This will contribute to wider debates in development studies, environmental management, energy and water studies, and geography.

# Powering dam development the Chinese way

By exploring the impacts of overseas Chinese hydropower dams in Africa and Asia, the School of Oriental and African Studies at the **University of London**, UK, aims to inform corporate behaviour and policy in this field

**CHINA'S GLOBAL INFLUENCE** has risen rapidly in recent years, at a time when other countries have had difficulty maintaining their economic and political power. It is widely predicted that China will continue to flourish in the future, but this rapid growth is not without its consequences. Energy and water resources are being pushed to the limit, and to meet China's expanding needs the country has had to look beyond its borders.

With a long history of dam construction, China's rivers are a major natural resource for water and energy. Today, over 45,000 large dams – roughly half the world's total – are found in China. This massive market is nearly at saturation point, however, and few of the country's 1,500 rivers remain available for damming. In response, investments in construction are heading overseas, with markets in low- and middle-income countries of great interest partly due to the small number of investors. Currently, there are more than 330 dams being built by Chinese firms overseas, with around 40 per cent located in Southeast Asia and another one-third in Africa.

While moving construction overseas seems like a win-win solution on the surface, deeper research into the implications is required. In fact, large dams have been a hot topic for many decades due to their environmental and social impacts, such as the effects they have on local communities through displacement and resettlement, as well as the large-scale, irreversible impacts to the environment due to the flooding of large areas of land.

## GLOBAL IMPACT

Dr Frauke Urban of the Centre for Development, Environment and Policy (CeDEP) at the School of Oriental and African Studies (SOAS), University of London is leading a research project to help paint a more complete picture of the repercussions of Chinese-funded and built dams in low- and middle-income countries. The research is unique in that it is the first time that comparative analysis of the environmental, social, economic and political impacts of Chinese hydropower dam projects in low- and middle-income countries has been pursued. "Our project aims to address the impacts of large dams, which are often not properly considered by investors, developers and engineers, and to help the development of more sustainable practices both for Chinese builders and host countries to mitigate the impacts of large dams," Frauke explains.

This area of investigation is familiar ground for the project team. Frauke and her co-investigators previously worked on other projects that studied China's journey to become a powerful global player, and the need for a better understanding of the environmental and social consequences. These projects include Chinese aid to Africa, Chinese business migrants, Chinese oil investments in Africa, China's energy and climate policy, low-carbon innovation in China and water management in China.

Frauke's current project, entitled 'China Goes Global', is looking at four dams as case studies – Kamchay Dam in Cambodia, Bui Dam in Ghana, Bakun Dam in Malaysia and

Zamfara Dam in Nigeria. These dams, with the exception of Zamfara, are fully operational, allowing the researchers to study the social and environmental impacts of the dams after their construction. Nevertheless, the Zamfara Dam, which is still in the planning phases, serves as an equally rich source of insights: "It allows us to observe the negotiation process between Chinese dam builders and financiers and the national authorities, highlighting many of the political challenges and complexities. We can see in real-time, whether and how local communities are being consulted and in which forms," Frauke describes.

## GOING TO THE SOURCE

The project is divided into four themes – the organisation and motives of Chinese hydropower actors, local and national impacts, governance implications, and UK and Organisation for Economic Co-operation and Development (OECD) interests. The research team, which comprises 10 institutes from the UK, China and each of the four countries involved in the case studies, pursues these strands of research by carrying out fieldwork at the dam sites, as well as conducting interviews with institutional stakeholders, such as government officials, hydropower firms and financiers, NGOs and researchers. "We are using an interdisciplinary, multi-method approach that reflects the international scope of the project's complex interconnections," notes Frauke.

An important aspect of the project's approach to studying the impacts of dams in low- and

middle-income countries is listening to and learning from the locals. In fact, Frauke highlights this work as the most fascinating component of the job: "This is the part of the research that I get the most excited about as we are able to visit the people that are affected by the dams on a daily basis, for instance those that have been displaced and resettled, or affected by negative impacts on their livelihoods". In fact, the research team spent time staying with resettled indigenous communities in Borneo, which afforded them these insights first-hand.

As the first study of its kind, Frauke and her colleagues will be able to provide new, valuable insights into the effects of Chinese financed and built dams in low- and middle-income countries

In addition to local partners, the project works with the NGO International Rivers, which has worked alongside Chinese dam builders for many years. This provides an opportunity for the researchers to help inform corporate behaviour of hydropower firms in China and the UK/OECD, and shape emerging national and international policy in this field.

#### DAMMING RESULTS

With the project's fieldwork nearing completion, the researchers are shifting their attention to analysing the data gathered. A number of interesting and surprising findings have already been revealed. For instance, the fieldwork conducted by Frauke and her colleagues revealed that some large dams are located on protected land, such as national parks or biodiversity hotspots, home to endangered species.

However, it is not just nature and animal life that are being transformed by the dams – indigenous communities are also being affected. The team found that some people with homes near the dams – major sources of hydroelectric power – are actually living without electricity. "This means that some of the local people, who are experiencing a decline in their livelihoods due to the dam, are literally left in the dark," Frauke points out. "We can see a pattern across our comparative analysis that the negative impacts of the dams are felt locally by poor people while the benefits are reaped nationally, often in the capital or industrial centres."

Moreover, the project demonstrated that several dams are not being used to their full potential. The Bakun Dam in Borneo is estimated to be running at only 25 per cent capacity, due to low electricity demand. Despite this, there are plans to build more dams in the area, which will result in more people being displaced.

#### SHAPING DECISIONS

As the first study of its kind, Frauke and her colleagues will be able to provide new, valuable insights into the effects of dams built and financed by China in low and middle income countries. The overall aim of the project is to help inform hydropower firms in China and aid the UK and OECD in shaping national and international policy. "Ideally there should be a global code of conduct for the environmental and social sustainability of international hydropower projects. This applies not only to Chinese dam builders, but also to those from other countries or organisations," affirms Frauke.

To help make their results widely available, the team will be hosting dissemination events in the UK as well as each of the case study countries. These events will welcome Chinese dam builders, national government authorities, donors, NGOs and representatives from local communities to come together to discuss the significant issues relating to dams.

## INTELLIGENCE

### CHINA GOES GLOBAL: A COMPARATIVE STUDY OF CHINESE HYDROPOWER DAMS IN AFRICA AND ASIA

#### OBJECTIVES

To provide the first systematic and comparative analysis of the environmental, social, economic and political impacts of Chinese hydropower dam projects in low and middle-income countries, which will inform corporate behaviour of hydropower firms in China and the UK and shape emerging national and international policy responses.

#### KEY COLLABORATORS

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Project team members.



Core project team (from left to right): Giles Mohan, May Tan-Mullins, Giuseppina Siciliano and Frauke Urban.

