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Social Innovation and Chinese Overseas Hydropower Dams: The Nexus of National Social Policy and Corporate Social Responsibility

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ABSTRACT

The nexus between hydropower dams, social policy and corporate social responsibility (CSR) is a currently understudied topic. This paper aims to fill parts of this gap by discussing these issues in relation to the world's largest builder of hydropower dams, Chinese state-owned enterprise Sinohydro. This paper draws on the analysis of firm strategy documents and CSR documents and gains additional insights from key informant interviews. The research finds that in 2011 Sinohydro developed its first comprehensive policy framework for social and environmental safeguards that was in line with international standards set by the World Bank/International Finance Corporation. These policies were however later replaced by weaker, vaguer policy. The paper suggests there is a need for Sinohydro and other dam-builders to re-engage with social innovation to mitigate some of the negative social and environmental implications of hydropower dams. Copyright © 2015 John Wiley & Sons, Ltd and ERP Environment

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Introduction

THE NEXUS BETWEEN HYDROPOWER DAMS, SOCIAL POLICY AND CORPORATE SOCIAL RESPONSIBILITY (CSR) IS A CURRENTLY understudied topic. This paper aims to fill parts of this gap by discussing the nexus between national social policy and CSR in relation to the world's largest builder and operator of hydropower dams, Chinese state-owned enterprise (SOE) Sinohydro.

Hydropower dams are experiencing a new renaissance in many parts of the world, particularly in low and middle income countries, where most of the hydropower potential remains at relatively low levels of exploitation. These countries have weak formal social policy to remedy some of the social implications of large infrastructure projects such as dams. Hydropower dams are symbols of economic development in general and low carbon development for climate change mitigation in specific. At the same time, large hydropower dams are controversial, as humans and nature have to make way for these megaprojects. The focus on technological solutions has come at the price of challenging

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sustainable development and neglecting some of the most critical social impacts of large dams, let alone the large environmental impacts of dams. Large dams present immense social and environmental challenges for local communities, which can include resettlement of affected individuals and communities, psychological stress, loss or decline of livelihood and assets, changes to lifestyles and traditions, impacts on fishing, agriculture and food security, impacts on access to and quality of water and a wide range of environmental adverse effects (Urban *et al.*, 2013).

After decades of hydropower dam-building in low and middle income countries there is still no comprehensive remedy for the severe impacts on affected local people. The World Commission on Dams (WCD) developed the framework *Dams and Development: a New Framework for Decision-Making* in 2000. The International Hydropower Association (IHA) launched their own sustainability guidelines in 2004, followed by their Sustainability Assessment Protocol in 2010. There has also been a rise in assessment techniques such as social impact assessment, multi-stakeholder platforms and transboundary environmental impact assessments (Mirumachi and Torriti, 2012). The World Bank had withdrawn itself from funding large hydropower dams in the 1990s, but has in recent years re-engaged with hydropower projects. The recent increase in Chinese investment in hydropower in low and middle income countries has not only challenged the prior dominance of the World Bank but it has increased the need to discuss and analyse the social sustainability of overseas Chinese hydropower dams. China's 'Going Out' strategy has led to a rising number of Chinese overseas hydropower dams, particularly in low and middle income countries in Asia and Africa (Bosshard, 2009; McDonald *et al.*, 2009; International Rivers, 2012). Chinese banks and companies have been involved in more than 330 large Chinese overseas dam projects, most of them in Southeast Asia (38%) and Africa (26%), of which 81 have been completed and 92 are currently under construction (International Rivers, 2014).

Hensengerth (2013) suggests that the actual implementation of environmental and social guidelines for overseas dams depends on the local and national circumstances and governance, particularly the national regulations and enforcement capabilities of the host country. This becomes even more severe when many of China's overseas hydropower projects are built in countries with weak local governance and/or high corruption. Moreover, many of these countries have weak informal social security and welfare arrangements, which make affected local stakeholders very dependent on the contracts that national and local politicians negotiate with powerful Chinese actors.

This article aims to fill the current knowledge gap in discussing the nexus of national social policy and CSR in relation to Sinohydro. The *research question* is the following: what is Sinohydro's stance towards social policy for mitigating the social and environmental impacts of their overseas dams? The paper first aims to conceptualize the role of hydropower dam-builders in countries with weak formal social policy. In these countries the dam-building firm needs to step up their mitigation measures to reduce some of the social and environmental impacts of large dams. Second, this paper examines the social policies of the Chinese dam-builder Sinohydro, the world's largest dam-building firm, since the introduction of their first comprehensive policy for social and environmental safeguards in 2011. We examine how Sinohydro's conceptualization of CSR has changed in recent years. We found that in 2011 Sinohydro was preparing to close the gap between their policy and the international standards set by the World Bank/International Finance Corporation (IFC), which is a sign that Sinohydro was going to incorporate social innovation at a corporate level. These proposed social innovations were however replaced by weaker policies after the restructuring of Sinohydro. The policy documents that were released in 2013 and 2014 after the restructuring hark back to a discourse close to the Chinese overall 'no-strings attached' approach. The paper suggests there is a need for Sinohydro to re-engage with social innovation to mitigate some of the negative social implications of hydropower dams and to promote sustainable development.

The following section elaborates the theoretical framework, the next section discusses the role of Chinese-built and Chinese-funded dams and presents the empirical material, the fourth section discusses the findings and the fifth section concludes the paper.

Methodology and Theoretical Framework

Methodology

This paper draws on document analysis, supplemented by key informant interviews. It analyses firm strategy documents and CSR documents and gains additional insights from strategic key informants. It analyses four key

documents from Sinohydro: its *Policy Framework for Sustainable Development* (2011), its *Occupational Health, Safety and Environmental Policy* (2013), its *Statement of Ethical Principles* (2014a) and its *Sustainable Development Policy* (2014b). It analyses these documents with regard to key issues that are of relevance for large dams and their social and some environmental impacts, such as resettlement and compensation, impacts on livelihoods and natural resources, the consultation process etc. In addition, 14 interviews with key informants were conducted in 2014, including representatives from various parts of Sinohydro, Exim Bank, China Three Gorges Corporation, Chinese embassies in Asia and Africa, Chinese ministries such as the Ministry of Water Resources and Ministry of Environmental Protection, the Chinese Academy of Social Sciences and various universities. Most interviews were conducted in Beijing, China, while some interviews took place at sites and capitals in Asia and Africa where Sinohydro is constructing dams. The interviewees were chosen based on their expertise and knowledge in the field of study.

The approach to analysing these key issues is detailed in Table 1 and discussed in the following theoretical framework.

Theoretical Framework

Innovation, Social Innovation and Social Justice

Low carbon technologies in general and large hydropower dams in specific are being considered as one solution for climate change mitigation. There is an overarching consensus that technological innovation could solve the fraught relationship between economic growth, poverty reduction and environmental degradation. Technological innovation is perceived to be an essential part of low carbon development, but often this neglects some of the most critical social and environmental implications of large dams. The environmental impacts of large dams are wide ranging; however, the key focus of this paper is on the social impacts of dams. Large dams are considered as controversial due to their negative social effects and as those who benefit are often not the local population whose lives are directly affected by the dams (Scudder, 2005).

Innovation can be broadly defined as creating something new, developing a new product, service or idea. Innovation is often seen as new products, services and ideas that have successfully reached the market (Rogers, 2003). Innovation systems are highly complex and need to reconcile socio-economic development, environmental sustainability and technological and innovation capabilities, in both developed and developing countries (Stamm *et al.*, 2009; Urban *et al.*, 2012).

Social innovation has become a separate stream of literature that focuses on the social and political organization of society. Ockwell and Mallett see 'social innovation' as 'recognizing new ways of organizing or doing things through social dimensions' (2013, p. 118). Andersen *et al.* define social innovation as 'the ability to organise bottom linked collective action/empowerment (including efficient political representation)', and state that this 'is a condition for

Distributive justice for social innovation

Basic needs of the communities affected by dams met, such as sufficient food, adequate housing, income and extended needs
 Employment and opportunities for learning and self-development met
 Provision of basic services such as clean water supply, sanitation, reliable electricity supply, schooling/education, health services, mobility/transportation
 Fair distribution of environmental 'bads' and 'goods' and natural resources/equality of rights, including human rights, land user and tenure rights, and indigenous people's rights

Procedural justice for social innovation

Accountable governance and management of the policy, planning and standard-setting process for dam construction and its implementation; including holding actors accountable for fulfilling their promises and pledges
 Social monitoring of the policy, planning and standard-setting process for dam construction and its implementation
 Access to participation and decision-making at different stages of the process and over time/proactive stakeholder communication and consultation throughout the dam planning and construction process

Table 1. Adapted justice for social innovation framework for large hydropower dams, derived and amended from the work of Boström (2012)

reaching sustainable democratic and social development' (2009, p. 283). They argue further that '[S]ocial inclusion and integration are impossible without both social conflict and democratic dialog' (2009, p. 283). One of the most important aspects when analysing hydropower dams and social innovation is the need to go beyond the flawed system of implementing large hydropower dams with social sustainability being nothing more than an afterthought. When referring to social innovation in the context of this paper we therefore mean that a new policy, product or service is being created to minimize the social and environmental impacts of dams and maximize the quality of people's lives, livelihoods and assets.

Social justice needs to play an important role here to facilitate social innovation for large hydropower dam projects. This means that those social groups affected by the dam, who are sometimes already poor and marginalized before the dam construction, should experience justice through the dam construction. In practice this means that their quality of life and livelihoods, their assets, income and employments, access to services and social protection would be guaranteed. Two of the most important aspects here are to facilitate both distributive social justice and procedural social justice within social innovation.

Distributive justice is concerned with the distribution of resources, hence the fair and equal allocation of environmental resources among diverse groups of citizens and stakeholders (Maiese, 2004). Distributional justice has often focused on how marginalized groups have been exposed to environmental hazards such as toxic substances or other environmental issues. Moreover social justice is not just an academic field and a policy framework, it is also a social movement, which entails communities engaging and reacting against environmental bads in the community (Agyeman, 2005, p. 3). Gender, race, class, impacts of environmental 'bads' and access to environmental 'goods' (such quality of life, natural resources or a clean environment) have become the heart of discussing distributive justice and the environment (Boström, 2012, p. 5).

Procedural justice is concerned with the process of social and environment justice. It deals less with the equal distribution of resources and more with the direct empowerment and participation of different stakeholders in environmental processes (Boström, 2012, p. 5). There is an overarching perception in this discourse that most pollution and environmental degradation is caused by the more affluent and powerful and the environmental consequences hit the poor disproportionately. It is therefore important that the environmental policy decision-making process for large infrastructure projects such as dams is transparent, just and participative. The importance lies in creating fair processes for environmental policy-making and policy implementation. There is a perception that, if policy-making and policy implementation have been fair, participating parties are more likely to accept a disliked outcome (Deutsch, 2000). Both distributive and procedural social justice are important for ensuring that social innovation takes place with regard to large dams.

For this paper we use Boström's framework, which is very much linked up with distributive and procedural dimensions of social justice. He highlights the need for 'the improvement of conditions for living people and future generations *and* the quality of governance of the development process' (Boström, 2012, p. 5).

We amend Boström's framework and link social justice with social innovation. We then differentiate between a 'what' category that covers *distributive aspects* and a 'how' category that covers *procedural aspects*. This article looks at how distributive justice within social innovation is part of Chinese dam-builders' CSR; if it can sustain stakeholders' basic needs, support local stakeholders employment opportunities/livelihoods and also provide them with basic services. This looks at the redistributive aspect of corporate citizenship. The second aspect that we look at is procedural justice within social innovation; how accountable the process is, if there is social monitoring, transparent information and communication, and how open the process is to participation (Boström, 2012).

A socially sustainable and just hydropower dam project would need to safeguard the affected people's basic needs, employment and basic services as well as guaranteeing that the overall project and the dam-builders and government agencies are accountable, providing good social monitoring and opening up spaces for participation by the affected people and communication with dam-builders, government agencies and the affected people.

Social Policy and CSR

One of the most difficult areas for mitigating the social adverse effects of hydropower projects is the lack of structure and responsibility in responding to these challenges. Many of the most disputed hydropower dam projects have taken place in ecologically sensitive natural environments and in poorer middle and low income countries, often relying on strained communities and kinship groups. Gough and Wood have discussed the concept of *informal*

security regimes and *insecurity* regimes (Gough and Wood, 2006), which describes low and middle income countries where the state cannot offer comprehensive or even basic welfare services. Many developing countries have an informal welfare system that relies more on informal communities and informal social services. Gough and Wood discuss the nature of informal security arrangements, where rights and duties are often informal and people rely heavily upon community and family relationships to meet their security needs (Gough and Wood, 2006, pp. 1699–1700).

Many of the countries that attract investment in hydropower from China are countries with little formal welfare service from the state and a high reliance on families and communities for welfare, and not seldom a dependence on international aid and charities. Hydropower dams may risk not only undermining individuals' but also whole communities' ability to provide welfare arrangements for members and kin. As the state cannot provide an adequate safety net in many developing countries, people adversely affected by dams become extremely vulnerable to changes to their lives and livelihoods. In these cases, corporations and investment banks will have a disproportionate impact on vulnerable people in affected areas. The lack of responsibility of many corporations and investment banks has created much suffering amongst the poor and marginalized in areas affected by large dams. It is therefore important to acknowledge that corporations and investment banks carry a social responsibility towards their investments and construction projects in developing countries.

This creates a new reframing of how we understand CSR. Traditionally, corporations have not been perceived to replace the work of the state and CSR has been rather limited in scope. Carroll has authored the most widely used definition of CSR: CSR should be understood to be 'being profitable, obeying the law, being ethical, and "giving back" to the community' (2000, p. 37). What is needed from builders, operators and managers of hydropower dams must go beyond philanthropic ventures (Blumberg, 1972; Henning, 1973; Sheikh, 1996) to a larger obligation 'to take proper legal, moral-ethical, and philanthropic actions that will protect and improve the welfare of both society and business as a whole' (Anderson, 1989, p. 9). This is due to the large social and environmental impacts that large dams can have.

Matten and Crane have discussed views to extend our understanding of CSR but have focused mostly on developed countries. One of the most interesting aspects of expanding our understanding of corporate citizenship and CSR involves the corporations taking over responsibilities that in developed countries have been identified to belong to the state. Matten and Crane argue that corporations' involvement in the citizenship arena is more similar to the involvement of governments. At the same time, corporations have become more and more responsible for the administration of social, civil and political citizenship rights: a domain that was traditionally seen to belong to the nation state (Matten and Crane, 2005). This could mean the deliverance and allocation of public goods and the definition and administration of citizenship rights. The corporations share a horizontal dimension with governments and are in a vertical relationship with the citizens within a political community (Matten and Crane, 2005). Corporations become active in certain areas of social innovation where government has not been. Since developing countries often lack local governance, corporations could step in and surrogate governments, for example by ensuring that employees have an adequate living wage or by financing schools for child workers. Many of these questions have for better or worse been reconfigured through multinational corporations and their activities (Matten and Crane, 2008, pp. 36–38).

The main questions here is whether, when a hydropower project takes place in low or middle income countries, the dam-building firm can mitigate its social and environmental impacts and compensate for the lack of formal state welfare. A worst case scenario would be that informal communities are undermined by hydropower dams and cannot deliver the informal services the individuals, families and marginalized group need. This becomes more severe when the country has no welfare infrastructure and the firm has taken little social responsibility towards local people. It is therefore important to analyse and discuss the role of social innovation a firm such as Sinohydro takes to mitigate some of the social adverse effects and to make the overall project more socially sustainable and socially just.

Chinese-Funded and Chinese-Built Overseas Hydropower Dams

While China has a long history of domestic dam-building, Chinese dam-builders are relatively new to the international dam industry and have had a rapid increase in activity in recent years (Urban *et al.*, 2013). Chinese dam-

builders and financiers tend to differ from other dam-builders and financiers due to their bundling of aid, trade and investments; the role of SOEs that are backed by abundant state funding; their own distinctive way of handling (and not seldom underestimating) social and environmental impacts; their pragmatic approach to regional politics and political alliances; and their lower prices, which pose a challenge to competitors (Urban *et al.*, 2013; Hensengerth, 2013; see also Tan-Mullins and Mohan, 2013). With regard to Chinese overseas dam projects, Chinese banks and companies have been involved in over 330 Chinese overseas dams, most of them in Southeast Asia and Africa. The great majority of these are large dams, of which 81 have been completed and 92 have commenced construction since 2000 (International Rivers, 2014), at a time when many other dam-building nations and organizations, particularly those from the OECD, were withdrawing from the dam-building industry.

Sometimes governments ask dam-builders to build dams according to specific pre-arranged plans and conditions. Dam-builders such as Sinohydro may be on other occasions involved in planning the dam and how it should be designed, engineered and constructed, which often includes major decisions about the size of the dam, generating capacity, size of the reservoir that will flood the area etc. This can also include making major decisions with consequences for individual people, villages, towns, agricultural land and cultural sites that will be affected by the dam-building and the flooding of the area. While Sinohydro is mainly the contractor, there are several cases where the firm has acted as a project developer for build–operate–transfer (BOT) projects, for example at the Kamchay Dam in Cambodia. In such situations they may contribute to decisions about compensation payments, including how much money is made available. In many countries around the world, developers are required to conduct an environmental impact assessment (EIA) or an environmental and social impact assessment (ESIA) so that the environmental and social impacts of the dams are evaluated and mitigation measures are developed (such as resettlements and compensation, rescue missions for animals before the reservoir flooding, planting new trees after the flooding etc.). Compared with project contractors, developers are therefore more aware of the full extent of the dam-building and its impacts and can make informed decisions about its sustainability and whether or not a project should go ahead.

This paper examines Sinohydro's stance towards social policy for mitigating the social and environmental impacts of their overseas dams. In Table 2 we list the firm's corporate policies from 2011 to 2014. 2011 was the first year that a comprehensive social and environmental policy was officially developed by Sinohydro. We also examine how Sinohydro's conceptualization of CSR changed recently.

Sinohydro

Policy Framework for Sustainable Development

Sinohydro's documentation of social policy has rarely been made public in a transparent and coherent way. There was an attempt in 2011 to adapt international norms for hydropower dam projects. The most important document that was publically accessible is Sinohydro's policy commitments from its *Policy Framework for Sustainable Development* (Sinohydro, 2011; International Rivers, 2012) in 2011. This document adopted World Bank standards as a minimum, for example with regard to resettlements. The World Bank and IFC Performance Standards are the latest international standards on dam-building. Standards are appropriately developed by public institutions such as governments, the United Nations and the World Bank, not by corporate actors. Having standards set by

Organization	Document	Year	Nature of document
Sinohydro	<i>Policy Framework for Sustainable Development</i>	2011	catalogue of commitments; references to other internal and external documents
Sinohydro	<i>Occupational Health, Safety and Environmental Policy</i>	2013	brief statement with lack of details
Sinohydro	<i>Statement of Ethical Principles</i>	2014	longer statement, which lack details concerning social implications and CSR
Sinohydro	<i>Sustainable Development Policy</i>	2014	list of principles similar to the document released in 2011 but far shorter and with less detail on CSR

Table 2. Documents on social and environmental guidelines by Sinohydro

different corporate actors would lead to a proliferation of different standards that are difficult to implement and monitor. Corporate actors, such as Sinohydro and other dam-builders, have been asked to adopt and follow existing standards. Sinohydro fares better than its Chinese competitors with regard to social policy. In particular, smaller, local SOEs do not have social policy guidelines and do not adhere to World Bank standards. In this sense, it was innovative for Sinohydro to adopt standards that were prepared by and for public financial institutions such as the World Bank and the IFC.

In addition to the World Bank standards, legal compliance and environmental assessment policies are driven by Sinohydro's own policy documents, while resettlements and community consultations policies have been adopted to World Bank standards (eight policy commitments from 12 overall). The distributive dimension is less developed than the procedural dimension.

The focus for the distributive justice dimension of social innovation is on resettlement arrangements, which should include livelihood options and resettlement site options and set out compensation and new community infrastructure. Dams are not supposed to be built in national parks or habitats of endangered species. The *Policy Framework for Sustainable Development* document states that, if the host country government's resettlement measures do not meet Sinohydro's policy standards, Sinohydro will prepare a supplemental resettlement plan that will address its policy commitments. Sinohydro claims that displaced persons will at a minimum keep their former living standard, income earning capacity and production levels. Most of the document is focused on distributive justice dimensions of social innovation, such as consultations with local communities and stakeholders on EIA (World Bank's Operational Policy on Environmental Assessment) and that the relevant information has been disclosed to affected communities on the nature of the projects, including duration, risks, engagement process and grievance mechanism (IFC Performance Standard). Sinohydro itself aims to conduct sufficient consultations with relevant stakeholders and respond to their concerns. If indigenous people are involved, Sinohydro aims to obtain their consent. Sinohydro also promises that compensation standards are transparent and applied consistently.

Sinohydro does not use social policy as a concept but focuses on the term 'resettlement measures'. The promise of replacing host countries' potentially inadequate resettlement measures with Sinohydro's own standard or restoring displaced persons to their former living standard would imply a social policy that replaces or expands upon possibly inadequate local welfare arrangements. What is missing from the policy document is a discussion and an analysis of Sinohydro's policy standards vis-a-vis the existing welfare arrangements in low income and middle income countries. These documents may be a step forwards for Sinohydro to a more comprehensive social policy framework.

However, after senior management prepared and reviewed the *Policy Framework for Sustainable Development* in 2011, it avoided publicizing the policy only six months later when Sinohydro was restructured. The company was restructured as Sinohydro Resources and Sinohydro International, while PowerChina was created as a parent company owned by the government's State Administration for State-Owned Enterprises. This also meant that the newly introduced *Policy Framework for Sustainable Development*, which largely followed World Bank standards, was replaced by new, weaker policy documents in subsequent years following the company's restructuring.

Occupational Health, Safety and Environmental Policy

One of the post-restructuring documents, *Occupational Health, Safety and Environmental Policy* from 2013, is a step back in detail and provides more broad and general commitment to providing 'a safe and healthy workplace, complying with local legislation, international standards and company's requirements to protect the environment' (Sinohydro, 2013, p. 1). This document focuses on work-related issues such as health and safety for personnel and reframes environmental issues and challenges within the same framework. 'We believe that all work related injuries, illness and environmental incidents are preventable, and we will respect our neighbours and contribute to the environment in which we operate' (Sinohydro, 2013:1). This highlights a change of focus, where the overall environment is mentioned in the same breath as the health of personnel. There are no real commitments to social standards and no indications of how Sinohydro will contribute to the overall environment in the particular area. Moreover, this document relates more ambiguously to international standards compared with the previous policy documents. It does not refer to the international standards developed by the World Bank and the IFC. Sinohydro should be 'committed to taking all appropriate measures to provide a safe and healthy workplace, complying with local legislation, international standards and company's requirements to protect the environment', but it becomes

more ambiguous later on in this brief document, as they state that Sinohydro will '[e]stablish, implement and develop the Health, Safety and Environmental Management System in compliance with relevant standards and regulatory requirements' (Sinohydro, 2013, p. 1).

Statement of Ethical Principles

In Sinohydro's policy document *Statement of Ethical Principles* from 2014 (Sinohydro, 2014a) the firm continues to display a U-turn on social innovation and CSR. This policy document does not refer to the international standards developed by the World Bank and the IFC. The document first and foremost focuses on the 'health and safety of our employees', but adds that they are also committed to 'any other persons who may be affected by our operations' (2014a, p. 6). The tone is less defined in their commitment to both distributive and procedural social innovation. The document states that Sinohydro has the 'responsibility to prevent injury, ill health, damage and loss arising from our operations as well as to comply with all regulatory or other legal requirements pertaining to safety, health, and the environment' (2014a, p. 6). It is no longer mentioned that national parks or World Heritage areas are no-go areas for dam projects. The goals are much more ambiguously put: Sinohydro should be 'limiting the impact of our business activities on the environment' and 'continue to take steps to preserve biodiversity and affected ecosystems, protect World Heritage areas, and to restore any disturbed areas in a timely manner' (2014a, p. 6). This is a step back from the document in 2011 and more ambiguous on what is allowed and not allowed.

This ambiguity continues as the document states that Sinohydro will 'participate in the social and economic life of the communities in which we work, both within and outside China' (2014a, p. 7). The strongest passage for social innovation relates to the following:

In our overseas projects we support and help to provide access to health, education, and integration for underprivileged populations. We are committed to an open dialogue with all of our stakeholders – our owners as well as local partners, public and governmental institutions, NGOs, local associations, et cetera – to mitigate disturbances created by our operations, working in compliance with local cultural and community practices. We also seek to make a lasting positive impact in our host countries, including whenever possible by recruiting and training local workers and by promoting their professional development (2014a, p. 7).

Sustainable Development Policy

In 2014 Sinohydro also issued a new *Sustainable Development Policy* (Sinohydro, 2014b). This policy document does not refer to the international standards developed by the World Bank and the IFC. It also does not refer to the social innovation aspects mentioned in its *Statement of Ethical Principles*. This highlights that Sinohydro has not developed a coherent policy on CSR. The turn that Sinohydro has taken has more to do with protecting its own employees than the local community that is affected by its activities. The document states the importance to 'create long term jobs', 'foster career development of our employees' and share the 'fruits of the company's growth and profits' (Sinohydro, 2014b, p. 2). The focus is far more direct and now just includes mention of respecting 'local culture, religion and customs', 'providing locals with skills training and equal employment and business opportunities' and 'to contribute to the local society development' (Sinohydro, 2014b, p. 2). It is rather vague as, the document states the need to integrate sustainability into purchasing and procurement processes and the rather ambiguous promises to improve the consistence 'with company's social responsibility objectives while in pursuit of mutual beneficial relationship' (Sinohydro, 2014b, p. 2).

Now Sinohydro is only committed to limiting the impact of Sinohydro's business activities on the environment and is promising rather vaguely to take steps to preserve biodiversity and affected ecosystems (Sinohydro, 2014b). Moreover, the general aim to have an open and effective dialogue and communication mechanism to exchange information with communities when it comes to the environment is bland at best. In the end, the change of Sinohydro's CSR practices has also meant a roll-back of responsibilities. The document only promises to 'respond in an active manner to any complaints and/or grievances' (Sinohydro, 2014b, p. 7) that arise from customers, employees, subcontractors, communities and authorities. The focus on the local stakeholders has been lost in the 2014 policy document, and they are just one of many stakeholders and by no means a priority for Sinohydro.

Discussion

Within the context of this paper, social innovation means that a new policy, product or service is being created to minimize the social and environmental impacts of dams and maximize the quality of affected people's lives, livelihoods and assets. Our analysis shows that in 2011 Sinohydro was planning to introduce a social innovation into their organization when they appeared to integrate international social standards into their projects.

This included promises to ensure that resettled people would at least be able to maintain their living standard after relocation or that otherwise Sinohydro would step in when the host country's social policies could not fulfil its role towards the affected population. The attempt to introduce global standards in 2011 was shelved just after the restructuring of Sinohydro in the same year. World Bank policies were used as a blueprint for Sinohydro's CSR in 2011, but this changed in 2013 and 2014 towards a more vague corporate and legal focus on business ethics rather than social sustainability. This is presented in Table 3.

CSR approach	Distributive dimensions of social innovation	Procedural dimensions of social innovation	Social policy dimensions
Sinohydro	There has been a slide in how Sinohydro defines its distributive responsibility. In the first policy document from 2011 Sinohydro focused on resettlement arrangements close to the international standards of the World Bank. Sinohydro promised to supplement host countries failing resettlement measures and claimed that displaced persons will at a minimum keep their former living standard, income earning capacity and production levels. The later documents from 2013 and 2014 backtrack these promises and offer broader ambiguous promises. Most of the CSR pledges are towards employees, customers and economic stakeholders.'	All documents have focused on the procedural aspect of CSR. There has been a change of focus from consultations with local communities and stakeholders on EIAs in 2011 towards a more corporate focus on legal aspects such as anti-corruption, avoiding fraud/criminal activities and conflict of interests in 2013 and 2014. There is far more focus on describing Sinohydro's relationship with a more limited group of stakeholders such as customers, suppliers, sub-contractors, representatives and governments. The later policy documents focus far less on the affected communities and far more on the general procedural principles of fair competition.	Sinohydro does not use social policy as a concept but focuses on the term 'resettlement measures' in the early documents. This however neglects those people that have been affected by dams (for example by declining livelihoods and limited access to natural resources), but not been resettled. Most of the social policy measures are adapted World Bank/IFC performance standards in its 2011 policy. Most of these pledges have been dropped in the later policy documents from 2013 and 2014, which make only vague promises of 'support and help to provide access to health, education, and integration for underprivileged populations' and 'mitigate disturbances created by our operations, working in compliance with local cultural and community practices' (Sinohydro, 2014a, p. 7). Compared with the first document (2011) the development in 2013 and 2014 has been retrograded.

Table 3. Sinohydro's CSR approach

One has to discuss how far the above mentioned policies merely exist on paper rather than being implemented in practice. In the past the actual implementation of adequate social innovation lagged behind, as existing dams show. For example, the 2011 Policy Framework for Sustainable Development defined national parks as excluded from dam development. A project should not 'occur in a national park, habitat of threatened species or protected wetlands, which are no-go zones for project development' (Sinohydro, 2011, p. 1). Yet, several recent large dams by Sinohydro have been built in national parks, such as the Bui Dam in Bui National Park in Ghana and the Kamchay Dam in Bokor National Park in Cambodia, while the Bakun Dam in Borneo, East Malaysia, is located in the habitat of threatened species such as the orang-utan as well as on customary indigenous people's land (Urban *et al.*, 2015). These dams were already under construction at the time the policy was being developed and approved by senior management. Therefore, a substantial change in the way business was being done would have been required to follow the new policy. This also raises the question of whether and to what extent Chinese dam-builders such as Sinohydro have learned from their past mistakes. Learning from past mistakes seems limited following the replacement with weaker policies of the 2011 framework policy, which was to date the most advanced social and environmental policy, in line with World Bank standards.

Another challenge is caused by the vague wording of the current policies in place. Vague wording can leave room for sub-standard practice. For example, what does 'consent' from indigenous people mean prior to dam-building mean? This exercise may be limited to tokenistic consultation events rather than taking into account the views and needs of the local population, offering alternatives to lost income or livelihoods and looking for alternative dam sites or alternative energy options when local opposition arises.

This paper highlights the importance of both technological innovation and social innovation. While China spends a considerable amount of investment capital in low carbon development and low carbon technologies, it has spent far less resources in coupling this with social innovation. This becomes more and more important, as China has been following a 'Going Global' strategy in an attempt to access new markets and create global corporate champions in the hydropower sector.

In the mid-2000s, China started to rethink its 'no-strings attached' policy. In January 2007, Cheng Siwei, Vice-Chairman of the Standing Committee of the People's Congress, warned that 'irresponsible practices' had prevented Chinese companies from expanding their businesses abroad. He predicted 'Even in developing countries, foreign companies that turn a blind eye to their social responsibilities will be kicked out of the market' (McDonald *et al.*, 2009, p. S302).

The economic and public costs of hydropower dams in ecologically and socially sensitive areas make some Western firms occasionally wary of these investment opportunities. Rather than taking on this cautionary approach, Sinohydro's attempt to implement international standards were dropped even before they were implemented in practice. The social innovation of the early policy documents from 2011 would have been a big step forward for more sustainable and accountable hydropower practice. This would have meant that a Chinese SOE would have abandoned its infamous 'no-strings attached' policy and shown some genuine interests in the lives of people and their livelihoods affected by the dams. Sinohydro would have stepped up to take the role towards the affected local communities that would have been expected of a state. Instead, these plans were shelved and Sinohydro removed itself in both theory and practice from any comprehensive implementation of CSR.

As Sinohydro is an SOE there are two solutions to promote social innovation for the ever-growing investments from China in the future: one option would be that China's enterprises and financiers such as Sinohydro and Exim Bank or China Development Bank participate in shaping a more proactive global CSR for hydropower investment, following international standards such as those of the World Bank/IFC and the Equator Principles for the financial sector. Beckmann and Pies suggest argue that to some degree it would be in many corporations' interest if they accepted 'ordo-responsibility in rule-setting processes and rule-finding discourse' (2008, p. 54). The corporations would not just obey regulations and ethics but actually create and monitor such regulations. Such governance does not produce hard laws, but soft laws, which mean they lack the possibility of legal sanctions. These regulations are deliberative and consensual; they take for granted a more cooperative relationship between governments and corporations (Mörth, 2008, p. 107).

The second option would be that China's enterprises such as Sinohydro shape their own policies rather than adopting external rules, regulations and international standards. It is however regrettable that many of the social policies of Sinohydro and other dam-builders and dam-financiers are not effective. There is therefore a need for

social innovation to mitigate the adverse affects of large hydropower dams for affected people, their livelihoods and their local environment. This is not only restricted to specific firms or countries, but is needed on a global level.

Conclusion

This paper has contributed to narrowing some of the current knowledge gap with regard to Chinese overseas hydropower dams and social policy. The paper's research question aimed to examine the stance of Chinese SOE Sinohydro, the world's largest dam-builder, towards social policy for mitigating the social and environmental impacts of their overseas dams. The paper discussed the nexus of national social policy and CSR in relation to Sinohydro. The paper first highlighted that in countries with weak formal social policy the dam-building firm needs to step up its mitigation measures to reduce some of the social and environmental impacts of large dams. The paper then examined the social policies of Sinohydro since the introduction of their first comprehensive policy framework for social and environmental safeguards in 2011. The paper found that in 2011 Sinohydro was closing the gap between their policy and the international standards set by the World Bank/IFC, which are signs that Sinohydro was going to incorporate social innovation at a corporate level. While the World Bank standards leave room for improvement, they represent at least international practice. The publicization of these policies was however avoided later through the restructuring of Sinohydro and they were superseded by weaker, vaguer policy in 2013 and 2014. The policy documents that were released after the restructuring hark back to a discourse close to the Chinese overall 'no-strings attached' approach, reducing social innovation to a minimum. The paper suggests that there is a need for Sinohydro to re-engage with social innovation to mitigate some of the negative social implications of hydropower dams, for example by adhering again to World Bank standards or the IHA Hydropower Sustainability Assessment Protocol. Social safeguards need to be taken more seriously, particularly with regard to resettlement, compensation, livelihood impacts and consultation processes. This also applies to other dam-builders, including from OECD countries, particularly those that disregard the large social and environmental impacts of dams.

This paper has shown that, for the case of Sinohydro, CSR fails to replace state-driven social policy to mitigate the adverse effects of large dams on affected people and their livelihoods and the environment. Some argue that CSR has reached its peak and that a new approach to the regulation of corporate social power is needed (Altman and Vidaver-Cohen, 2000; Waddock and Smith, 2000). Further research is needed into how social innovation can be better adopted in the dam-building sector, how the policies and standards of dam-builders and financiers can be improved and how CSR can be an integral element of firms' best practice rather than a tag-on.

In line with these thoughts, we suggest that there needs to be a global benchmark system of dam-building firms that ranks them according to their social and environmental performance and a compulsory, global code of conduct for social innovation for international hydropower projects that goes beyond the current policies. This would apply not only to Chinese dam-builders but to dam-builders from any other nation too. This would be one way of holding dam-builders accountable even in countries where states fail to provide adequate social policy as a response to the impacts of large dams. This approach could contribute to sustainable development in the hydropower sector.

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