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## Original Article

# The Limits of Social Protection: The Case of Hydropower Dams and Indigenous Peoples' Land

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### Abstract

*Hydropower dams have been criticised for their social and environmental implications. There have been attempts to create international social standards for hydropower dam projects, but these standards have had limited impact. This article uses an extended environmental justice framework to make sense of the resettlement and compensation schemes for Indigenous peoples who were resettled for the construction of the Bakun dam in Borneo, East Malaysia. The article therefore analyses the social protection measures designed for the protection of Indigenous peoples and their livelihoods. The case study is based on in-depth interviews and focus group discussions with local communities, institutional actors in Malaysia, Chinese actors and dam builders. The article concludes that the social protection policies did not protect Indigenous people and their land sufficiently, but it facilitated a commodification process of both land and people. This should also be understood as a colonisation of their land and their cultures.*

**Key words:** environmental justice, indigenous groups, social protection, hydropower dams, Malaysia

### 1. Introduction

Large hydropower 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, there is still no comprehensive remedy for the severe impacts on affected local people. Hydropower dams have a similar impact on Indigenous peoples than traditional extractive industries which often lead to economic and social marginalisation of residents in remote and rural areas. Often, local people obtain few of the benefits that come with extractive activities on their land. It is more likely that these activities will threaten existing and viable livelihoods (Cademartori 2002; Freudenburg 1992). Indigenous peoples are particularly vulnerable as they have relied heavily on land which dam building threatens to undermine and they also tend to suffer under unequal development that provides external interests with most of the profit going to non-Indigenous organisations (Langton & Mazel 2008; Sawyer & Gomez 2012).

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The controversial nature of hydropower projects forced the World Bank to introduce social safeguard policies in the 1980s to protect local people from the consequences of dam construction and resettlement. Projects such as the Sardar Sarovar Dam in India, the Chonoy dam in Guatemala and the Itaparica hydropower scheme in Brazil became pivotal to the changes of the World Bank's approach to hydropower (Hall 2007). 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 (EIAs) (Mirumachi & Torriti 2012).

World Bank withdrew its funding for large hydropower dams in the 1990s almost completely but has in recent years re-invested in hydropower projects. Chinese actors such as China Export Import Bank (ExIm Bank), Sinohydro, China Three Georges Corporation and many other dam builders have taken over the role of funding hydropower dams. Chinese actors are often accused for failing to adhere to international benchmarks. Sinohydro has been benchmarked by International Rivers as one of the most well-performing Chinese hydropower dam builders with regards to reducing the social and environmental impacts of large dams but they are progressing very slowly to adapt to international standards. An attempt to adapt and implement international norms for hydropower dam projects in 2011 (Sinohydro 2011; International Rivers 2012), following the example of the World Bank and the IFC Performance Standards, was shelved in 2012, Sinohydro was re-organised 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.

Hensengerth (2013) suggests that the actual implementation of environmental and social guidelines for overseas dams depends on the local and national circumstances and governance. Recent studies analysed the social dimension of Chinese hydropower dams including analysis of social corporate responsibility and social sustainability of dam projects (Nordensvard et al. 2015; Urban et al. 2015; Hensengerth 2013). All these studies show important flaws in particular projects and the lack of overall environmental and social standards. At the same time, governments, financiers and dam-building firms often assume that one can mitigate both environmental and social impacts in large hydropower dams.

In this process, there is a need to analyse the actual social protection measures that hydropower dam projects offer and consider them within a larger capitalist global process of commodification of both land and people. Along these lines, this article primarily aims to analyse the compensation and resettlement schemes that were implemented by the state for Indigenous groups affected by the Bakun dam in Borneo, Malaysia. The Bakun dam is the first dam in Borneo and the largest dam in Southeast Asia. It is the third largest concrete face rock filled dam in the world. It is located in the tropical rainforest in Belaga District, East Malaysia, Sarawak, on the river Balui. The dam development includes a reservoir occupying 14 170 km<sup>2</sup>, the size of Singapore and occupying 12 per cent of Sarawak.

China as a funder and builder of the dam had little to do with the planning of the site or the actual relocation scheme which was funded by the government. To understand the process of commodification of both land and people, it is important to develop a more complex understanding of environmental justice that does not just highlight redistributive and procedural justice but also include the relationship between humans and the environment. The article therefore analyses the social protection measures designed for the protection of Indigenous peoples and their livelihoods. The case study is based on in-depth interviews and focus group discussions

with local communities, institutional actors in Malaysia, Chinese actors and dam builders. The article concludes that the social protection policies did not protect Indigenous people and their land sufficiently, but it facilitated a commodification process of both land and people.

This could also be understood as a colonisation of their land and their cultures through a commodification of land, taking control of Indigenous customary land and developing it for palm oil plantations, logging, mining or other extractive industries. One of the problematic areas of such modernisation policy is to remove the bonds between Indigenous people and their ancestral land. Social protection is playing a role in easing this process rather than creating and sustaining a more environmentally just development for humans and the environment.

Section 2 introduces the theoretical framework and methodology of the study, section 3 presents the results and discussion and section 4 concludes the article.

## 2. Theoretical Framework and Methodology

This article will use environmental justice as an analytical tool. The environmental justice framework originated from an American context which focused on issues of race and ethnicity and how these are intertwined with the distributions of environmental 'bads' such as pollution and technological risk (Bullard 1999). The concept of environmental justice has become an increasingly important approach to understand the struggles of Indigenous people over their land. Native Americans have been an important 'part of the US environmental justice movement, and Indigenous peoples have used EJ language and organizing themes in other countries and regions as well' (Schlosberg & Carruthers 2010:12).

Pulido (1996), Faber (2005) and Schlosberg (2007) have highlighted the importance of process and production in environmental justice. Distributive justice became a focal point in framing how communities of colour

have been exposed to environmental hazards, such as toxic waste or other environmental issues. *Procedural justice* focuses therefore on how the decision-making process in environmental policy and particular projects are transparent, just and participative. The importance lies in creating fair processes for environmental policy making and policy implementation. There is a perception that if the policy making and implementation were fair, participating parties would tend to accept a disliked outcome (Deutsch 2000). Boström created a model based around social sustainability/environmental justice (2012) that has been adapted by Urban et al. (2015) and Nordensvard et al. (2015) to analyse the social implications of hydropower dam projects in Ghana and Cambodia and the social policy measures of Sinohydro.

*Substantive justice* issues on the other hand encompass basic needs such as sufficient food, adequate housing, income and extended needs, employment/opportunities, basic services and social services, fair distribution of environmental 'bads' and 'goods'/equality of rights. Procedural issues encompass accountable governance and management of the policy, planning, and standard-setting process and its implementation including holding actors accountable for fulfilling their promises and pledges; social monitoring of the policy, planning, standard-setting process and its implementation; access to participation and decision-making in different stages of the process and over time, proactive stakeholder communication and consultation throughout the process (Boström 2012; Urban et al. 2015; Nordensvard et al. 2015). We argue that both substantive justice and procedural justice are important dimensions to understand the situation of Indigenous people vis-a-vis the Bakun Dam in Borneo. Still, we argue that we need to expand our understanding of environmental justice to understand some underlying and severe consequences of the Bakun Dam.

Schlosberg argues that we need to add a capability dimension to the environment in environmental justice; this would 'enrich conceptions of environmental and climate

justice by bringing recognition to the functioning of these systems, in addition to those who live within and depend on them' (Schlosberg 2013:44). Schlosberg and Carruthers suggest that Indigenous demands for environmental justice are not just about distributional equity but also about the functioning of Indigenous communities, which highlights traditions and practices, and to protect the essential relationship between Indigenous people and their ancestral lands (2010). This article highlights that we need to focus the analysis also towards the functioning and capabilities of Indigenous communities and their environment (Schlosberg & Carruthers 2010).

We argue that we need to expand these notions when we research Indigenous groups as this more limited notion of environmental justice omits how hydropower projects break the bonds between Indigenous groups and the environment and how this leads to a commodification of both people and land. Indigenous peoples' opposition to particular resource developments has often been seen to fit within an environmental justice discourse as it builds on social movements aiming for a just distributing of environmental goods, bads and procedural

dimensions such as decision-making and participation.

We will add a dimension to our environmental justice analysis in analysing whether, how and to what extent social protection/compensation measures are able to protect the self-reliance of Indigenous groups and their environment as well as the relationship to their ancestral lands. The first factor goes beyond just redistributing resources but discusses how Indigenous groups can sustain traditional livelihoods and relationships. The second discusses how social protection/compensation goes about breaking the bond between the Indigenous groups and their land. We have summed up our analytical understanding of environmental justice in Table 1.

### 2.1. Methodology

We draw on a case study from the Bakun dam. The Bakun dam in Malaysia was constructed for two main reasons: to provide electricity for industrial development in Borneo and, in the long-term, to potentially provide Peninsula Malaysia with electricity. The reservoir is the biggest in Malaysia. The area is a biodiversity hotspot and the

**Table 1** Interviews and FGDs Conducted in 2014 and 2015 for the Bakun Dam Research

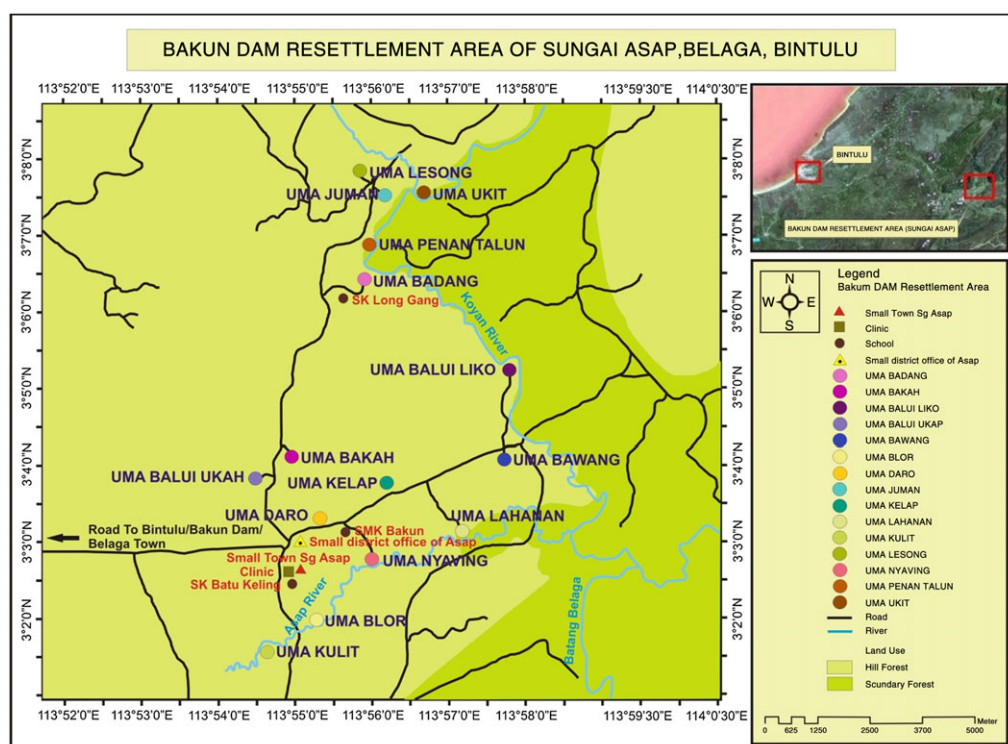
	<i>Community members</i>	<i>Malaysian institutional actors</i>	<i>Chinese institutional actors</i>
Number of interviews	20	8	23
Number of focus group discussions	7, totalling 66 people	—	—
Target group	15 longhouse communities that were resettled to the resettlement area in Sungei Asap from their customary lands upstream of the Balui River in Belaga District, Sarawak, Borneo, East Malaysia. Ethnic groups: Kayan, Kenyah, Lahanan, Ukit and Penan indigenous people (commonly referred to as Orang Ulu people).	Dam operators, contractors and utility firms like Sarawak Hidro, Sime Darby, Prime Minister's office, non-government organisations such as the Borneo Resource Institute BRIMAS	Dam builders like Sinohydro, China Three Georges Corporation, financiers like ExIm Bank, Chinese ministries (MOFCOM, MFA, MEP) and regulators
Total number: 51 interviews and 7 FGDs with 66 people			

habitat of many endemic and endangered species, including the orang utan. A total of 15 longhouses composed of more than 9000 Indigenous peoples from the upper Balui, including some semi-nomads, had to be resettled into sedentary settlements at Sungei Asap for the dam construction. Approximately 50 per cent of the impoundment area of the Bakun dam is lands claimed under customary rights (Sovacool & Valentine 2011). The cost of resettlement was funded by the Federal Government. The actual implementation of resettlement was undertaken by the State government (interview Sarawak Hidro 29 June 2015). Figure 1 shows a map of the dam and the resettlement area. Currently the resettled population at the resettlement site in Sungei Asap are approximately 51 per cent Kenyah, 39 per cent Kayan, 5 per cent Lahanan, 3 per cent Ukit and 2 per cent Penan Talun. All of these communities are

grouped under the Orang Ulu ethnic category of Sarawak.

The methodology includes detailed fieldwork at the dam site and in China. For the Bakun dam, we conducted 20 semi-structured in-depth interviews with local communities directly affected by the dam through resettlements, seven focus group discussion with the same affected communities (of which 57 per cent with women and 43 per cent with men, each FGD was composed in average of 9 people). We also conducted eight interviews with institutional actors from dam operators, national and local governments and NGOs in Malaysia, as well as 23 interviews with Chinese actors such as dam builders, regulators and financiers. This makes a total of 51 interviews and seven FGDs with 66 people that we draw on for this article. Fieldwork was conducted in 2013, 2014 and 2015. Table 1 provides an overview of the interviews and FGDs.

Figure 1 Map of the Bakun Resettlement Area at Sungai Asap, Sarawak, East Malaysia



We analysed the qualitative data by categorising and coding the sources as a means of comparing and contrasting interpretations of events (Wolcott 1990). We used the Nvivo 10 software to analyse the interview and focus group consultation data. These were analysed using narrative analysis (Wiles et al. 2005) rather than conventional 'code and retrieve' because the former allows for more layers of embodied meaning to be revealed by including narrative style. This allows us to compare several cases to be able to draw parallels from similar findings and flag up any differences (Yin 2009). Table 2 shows the coding tree structure used for analysing the individual interviews and FGDs in which references are the number of selections within each source that have been coded to any theme and sub-theme. Sources refer to specific interviews of FGDs and references refer to how many times these issues have been mentioned in the interviews of FGDs.

### 3. Results and Discussion

#### 3.1. Redistributive and Procedural Dimensions of Environmental Justice

When we look at the Bakun dam, we might come to the conclusion that the problem lies

in the actual implementation of resettlement and compensation schemes. If these social schemes were improved, then future large hydropower dam projects could be implemented with less opposition and less negative social implications. We find a particular de-coupling from the Chinese funder and builder when it comes to the social protection measures at the Bakun dam. The plan and cost of resettlement were funded by the Federal Malaysian Government. The actual implementation of resettlement was undertaken by the State government of Sarawak (interview Sarawak Hidro 29 June 2015). The compensation was limited to the following: house compensation, farm compensation, compensation from logging and oil palm companies for the use of the land previously used by villagers and not inundated by Bakun dam, and communal compensation for plantation land used for growing rice cultivation.

Farm compensation was given according to the number of fruit trees. The rate changes from an initially promised RM50-52 [about US\$ 12] per tree to a final compensation of RM5-9 [US\$ 1.2-2.1] or RM30 [US\$ 7] according to different villagers interviewed (these prices mainly refer to cocoa plant and pepper plant). Plantation compensation

**Table 2 Adapted Social Sustainability Framework for Hydropower Dams, Derived and Amended from Boström 2012 and Schlosberg & Carruthers 2010**

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#### *Substantive social sustainability*

Basic needs such as sufficient food, adequate housing, income and extended needs

Employment and opportunities for learning and self-development

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'/Equality of rights, including human rights, land user and tenure rights, and indigenous people's rights

#### *Procedural social sustainability*

Accountable governance and management of the policy, planning, and standard-setting process and its implementation, including holding actors accountable for fulfilling their promises and pledges.

Social monitoring of the policy, planning, standard-setting process and its implementation.

Access to participation and decision making in different stages of the process and over time/Proactive stakeholder communication and consultation throughout the process

#### *Functioning and capabilities of Indigenous communities and their environment*

How and to what extent social protection measures are able to protect the self-reliance of Indigenous groups and their environment.

How and to what extent social protection measures are able to protect Indigenous groups relationship to their ancestral lands.

How Indigenous groups can sustain traditional livelihoods and relationships.

How social protection/compensation goes about breaking the bond between the Indigenous groups and their land.

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(*temuda*) was priced at RM50 000–RM80 000 [US\$ 12 000–90 000]. The compensation given to villagers from oil palm or logging companies for using the customary lands at Bakun dam was RM500 [US\$ 120] per head. All compensations referred to the inundated area and the land located within the perimeter of the reservoir were paid by the government in two phases. In the first phase, villagers got 30 per cent of the total value of compensation. In the second phase, villagers got the remaining 70 per cent.

There was also individual compensation for people born before 1998 (RM13 000 per person) and compensation for burial grounds (moving grave RM 4000 and not moving grave RM1500 or RM2000). This was one-off payments which has been criticised for not creating a more sustainable compensation for Indigenous people that have been removed from their lands, lost access to large parts of the land and compensated in rather meagre terms.

The actual implementation of compensation has been perceived by locals to be too little, inadequate and/or partly flawed. One of the core criticisms was the compensation for land. In the case of the Bakun dam, after resettlement, each family was provided with 3 acres of land in the resettlement sites as compensation for the lost land in the reservoir area of the dam where people had free access to customary land. The customary land pre-resettlement was cultivated mainly with rice and vegetables for subsistence purposes, and it was enough to support family needs. Post-dam construction, the land was limited to 3 acres per family. A discussion point is if exchanging access to a much larger area with a small plot of land is a reasonable compensation. There have been voices among the Indigenous community that argue that the land is not enough for their needs (Interview from FGD with men in Uma Badeng).

There have also been voices within Indigenous communities that some plots of lands have been of substandard quality, hence low fertility land, which makes it difficult to sustain the local population. Issues of land fertility in the resettlement sites have

been mentioned by the villagers we interviewed.

*'[A]lmost everything is not suitable to be planted here, vegetables as well. The only thing that is suitable is oil palm trees, but there is not enough space to plant them in the 3 acres of land'* (quote from man respondent in Uma Juman).

Difficult access to the 3 acres of land received by the government as compensation is also an issue for the resettled communities. Land allocated to resettled communities is often located far away from the resettlement site, and there is no proper road to access the land. Some villagers reported that they have to walk for two hours to reach their lands (Interview from man respondent in Uma Juman). In the case of the Bakun dam, in terms of access to water resources, villagers reported that the water they can access in the resettlement site is polluted, smelly (smell of rust) and with a yellowish colour. Moreover, sometimes, the water supply is not regular, and there is no water provision for several days due to problems with excessive sedimentation and insufficient water pressure to pump the water from the river. Some villagers have also stated that water pollution comes from the chemicals used in the oil palm plantations owned by private companies located on the banks of the river.

*'Because at the upstream, i.e. Koyan River (a water catchment), there are many oil palm plantations, they use a lot of pesticides, and they go into the water; it is a big problem. Moreover, the water filter doesn't work properly'* (quotes from FGD with men in Uma Badeng resettled longhouse).

With regards to compensation, villagers have complained to have waited a lot of time (some years) before they were given the overall compensation amount. No compensation was given for the land outside the perimeter (land under customary rights) that was inundated after the construction of the dam. This was not taken into account by the government in the first land survey because the water inundated more land than the one

initially measured. Villagers are asking for compensation for this land.

*'The problem is the compensation for land. There are a lot of farms that have been measured and are submerged but have yet to receive compensation. There are some submerged lands that are not within the perimeter but they did not compensate for it'* (quote from FGD with men in Uma Ukit).

One could say that the governments could improve their records by improving both the quality and size of land given as compensation to the Indigenous people. Instead, Indigenous people had problems accessing some of the funding such as the full house compensation. Only after more than ten years of complaints and struggles with the Government villagers obtained to get the new house for free. Initially, the Government was giving a new house at a value of RM 52 000 [US\$ 12 400] maximum, if the value of the old house at Bakun was lower, then villagers had to pay the price difference by loan. However after more than ten years of negotiations, the villagers managed to get back the differential they paid to the Government. From a strict social policy perspective, one could also highlight the positive side effects of the relocation as it has given easier access to welfare services such as health care compared to the old settlement. People have easier access to roads, clinics and schools. They do not have to take the boat and travel for an entire day to reach the hospital. Now, they can go by cars to the nearest city, i.e. Bintulu (about 3 hours' drive away from the resettlement area (Interview from FGD with female in Uma Badeng).

*'Schools and clinics were the only thing that was difficult for us back then [pre-dam construction] because it would take us one day to go to the clinic. We used longboats with engines to shorten the time'* (quote from FGD with men in Uma Ukit).

Remote communities are now no longer remote in the sense of social services, which means not just easier access to health care but also a better access to schools for their children.

*'Back then my high school was at a town in the Belaga district. We went to school using a longboat. In a day, we went through a lot of dangerous rapids. We had to land, go down using the longboat rope, go pass all the rapids and get back into the longboat. It took us one day to reach back the village.'* (quote from Village men in UMA Badeng).

Moreover some highlights that being closer to schools has helped people with less income to send their children to school. Before the resettlement *'only those who could afford it could send their children to school'* (quote from Village man in Uma Belor).

This highlights that the flaws in actual compensation and resettlement are however at least superficial redeemed by better access to social services. This is an interesting and problematic statement as we will discuss further on. When we look at procedural justice, we will find that the dam building, resettlement and compensation process has been flawed. One of the most important environmental requirements was the preparation of the EIA which needed to be approved by the Director General of Environmental Quality. The project was not allowed to proceed unless approval of the EIA report had been granted (Department of Environment, 2010). University Malaysia Sarawak (UNIMAS) acted as the main consultant for the EIA of the Bakun project. Interaction and communication with resettled people during the preparation of the EIA including negotiations of compensation terms, land allocations and resettlement were carried out mainly between village leaders, village committees and state departments.

The negotiations of compensation terms, land allocations and resettlement have been carried out mainly between village leaders, village committees and state departments such as: the Chief Ministry, The District office, Department of Information, the Resident's office, and the Land and Survey Department. Suggestions for compensation were discussed within the communities and brought by the village leaders to the attention of the government during a meeting in Kuching. However, these suggestions were never taken into consideration by the government.



Prior to resettlement, government development agencies provided information selectively, but generally only regarding favourable aspects of resettlement (interview community leader, Kenyah 18 April 2015). There were some initial concerns about leaving the land, but people were told that their land would be flooded by the reservoir anyway. They were told that there would be jobs, enough land to replace the ones land, infrastructure especially roads, electricity, water and, more importantly health clinics and schools for their children. The idea was sold to the Indigenous people like ‘the city in the jungle’ (interview, 4 men, Uma Badeng 16 April 2014).

The big issue when we look from a procedural aspect is not only the skewed information campaign but also the lack of real participation. There has been a general voice that most people could not participate themselves but only through their leaders. After resettlement, many locals felt betrayed by their leaders who has been as ‘Gods’ but they felt that the leaders did not look after their interests and they mismanaged their roles through missing compensation money, not knowing how to report protests of their people and just accepting cheques (interview, Uma Belor, 7 April 2014).

The results show that neither the redistributive nor the procedural dimension of the dam project has been satisfactory, but there is a deeper and more worrisome dimension of breaking the bond between Indigenous people and their ancestral land. This would be in line with Schlosberg and Carruthers more extended view on environmental justice that includes the functioning of Indigenous communities.

In our case study, we looked therefore at two aspects of functioning: the possibility to sustain a traditional life style and maintaining a relationship to ancestral lands. The conclusion of a more expanded understanding of environmental justice leads us to see how the compensation has led to a commodification of both Indigenous people and their lands. In the end, this means a colonisation of their living space. We have summoned the extended finding in Table 3. The first factor goes beyond just redistributing resources but discusses how

**Table 3** Coding Structure Using Nvivo

	Sources	References
Resettlement	4	5
Psychological impacts	5	10
Others	4	8
Life changes	13	28
Involvement and consultation		
Resettlement	12	25
Conflicts	11	38
Complaint	9	31
Compensation	16	117
Interaction and communication	15	115
Impacts		
Social network	10	48
Livelihood changes	1	1
Shifting livelihood strategies	11	42
Improvement of livelihood	12	37
Decreasing livelihood	13	46
Lifestyle	11	33
Interactions with immigrants	11	17
Health care	13	19
Energy access	15	34
Education	17	56
Ecological impacts		
Water flow		
Water access and quality	11	23
Flooding	5	10
Decreased water flow	2	3
Land	7	17
Fish stocks and aquatic life	3	5
Fauna and flora	9	12
Environmental protection	5	5
Access to local resources	17	106
Expectations		
Past	9	14
Future	13	30
Cultural impacts	9	31
Compensation	7	19
Challenges	8	13

Indigenous groups can sustain traditional livelihoods and relationships. The second discusses how social protection goes about breaking the bond between the Indigenous groups and their land.

### 3.2. *Maintaining Relationships to Ancestral Lands*

One of the more serious impacts of hydropower dams have been the commodification of land, taking control of Indigenous custodian land and developing these lands for palm oil, mining or other

extractive industries. One of the problematic areas of such modernisation policy is to remove the bonds between Indigenous people and their ancestral land. In terms of land and house titles, villagers said that they have only a temporary occupational license grant which lasts for 60 years. After that period, they will lose their ownership, which can be renewed, but they would have to pay a price for it, almost RM30 000 for the 3 acres of land. This highlights a direct land grab replaced by 3 acres of land whereas people used to have full access to land and forest pre-dam construction (Table 4). Some resettled villagers in Sarawak, Malaysia reported that they do not have land titles in the resettlement sites, so they cannot sell the land and they are afraid about the fact that without titles the government could reclaim their lands in the future:

*'The land title is not a freehold grant. This is a TOL (Temporary Occupational License) grant. It expires within a fixed period of time. Sixty years only. When the expiry date comes, the land is no longer ours. It can be renewed but there is a chance we will have to pay. I heard we have to pay at least RM30,000 for the 3 acres of land. This is what scares the villagers. The land was promised to us for a lifetime. Turns out, there's an expiry date. When that expiry date comes, how are those people who have no money going to renew the license?'*

(quote from men respondents in Uma Badeng resettled longhouse).

Other villagers asked for compensation by logging and oil palm companies that were using the land not inundated but under customary rights claiming it was state land given to them by the government. The government also promised to give to the villagers 30 per cent of the logging revenues, but they have not received them. Resettled villagers are occupying new land around the resettlement sites or reoccupying the land not inundated by the reservoir in the dam area, claiming their customary rights over the old land.

The newly occupied land or the reoccupied land in the dam area are mainly used for oil palm plantations which are easier to grow in the less fertile land in the resettlement site, and it provides better revenues to villagers than vegetables and rice cultivations. The occupation of new lands is taking place in the land owned by the Sarawak government, the so-called State land. This land and the land not inundated at the dam site are also targeted by private oil palm, rubber or logging companies, which usually have better access to State land use permits than resettled villagers. The presence of multiple interests on the land by the government, the local

**Table 4** Resettlement and Compensation Process

<i>Sustaining traditional livelihoods</i>		<i>Maintaining relationship to ancestral lands</i>	
<i>Area</i>	<i>Content</i>	<i>Frame</i>	<i>Content</i>
Self-sustaining livelihoods vs. dependency on capitalist market system	The resettlement is based on removing people from their environment where their dependence on each other was vital for survival as they had access to resources through their environment. Moving people out of their context has made them more dependent on capitalist structures such as currency to support transport, access to natural resources that are now longer available at the resettlement site and the need to sell and buy products from a market system. In many ways, it is a forced integration into a capitalist system which commodifies relationships.	Ancestral land vs. Natural resource exploitation	The removal of indigenous right to land can only be understood through a commodification of land; land that were there to support eco-systems where human played an integral part in up-keeping the balance have been flooded to provide electricity for a possible industrialisation of Sarawak has two direct implications on our understanding land. Land belongs to people in capitalist systems where in many indigenous belief people belong to land. In a capitalist system land is replaceable and valued upon the resources that it provides.

communities and the plantation or logging companies create conflicts over land use, particularly between private companies and communities, as reported in the quote below.

*'With regard to occupation of customary land by logging companies, if the government is really responsible, the logging company should not come in again at the Bakun dam. That's the problem. I have heard about an agreement. But the logging still exists. If we know that the company comes into our compound (the old land at the dam site), we ask them to pay. That is the only way to get income from that. The conflict now is at this point. The solution is the company will pay us'* (quotes from FGD with men in Uma Badeng).

### 3.3. Sustaining Traditional Livelihoods

One of the concerns is how little by little the Malaysian government deconstructs the base for sustaining Indigenous communities through resettlement and compensation. One aspect that could be both seen as positive and negative is the reliance on formal structures such as markets, paid labour, formal education and formal health care that has partly made it possible to have a higher living standard, but it has also undermined the actual traditional livelihoods of Indigenous peoples. Moving people out of their context has made them more dependent on capitalist structures such as currency to support transport, access to natural resources that are no longer available at the new location and the need to sell and buy products from a market system. According to the interviews, villagers in the new settlement area at Sungai Asap rely more on the market for food provision, which they were able to get freely from the forest and dam area before resettlement, and other goods. Therefore, life is in general more costly in the resettlement area, and for some villagers who do not have access to remunerative jobs, such as the elderly and women, livelihoods have decreased. The following quotes indicate this:

*'You must use money for everything here. When I was at the old place, at least I would get some income whenever I go hunting, fishing or*

*searching for rattans'* (quote from FGD with men in Uma Ukit).

*'In our old home, it was easier for us to earn a livelihood. We didn't use money. Now, that we have moved here we need to use money. If we go to the market to buy vegetables, buy meat, how could we live? Even transportation to the market cost RM5'* (quote from village man in Uma Bakah).

*'Our lives were easier at the old place by the river. If we wanted to catch fish, it was easy. Here, we need to use money to even buy fish at the market'* (quote from female respondent in Uma Belor resettled longhouse).

The change has meant that Indigenous groups need access to money and therefore will have to enter the formal or more often the informal labour market to support themselves, their families and their communities. This could be seen as a transformation from a custodian of a large area of land that supported them to become part of a labour force. This is not just a case of land grabbing but also removing the entitlement to both land and a traditional life style. On the flipside of the coin, job opportunities for most of the villagers, particularly young or middle age men, have increased after moving in the resettlement site. This has meant going from more or less subsistence farming, fishing and hunting to working for oil palm plantation, logging, working for Bakun Dam construction or tourism activity. In terms of farming, in the new settlement, the government have introduced schemes for cocoa, pepper, oil palm and rubber cultivation providing fertilisers and seeds to farmers. However, according to the villagers, some of these schemes have not succeeded due to problems of land scarcity and low fertility of the land. At same time, most of the workers building the dam came from China, and many of the formal works have gone to workers from other areas of Malaysia or from Indonesia. This highlights a radical transformation and a commodification of the people.

This conjures up the split nature of social protection as it might raise the living standard as in access to health care and education, but it will also undermine the functioning of Indigenous communities to live off their land and its natural resources. Behind the social protection policies is a larger colonisation strategy of both Indigenous land and people. Indigenous peoples often argue that humans are inseparable from other living things and they see the environment as an interconnected community (LaDuke 1999; McGregor 2009). This approach has created an attempt to include environmental concerns into a movement that has often been perceived to be anthropocentric (Shrader-Frechette 2002). 'When we interrupt, corrupt, or defile the potential functioning of ecological support systems, we do an injustice not only to human beings, but also to all of those non-humans that depend on the integrity of the system for their own functioning' (Schlosberg 2013:44).

Westra links up environmental justice with a 'biological/ecological integrity model' which highlights the importance of interdependence between the functioning of Indigenous communities and the functioning of the environment. 'If the rights of Indigenous peoples are based, first, on their rights to biological integrity and natural function; and second, these rights cannot be separated from the protection of the ecological integrity of their lands; then third, entrenching such rights would limit the freedom of Western industrial operations to commit crimes' (Westra 2007:19). Environmental justice needs therefore to include both the preservation of Indigenous autonomy and functioning as a community and the biological integrity of their ancestral land to prevent 'biological genocide' (Westra 2007).

Polanyi highlighted that we do not only need to de-commodify labour, but our land and environment are in need for protection against market forces. Polanyi pointed out the importance of adding the environment to the analysis. He argued that there are two further fictitious commodities in addition to labour: money and land. Land is considered by Polanyi as 'another name for nature, which is not

produced by man' (Polanyi 1944:72). He argues that the commodification of land, natural resources, the oceans, etc. will generate collective 'bads'. This will need a collective response from society. Polanyi argued for a more active role of the state in regulating the land and protecting natural resources from market forces: '[T]he commodity fiction disregarded the fact that leaving the fate of soil and people to the market would be tantamount to annihilating them' (Polanyi 1944: 73). It is clear in this case that the social protection measures of the state do not protect either land or humans from being commodified but instead facilitates it.

#### 4. Conclusion

This paper has contributed to discussing the impact of social protection with regards to hydropower dam projects on Indigenous peoples' customary land in Malaysia. This article used an extended environmental justice framework to make sense of the resettlement and compensation schemes for Indigenous peoples who were resettled for the construction of the Bakun dam, Borneo, East Malaysia.

The results shows that neither the redistributive nor the procedural dimension of the dam project has been satisfactory, but there is a deeper and more worrisome dimension of breaking the bond between Indigenous people and their ancestral land. The nation state could be questioned as an organisation that represents all people in their country. Fraser has highlighted that in our global world the nation state itself becomes a vessel for injustice for national and global elites. Often 'states and transnational elites monopolize the activity of frame-setting, denying voice to those who may be harmed in the process, and blocking creation of democratic arenas where the latter's claims can be vetted and redressed' (Fraser 2005:85). The role of Indigenous people in relation to their ancestral land on one side and the local, national and international elites on global scale collides in the case of hydropower dams. There is a lack of interest to respect both the needs and the historical rights of

Indigenous people in the name of nation state interests.

This would be in line with Schlosberg and Carruthers more extended view on environmental justice that includes the functioning of Indigenous communities. In our case study, we looked therefore at two aspects of functioning: the possibility to protect and develop a traditional life style and maintaining a relationship to ancestral lands. The conclusion of a more expanded understanding of environmental justice leads us to see how the compensation has led to a commodification of both Indigenous people and their lands. In the end, this means a colonisation of their living space created through the nation state where the state is a direct vehicle of injustice towards Indigenous populations.

We could therefore see this is a double flawed process: not only was the actual process to involve and compensate Indigenous people flawed, but more importantly a lot of the policies did support land grabs and the breaking up of traditional Indigenous ways of life.

There is therefore a need for a global approach to solve the issues more than an attempt to respect the nation state rights to allow exploitation of Indigenous peoples. Fraser argues that we will need to leave a nation state framework for an all-affected principle where 'all those affected by a given social structure or institution have moral standing as subjects of justice in relation to it' (2005:82). It is therefore of importance to discuss the global ethics of both low carbon development and social protection. As it stands now, low carbon development could also mean policy activities that result in negative impacts such as land grabs, undermining of biodiversity, and undermining the traditional lives of Indigenous people in Borneo and elsewhere.

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