

# Watered down

How do big hydropower companies adhere to social and environmental policies and best practices?



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International Rivers protects rivers and defends the rights of communities that depend on them. Established in 1985 and with a small team working across four continents, we work to stop destructive dams and promote water and energy solutions for a just and sustainable world. We seek a world where healthy rivers and the rights of communities are valued and protected.

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Front cover photo: Smooth waters on the Mekong, Thailand. 2016

Back cover photo: Sunset on the Teles Pires, Brazil. 2015

# Free-flowing rivers are critical to sustaining life on earth

Despite the impacts of hydropower, it continues to feature heavily in some government agendas. These are the countries where International Rivers focuses its work.



They regulate the carbon cycle, protect against unpredictable and extreme climate events, replenish land with sediment and minerals, nurture critical ecosystems and biodiversity, their fisheries nourish 550 million people<sup>1</sup>.



And yet, only 21 rivers longer than 1,000 kilometers retain an unobstructed connection to the sea.<sup>2</sup>



Global freshwater biodiversity has declined by 83 percent.<sup>3</sup>



Dams have fragmented two-thirds of the world's great rivers,<sup>4</sup> displaced over 80 million people<sup>5</sup> and negatively affected an estimated 472 million people.<sup>6</sup>



Dams generally have planned life spans of 50 years.<sup>7</sup> After that, they stop functioning optimally and lose viability.



Countries and regions which were the first to participate in a dam building boom have started to conduct widespread dam dismantling and partial decommissioning.



Europe has removed 3,500 dams.<sup>8</sup> The USA has removed 1,605 dams.<sup>9</sup> China is prioritizing re-connection of the country's rivers.<sup>10</sup>

## Endnotes

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10. Central Committee of the Communist Party of China (2016). *The 13th Five-Year Plan for Economic and Social Development of the People's Republic of China (2016–2020)*, see page 89.

# 1. Executive Summary

Healthy rivers are critical to sustain the communities and ecosystems that depend on them. Yet our rivers around the world are under threat. As many as 3,700 new dams have either been proposed or are already under construction.<sup>1</sup> Despite the enormous diversity in size, scale and geography of new dams being built, a relatively small number of corporations are responsible for their construction. Thus the policies and practices of these corporations have tremendous implications for rivers and human rights.

The intention of this report is to provide an incentive and justification for these corporations to compete on their environmental and social track records rather than simply on financial grounds.

From early on, International Rivers identified the emerging importance of Chinese companies, which have become the biggest actors in global dam building. Just one Chinese corporation, PowerChina Resources, is estimated to have as much as a 50 percent share of the international hydropower construction market.<sup>2</sup> Meanwhile, the China Energy Engineering Group recently boasted that Chinese enterprises represent 70 percent of the global hydropower market.<sup>3</sup> Looking forward, Chinese hydropower corporations are positioned to become even more influential, as China continues to roll out the “Belt and Road Initiative,” a trans-continental connectivity scheme worth trillions of dollars in infrastructure projects that is slated for completion by 2049.

In 2015, International Rivers published a groundbreaking report that was the first to benchmark and rank the policies and practices in overseas projects of seven Chinese state-owned hydropower corporations. The present report builds on our 2015 work and aims to assess how corporate environmental and social policies compare to key internationally-accepted principles. It also examines how they are implemented through a series of seven in-depth case studies of dams constructed by six corporations (five Chinese and one American), with detailed information about the projects - some of the largest to have come online in between 2016 and 2019. These included site visits to projects being developed around the world and meetings with management, government agencies, workers, and local communities. It differs from the 2015 report in that it does not attempt to rank corporations against each other; rather it assesses performance against policies and standards and provides greater context of individual projects to highlight some of the complex situational factors that corporations should take into consideration in determining whether it is appropriate to become involved.

The research, interviews and site visits undertaken for this report were conducted with the intention of documenting and monitoring the performance of projects at final stages of completion. The report provides information that is evidence-based and descriptive of concrete, on-the-ground impacts. It offers recommendations on how companies can meaningfully improve the environmental and social outcomes for these specific cases, as well as better align their policies and practices to ensure positive outcomes in future projects.



## Summary of Key Findings

- **Leading companies must embed proper due diligence into how they evaluate potential projects, even if it means passing on potentially profitable business opportunities.**

In one encouraging example, in 2013, Sinohydro International withdrew from the Agua Zarca Dam in Honduras on the grounds that their client was involved in controversial and inappropriate activities with local communities.<sup>4</sup> If companies aspire to be responsible actors in the sector, we need to see them adopt a higher risk threshold, whereby they set out key bottom lines for involvement. Certain projects simply should not be built because of their irreversible impacts, violations of agreements to maintain protected areas, or location in countries where affected communities lack meaningful avenues to raise concerns.

- **By and large, companies lack adequate due diligence processes to guide whether it is appropriate to become involved in a new project.**

The case studies in this report show that China International Water and Electric (CWE), a subsidiary of China Three Gorges Corporation, accepted a contract to build the Isimba Dam on the White Nile in Uganda despite the fact that the reservoir would submerge important protected areas.<sup>5</sup> AES Corporation continued construction of the Alto Maipo project in Chile in the face of widespread public protest over the project's impacts on the primary drinking water supply to the capital, Santiago.<sup>6</sup> Huaneng pushed forward with the Lower Sesan 2 hydropower project in Cambodia despite widespread protests from communities and UN documentation of human rights abuses resulting from project implementation.<sup>7</sup>

- **Most of the companies are primarily concerned about staying on schedule during project building, to the detriment of social and environmental objectives,**

which routinely lagged behind. PowerChina Resources, for example, did not respect Lao law to resettle and compensate before beginning construction of the Nam Ou Hydropower Cascade in Laos, which is expected to displace over 10,000 individuals.<sup>8</sup>

- **Company policies fall well short of accepted international standards.** Our assessment compared company policies against internationally accepted standards, using key requirements and principles of International Finance Corporation (IFC)'s Performance Standards as a reference because of their near-universal application. This includes objectives such as achieving improved living standards for resettled communities and requiring that companies assess the cumulative impacts of multiple projects on a river basin. We found that companies must significantly strengthen their environmental and social policies to reflect international norms if they are to be considered industry leaders.

- Similarly, **disclosure of key documents remains weak and below international standard.** All companies included in the study lacked policies requiring that environmental and social impact assessments be disclosed publicly or consulted upon with affected communities. Such requirements are embedded in all global standard regimes, including the IFC Performance Standards. Only one of the projects reviewed (Alto Maipo in Chile by AES) had made full environmental impact assessments publicly available prior to companies beginning construction.

- Since company regulations and hydropower industry guidelines are typically not considered to be binding, **companies perform to a higher level and implement stronger measures if they are obligated to do so by laws in the host country.**

- In cases when country laws are insufficient or not readily implemented, **we did not find instances where companies were successful in insisting that governments accept and apply the companies' own (higher) sustainability commitments.** China Gezhouba Group Company (CGGC), a company with one of the largest shares of the global hydropower market, has a sophisticated system for legal compliance and its company guidelines require environmental impact assessments to be conducted prior to project construction. Yet, the project proprietor (government of Pakistan) ordered construction of the Neelum Jhelum Dam to continue without ensuring proper conditions for project construction, including conducting an environmental impact assessment prior to construction.

The proprietor also used inadequate resettlement and compensation plans which excluded certain segments of the affected population. CGGC deflected responsibility for the environmental impact assessment and resettlement to the project proprietor.<sup>9</sup>

Even countries with strong laws on paper can be undermined by conflicting standards aimed at facilitating economic development and exploitation of natural resources. While Cambodia has laws recognizing the rights of indigenous peoples, the Lower Sesan 2 hydropower project resulted in the involuntary resettlement of over 5,000 people, many of whom are indigenous, in violation of national laws and human rights commitments.

• **Companies engaged through construction contracts (Engineering Procurement Construction) deflect responsibility for environmental and social impacts.** Hydropower corporations consistently relinquish environmental and social responsibilities and hide behind contract types. Responsible contractors should ensure that proper analysis and baseline studies are completed prior to starting project construction, regardless of their contract. This makes it easier to ensure robust implementation of policies to protect the environment and communities. The four companies reviewed in this report that were engaged through Engineering Procurement Construction contracts (CGGC, China Three Gorges, AES, Sinohydro International) did not accept responsibility for environmental and social outcomes. This would be an important step for companies to demonstrate leadership in aspiring toward becoming responsible actors in the sector.



## Looking Forward

At the same time that the hydropower industry is intensifying efforts to position itself as contributing to achieving the Sustainable Development Goals and climate change mitigation, its true impacts are coming into sharp relief. The well-documented cases of dam-induced displacement of indigenous peoples from Brazil to Cambodia undermine these claims, while high-profile tragedies such as the collapse of the Xe Pian-Xe Namnoy Dam in Laos expose the severe safety risks that dams pose. The impact of dams on biodiversity, especially on endangered species, will come under closer scrutiny as the world prepares to make stronger commitments to protect biodiversity at the fifteenth Conference of Parties of the Convention on Biological Diversity in 2020.

Renewable energy options like wind and solar power are proven and competitive with dramatic increases in newly installed capacity worldwide. These energy solutions can be deployed to better meet persistent energy access needs, are quicker to build and in many places are less expensive than hydropower. In fact, some of the companies that we reviewed have energy portfolios that include these options. For instance, China Three Gorges Corporation aims to lead offshore wind power development in China and has commissioned the largest offshore wind farm in the country (Xiangshui Wind Farm) as well as large offshore wind projects in Europe.<sup>10</sup>

With hydropower representing such a great threat to free-flowing and healthy rivers,<sup>11</sup> companies must fundamentally transform the way that they operate by aligning their policies to and abiding by accepted international standards. And if they are to remain competitive globally, they would do well to align their business with recent trends that have seen a steady decline in hydropower in favor of renewable options.

## Endnotes

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11. Vörösmarty et al. (2010). Global threats to human water security and river biodiversity.



Local women heading to the fish market on the Sekong River, Cambodia. 2013

# Case Studies

## Chile

### Alto Majpo

Alto Maipo Hydroelectric Project (531 MW) on the Maipo River in Chile.

By AES Corporation. EPC.

The Maipo River is the primary source of potable water for residents of Santiago and for Chilean farmers.

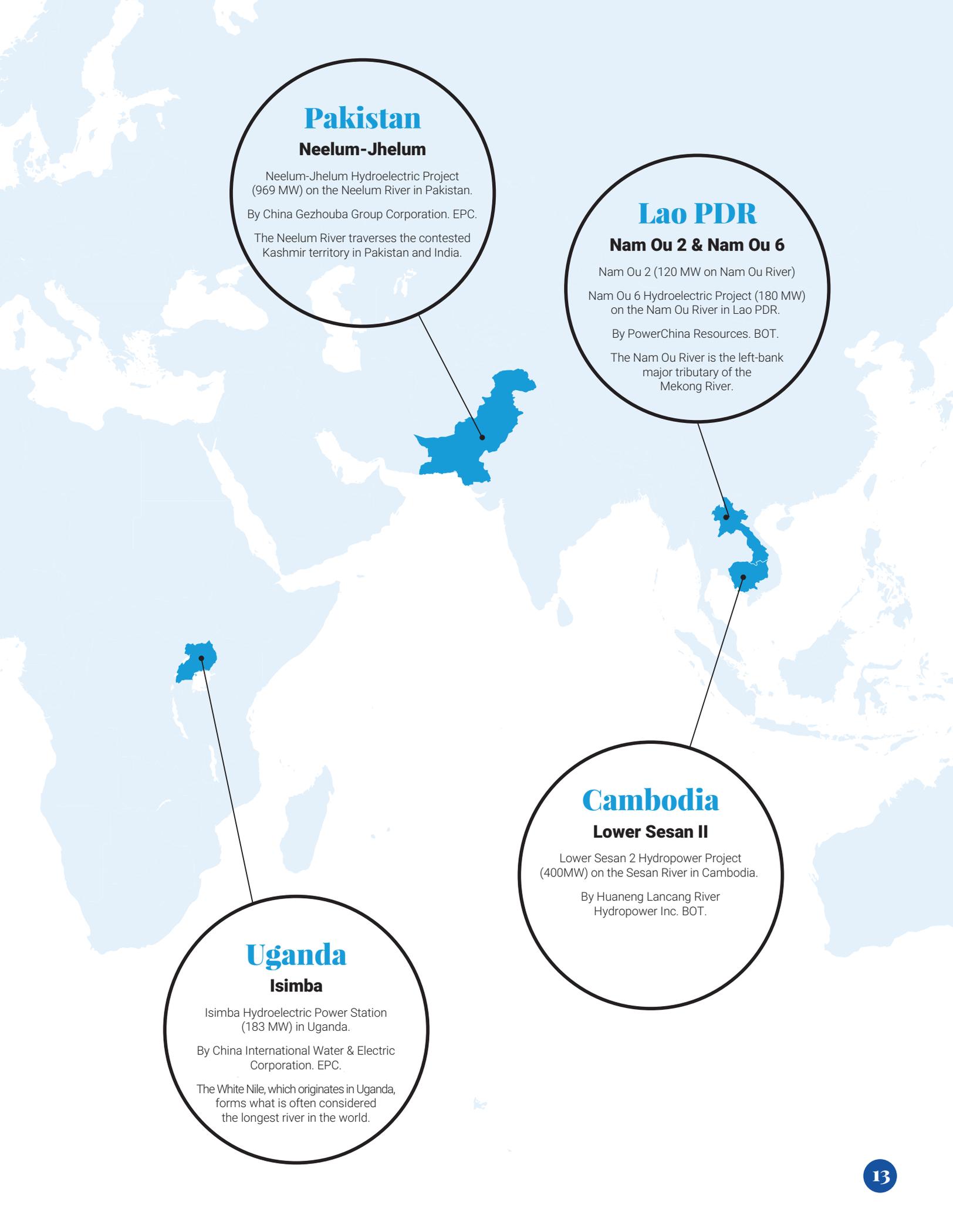
## Côte d'Ivoire

### Soubré

Soubré Hydroelectric Power Station (275 MW) on the Sassandra River in Côte d'Ivoire.

By Sinohydro International. EPC.

The Sassandra River flows through varied terrestrial ecoregions in Côte d'Ivoire.



## Pakistan

### Neelum-Jhelum

Neelum-Jhelum Hydroelectric Project (969 MW) on the Neelum River in Pakistan.

By China Gezhouba Group Corporation. EPC.

The Neelum River traverses the contested Kashmir territory in Pakistan and India.

## Lao PDR

### Nam Ou 2 & Nam Ou 6

Nam Ou 2 (120 MW on Nam Ou River)

Nam Ou 6 Hydroelectric Project (180 MW) on the Nam Ou River in Lao PDR.

By PowerChina Resources. BOT.

The Nam Ou River is the left-bank major tributary of the Mekong River.

## Uganda

### Isimba

Isimba Hydroelectric Power Station (183 MW) in Uganda.

By China International Water & Electric Corporation. EPC.

The White Nile, which originates in Uganda, forms what is often considered the longest river in the world.

## Cambodia

### Lower Sesan II

Lower Sesan 2 Hydropower Project (400MW) on the Sesan River in Cambodia.

By Huaneng Lancang River Hydropower Inc. BOT.

Healthy rivers are critical in sustaining communities and ecosystems. Yet our rivers around the world are under threat. As many as 3,700 new dams have either been proposed or are already under construction. Despite the enormous diversity in size, scale and geography of new dams being built, a relatively small number of corporations are responsible for their construction. Thus the policies and practices of these companies have tremendous implications for rivers and human rights. This report provides context for this situation and features seven in-depth case studies of dams at final stages of completion. The case studies are evidence-based and descriptive of on the ground impacts; they cover a wide geography, and are considered to be flagship projects of some of the most influential companies in the hydropower sector. The intention of this report is to provide an incentive and justification for these corporations to compete on their environmental and social track records rather than simply on financial grounds.

