

DAMMING EVIDENCE

How the Batang Toru megadam threatens a new orangutan species with extinction

In late 2017, the announcement of a new orangutan species — the Tapanuli orangutan — made headlines around the world. Yet, already, Tapanuli orangutans face extinction, threatened by the imminent construction of a major new hydroelectric dam. Slicing through the very heart of their remaining forest habitat, in a valley with the highest densities of orangutans, the dam and its associated infrastructure pose a real and immediate threat to the species' continued survival. Urgent action must be taken now to halt construction of this potentially devastating new facility and ensure the most recently discovered great ape is not driven to extinction.

A NEW ORANGUTAN SPECIES

In November 2017, a major new scientific discovery was announced. A new species of orangutan — the Tapanuli orangutan (*Pongo tapanuliensis*) — was revealed to be living on the Indonesian island of Sumatra. While these orangutan populations have been known about for many years, genetic studies have only recently determined that they are distinct from their cousins, the Sumatran orangutan (*Pongo abelii*). With fewer than 800 individuals thought to remain in the wild, the Tapanuli orangutan immediately became the most endangered great ape species in the world.¹

Today, the new species is found only within the forests of the Batang Toru ecosystem, located in the Tapanuli highlands of North Sumatra province. These primary forests cover about 1,400km² in two main blocks, separated by the Sumatran rift valley. A smaller group of the orangutans live in the Dolok Sibualbuali Nature Reserve. Most of the Batang Toru ecosystem is protected under Indonesian law. It hosts many rare and threatened species, including Sumatran tigers, pangolins, sun bears and helmeted hornbills.

In addition to their unique biodiversity, the Batang Toru forests play a key role in providing water supplies and many other vital ecosystem services for hundreds of thousands of people living in the region. Communities rely on the high rainfall generated by the humid tropical forest, and on the protection it provides against flooding and soil erosion. Like all forests, it plays a key role in mitigating climate change by storing vast amounts of carbon.



1. www.iucnredlist.org/details/120588639/0

THE BATANG TORU DAM THREATENS TAPANULI ORANGUTANS WITH EXTINCTION

Tapanuli orangutans are already under pressure from illegal settlements, logging and hunting, as well as an open-cast gold mine. However, a new and immediate threat has emerged: a major new hydroelectric dam right in the heart of the orangutans' habitat.

Financed by overseas investment, the 510MW dam is planned in areas of forest with the highest orangutan densities and presents a real risk of extinction. Permits have been issued for the project and access roads are already being constructed. The need for immediate action could not be more urgent.

The project will split the orangutans' remaining forest habitat into three sections, permanently separating the two main blocks and the Sibualbuali Nature Reserve. A 13.5km tunnel is planned along the valley to carry water from the dam to power generators downstream. The accompanying access road, via which the tunnel will be serviced and maintained, will create a permanent barrier that orangutans and other wildlife will be unwilling or unable to cross. In addition, forests will be felled to make way for high-voltage power lines running along the valley, creating another barrier.

These barriers will immediately and irreversibly fragment the few remaining Tapanuli orangutans into populations too small to guarantee their survival. Allowing the orangutans to move freely across all areas of the forest to feed and reproduce is essential for the long-term viability of the species, but the dam will create an artificial and permanent barrier, threatening Tapanuli orangutans with extinction.

On top of this, over a million cubic metres of rock and earth from the tunnel excavations will be dumped in the forest, further destroying habitat and impacting wildlife, as well as increasing the risk of erosion and landslides. And if that wasn't enough, the area is notorious for powerful earthquake activity, exacerbating the risk of potential new disasters.



"The US\$1.67bn dam is backed by the Indonesian government and foreign — mainly Chinese — investors, with strong links to the Chinese government."

WHO'S BEHIND THE DAM?

The project is being built and will be operated by the Indonesian company PT North Sumatra Hydro Energy (PT NSHE). The investor chain of PT NSHE is complex and leads to a variety of other Indonesian, Chinese and international actors involved in moving the project forward.

PT Dharma Hydro Nusantara (PT DHN) is the majority shareholder in PT NSHE, with 52.82%,² and Asia Ecoenergy Development A and B (Singapore) together own 96% of PT DHN.³ Asia Ecoenergy A and B are subsidiaries of Asia Ecoenergy Development (Hong Kong), which in turn is a subsidiary of Zhefu Holding Group, based in Hangzhou, China.⁴ However, company profiles suggest Fareast Green Energy controls Asia Ecoenergy A and B,⁵ so the actual links between these companies are unclear. Fareast Green Energy is also a PT NSHE shareholder, with 22.18% of shares.⁶

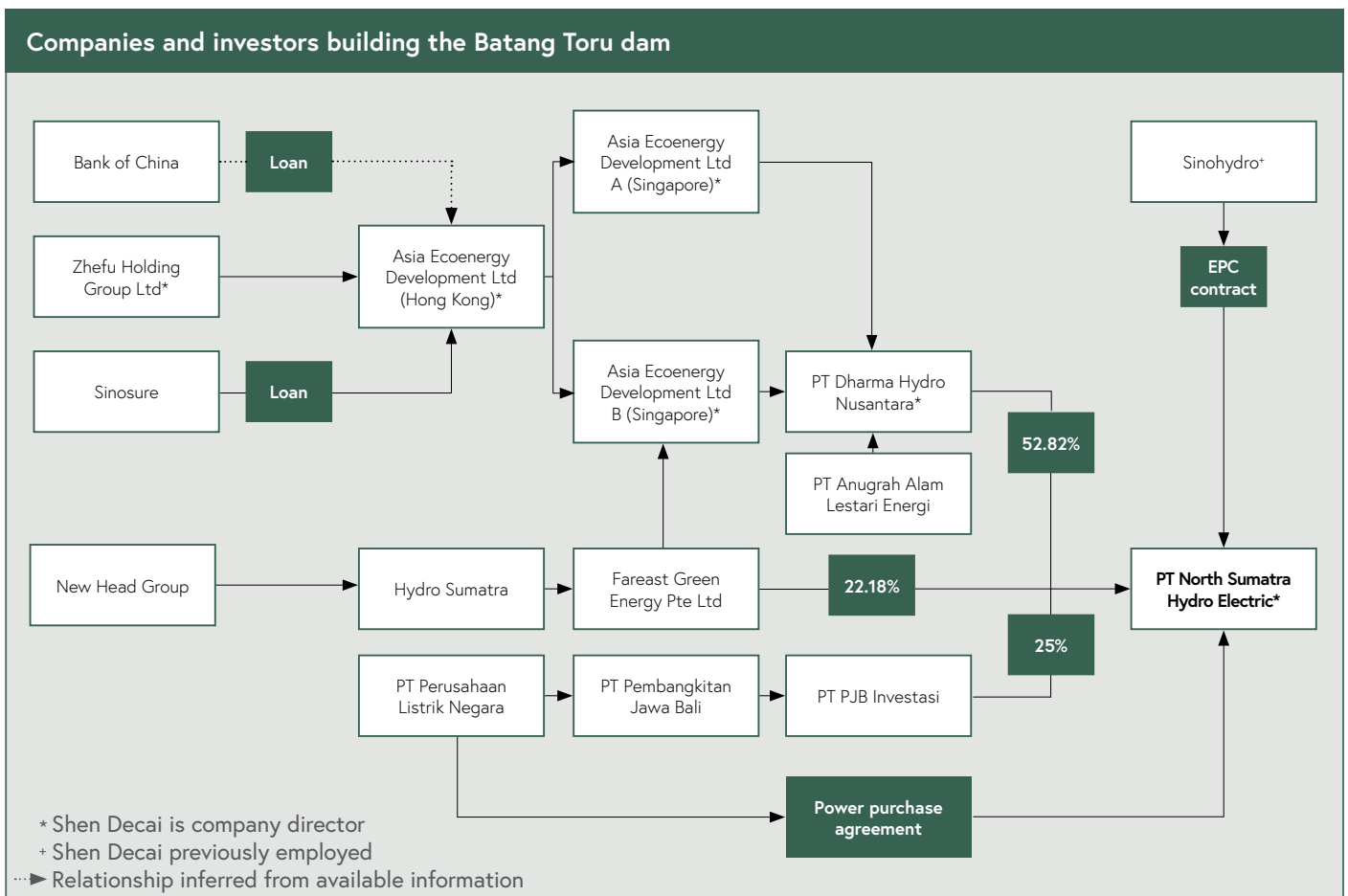
The remaining PT NSHE shareholder is PT PJB Investasi (PT PJB), and PT PJB, in turn, is owned by PT Perusahaan Listrik Negara (PT PLN).⁷ PT PLN is a state-owned company which generates and distributes the majority of Indonesia's

electricity. It also has a power procurement agreement with PT NSHE to acquire and distribute electricity generated by the Batang Toru dam.⁸

China Export and Credit Insurance Corporation (Sinosure) appears to be involved, while Sinohydro — which claims to be the world's largest dam builder — has the engineering, procurement and construction (EPC) contract. Both Sinosure and Sinohydro are Chinese state-owned enterprises.

In September 2017, Zhefu Holding Group announced it had secured sufficient funding from foreign banks, including a final loan of \$100m from an unidentified source.⁹ PT PJB has named Bank of China as a loan provider.¹⁰ Since then, construction of the dam has begun, despite the huge environmental and social impacts that it will undoubtedly cause.

One individual connects many of these companies. Shen Decai is director of PT NSHE,¹¹ Asia Ecoenergy Development (Hong Kong), Asia Ecoenergy Development (Hong Kong), Asia Ecoenergy Development A and B (Singapore)¹² and PT DHN,¹³ as well as the vice president of Zhefu Holding Group.¹⁴ In the past, Shen was also the general manager of Sinohydro Resources.¹⁵



2. www.pjbinvest.com/wp-content/uploads/2017/12/2017_10_26-Company-Profile.pdf | 3. PT DHN company profile, accessed by Sumatran Orangutan Conservation Programme | 4. www.iicorp.com/?opportunities/opportunity/54849?Auth=93917648-813b-4a22-94d8-758d50439414 | 5. Orbis company profile of Fareast Green Energy Pte Ltd, accessed by Sumatran Orangutan Conservation Programme | 6. www.pjbinvest.com/wp-content/uploads/2017/12/2017_10_26-Company-Profile.pdf | 7. ibid | 8. ibid | 9. www.iicorp.com/?opportunities/opportunity/54849?Auth=93917648-813b-4a22-94d8-758d504394 | 10. www.pjbinvest.com/wp-content/uploads/2017/12/2017_10_26-Company-Profile.pdf | 11. PT NSHE company profile, accessed by Sumatran Orangutan Conservation Programme | 12. Asia Ecoenergy Development company profiles, accessed by Sumatran Orangutan Conservation Programme | 13. PT DHN company profile, accessed by Sumatran Orangutan Conservation Programme | 14. www.bloomberg.com/profiles/people/19916662-decai-shen | 15. www.internationalrivers.org/sites/default/files/attached-files/activist_guide_to_sinohydro_resources_environmental_policies.20141212_final.pdf

PROBLEMS AND IMPACTS

Flawed impact assessment

The environmental impact assessment (EIA) is deeply problematic. Despite the presence of orangutans and other endangered species being documented for many years, it fails to address the impact the dam will have on wildlife. It also neglects to discuss any mitigation measures for the impacts on downstream communities, or any of the other problems highlighted below.

Risk of extinction

The Batang Toru forest is home to the entire remaining population of Tapanuli orangutans, the most endangered great ape species in the world. The new project poses a very real threat of extinction for this entire species. Many more endangered species will be severely impacted, such as Sumatran tigers, sun bears, agile gibbons and pangolins.

Threats to fisheries and river ecology

The dam will split the river in two, preventing fish and other species from migrating along the river. This will have serious impacts on fish like jurung, an extremely important and highly valued source of food and income for local communities.

Threats from pollution

Despite being billed as a 'green' project, like all large hydroelectric projects the Batang Toru dam will emit significant quantities of greenhouse gases, contributing to climate change. These emissions originate from the manufacture of the massive amounts of concrete and other materials needed for construction. They are also emitted by decomposing vegetation in the flooded reservoir above the dam, especially methane, which as a greenhouse gas is 30 times more potent than carbon dioxide. Other dam reservoirs have also led to increased concentration of methylmercury in the aquatic food chain, which is known to cause brain and nervous system damage.¹⁶

Impacts on local communities

The dam will radically alter the nature of downstream water courses, significantly impacting the local people. It will produce electricity during periods of peak demand, typically between 6pm and midnight. During the day, the river will be blocked and the reservoir above the dam will gradually fill up, to be released later through the tunnel and turbines to generate electricity. Downstream communities, which normally experience drought and flood cycles a few times a year, will now have to learn to cope with them on a daily basis.



"The environmental impact assessment fails to address the impact the dam will have on wildlife."

This will seriously disrupt access to clean water, fisheries, transport and the many rice paddies in the region. There have also been reports of social conflict between indigenous groups whose lands will be affected by the project and PT NSHE, due to claims from the groups that they have not been fairly compensated.¹⁷

Risk of earthquakes

Batang Toru lies in the middle of an earthquake hotspot: the region has the highest density of earthquakes in mainland Sumatra.¹⁸ There is also mounting evidence that reservoirs can themselves trigger earthquakes, due to the increased pressure created by large bodies of water.¹⁹ If an earthquake were to strike and rupture the dam when the reservoir was full the consequences for those living downstream would be catastrophic.

Lower impact power sources are available

Ironically, North Sumatra province, which the new hydroelectric project is intended to supply, reportedly has a surplus of energy-generating capacity.²⁰ Furthermore, even if extra capacity is required, there are a number of far less environmentally-damaging alternatives available that would be capable of providing more than the capacity of the currently planned project. For instance, a nearby geothermal project, which aims to generate 330MW, could provide up to 1GW.²¹

16. www.who.int/mediacentre/factsheets/fs361/en/

17. <https://news.mongabay.com/2017/09/protest-against-hydropower-plant-in-sumatra-ends-with-injuries/>

18. Kernel analysis of all earthquakes (magnitude 2.5+) recorded on mainland Sumatra downloaded from <https://earthquake.usgs.gov/earthquakes/search/>

19. www.internationalrivers.org/resources/a-faultline-runs-through-it-exposing-the-hidden-dangers-of-dam-induced-earthquakes-2645

20. <https://properti.kompas.com/read/2017/09/07/141436621/pasokan-listrik-sumut-surplus-tapi-pemadaman-masih-ada>

21. Statements made by a senior official of the PT SOL geothermal developer at a meeting of Tapanuli's Bupati held 23 February 2018 in Sipirok, South Tapanuli, to discuss conservation of the Batang Toru ecosystem

BREACHES OF COMPANY POLICIES, GOVERNMENT GUIDELINES AND INTERNATIONAL COMMITMENTS

With so many negative environmental and social impacts, it is hardly surprising that the Batang Toru dam project flies in the face of the corporate social responsibility policies of many of the companies involved. Indonesia's commitments to international agreements will also be undermined if the project goes ahead.

Breaches of company policy

- PT NSHE has stated that construction of the Batang Toru dam is 'highly controlled ... following the IFC (International Finance Corporation) guidance' on environmental and social standards.²² IFC performance standards set a number of strict requirements, including conducting an informed consultation and participation process with affected communities.²³ In addition, projects should not be implemented in habitats of endangered species unless 'there are no measurable adverse impacts'.²⁴
- Sinohydro's environmental policy states that it will 'commit to not harming the environment and protecting biodiversity whenever possible'. One of the ways it will do this is by 'adopting a set of 'no-go areas' including ... habitats of threatened species'.²⁵
- The policy also states that Sinohydro operations will 'adopt all the World Bank's safeguards [sic] policies as a minimum standard'. The World Bank Environmental and Social Safeguard Policies rule out support for 'projects that ... involve the significant conversion or degradation of critical natural habitats',²⁶ which are defined as 'sites that are critical for rare, vulnerable, migratory or endangered species'.²⁷
- Bank of China Hong Kong — the Bank of China subsidiary likely to be providing financial support — has less specific policies. However, these claim that the bank 'will conduct environmental due diligence in lending and other business operations' and that 'environmental risks [will be taken into] account when ... making decisions'.²⁸

Breaches of government guidelines

The project would also run counter to a number of environmental and social guidelines published by the Chinese central government.

- The Guidelines for Environmental Protection in Foreign Investment and Cooperation, published by China's Ministry of Commerce and Ministry of Environmental Protection in 2013, call for enterprises to 'carefully

consider the ecological function orientation of the area where the project is located, and they may ... have priority to take such measures as in-place and nearby conservation of animal and plant resources that worth conservation and may be affected, to reduce adverse impacts on local biodiversity [sic].²⁹

- Chinese bank regulators have also published policies, like the Green Credit Guidelines, that obligate banks investing abroad to comply with host country law and meet international norms and best practices.³⁰
- China's Green Finance Committee further encourages Chinese banks and enterprises 'to fully understand relevant environmental standards both in China and in host countries, as well as the prevailing international standards, and adopt the highest standard where feasible. They should conduct in-depth environmental due diligence, and maintain a high level of vigilance for potential environmental impacts'³¹ in infrastructure projects, of which dams would be included. As currently planned, the dam would be unable to meet these expectations due to the extreme and potentially irreversible environmental and social impacts.

Breaches of international commitments

- Indonesia's National Biodiversity Strategy and Action Plan³² describes its commitments to the Aichi Biodiversity Targets under the Convention on Biological Diversity. This states that Indonesia will make the 'realisation of efforts to make the populations of endangered species as a national conservation priority'.

These policies, guidelines and commitments raise red flags for both companies and financiers regarding the apparent failure of the project developers to properly conduct robust and appropriate environmental due diligence in relation to the dam. As a result, all involved companies and financiers — including PT NSHE, Sinohydro, Bank of China, the Indonesian government, and other developers — should urgently reassess the project's feasibility and reconsider their involvement.

22. www.jobstreet.co.id/en/job/2455519?fr=CPP, accessed 25 April 2018 | 23. www.ifc.org/wps/wcm/connect/3be1a68049a78dc8b7e4f7a8c6a8312a/PS1_English_2012.pdf?MOD=AJPERES | 24. www.ifc.org/wps/wcm/connect/36099a8048855658b9b4fb6a6515bb18/PS_6_BiodivConservation.pdf?MOD=AJPERES | 25. <http://eng.sinohydro.com/index.php?m=content&c=index&a=show&catid=26&id=104> | 26. <https://policies.worldbank.org/sites/ppf3/PPFDocuments/Forms/DispPage.aspx?docid=1567&ver=current> | 27. <https://policies.worldbank.org/sites/ppf3/PPFDocuments/Forms/DispPage.aspx?docid=1567&ver=current> | 28. www.bochk.com/dam/bochk/desktop/top/aboutus/csr/policy/Environmental_Policy_E.pdf | 29. <http://english.mofcom.gov.cn/article/policyrelease/bbb/201303/20130300043226.shtml> | 30. www.cbrc.gov.cn/EngdocView.do?docId=3CE646AB629B46B9B533B1D8D9FF8C4A | 31. unepinquiry.org/wp-content/uploads/2017/09/Environmental-Risk-Management-Initiative-for-China---s-Overseas-Investment.pdf | 32. www.cbd.int/nbsap/targets/default.shtml

WHAT'S THE SOLUTION?

Urgent action must be taken to save Tapanuli orangutans from extinction and protect local communities. Companies, government and investors must take immediate preventative action. In doing so, they can demonstrate their commitment to corporate responsibility, investor accountability, and environmentally-responsible and socially-responsible land-use planning.

1. Immediately halt all infrastructure, exploratory and engineering activities and restore already damaged sites

PT NSHE and Sinohydro should immediately halt all operations, and remove already built infrastructure, including roads and bridges, which is currently giving access to poaching, illegal logging and land speculation. Given the high densities of orangutans at the project site, any further disturbance will have severe consequences for the Tapanuli orangutan.



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2. Reassess environmental and social impacts

Reputable independent consultants should immediately conduct a new environmental impact assessment. Given the presence of endangered species and the impacts on downstream communities, this will undoubtedly show that Batang Toru is not a suitable location for a hydroelectric dam.



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3. Grant legally protected status to the entire Batang Toru forest complex

To ensure the long-term survival of the Tapanuli orangutan, the Indonesian government must give legal protection to the whole Batang Toru forest. This will prevent similar threats emerging in future.

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The Batang Toru dam threatens the survival of a new orangutan species

Urgent action is needed to save the Tapanuli orangutan from extinction.

1. Immediately halt all construction activities and restore damaged sites
2. Reassess environmental and social impacts
3. Grant protected status to the entire Batang Toru forest complex

