

## Myitsone Hydroelectric Project

An International Rivers Briefing - September 2011

### Background

#### *Project Overview*

The Myitsone Hydroelectric Project is located at the confluence of the Mali and N'Mai rivers and is the largest of seven dams (total capacity 13,360 MW) planned along the Irrawaddy, Mali Hka, and N'Mai Hka rivers in Burma. Scheduled for completion in 2019, Myitsone will become the 15<sup>th</sup> largest hydropower station in the world, with installed capacity at 6,000 MW.

The main dam is approximately 152 meters long, 152 meters high, and includes a reservoir about 766 square kilometers with a depth of 290 meters deep. The dam project is expected to cost USD \$3.6 billion dollars and is being developed by Myanmar Ministry of Electric Power-1, China Power Investment Corporation and Asia World Company of Burma.

#### *Region*

Myitsone Dam is located 37 kilometers away from Myitkyina, the capital of Kachin State. The area is widely recognized for its ecological value and is described by prominent conservation organizations as one of the world's eight hotspots of biodiversity.

The dam site is less than 100 kilometers from the earthquake prone Sagaing fault line. The dam will submerge important historical and cultural sites at the Mali and N'mai Hka rivers, as well as what is widely recognized as the birthplace of Burma. In addition to submerging a number of historical churches and temples, the sacred banyan tree at the Mali Hka and N'Mai Hka rivers' confluence will be submerged.

#### *Relocation and resettlement*

The state newspaper *The New Light of Myanmar* reported that 2,146 people from 410 households and five villages will move into in model villages, which are equipped with wooden houses, schools, a police station, a hospital, a post office, and religious buildings, and will be supplied with water and electric power.

However, Aung San Suu Kyi explained in her Irrawaddy Appeal<sup>1</sup> that 12,000 people from 63 villages have already been relocated and it is not clear whether they will ever receive compensation. A total of 20,000 people are to be affected by the dam cascade overall.

## **Stakeholders and Actors**

### *Dam builders*

A joint venture agreement between the China Power Investment (CPI) and Asia World Company (AWC) enables CPI to build and operate Myitsone in partnership with Burma's AWC and Myanmar Electric Power Enterprise.<sup>2</sup>

The three entities established the Irrawaddy Myitsone-Myintnya-MyintWan Hydropower Company Limited in 2009 to build and operate the dams:

#### *(1) China Power Investment Corporation*

CPI is one of the big five power producers of China, with nuclear, thermal, hydropower and coal power generation assets in China. Within the CPI Group, Yunnan Power Investment Co Ltd was created in December 2008 for the primary purpose of the development, construction and operation of the hydropower projects on the Irrawaddy River. This company is a holding company, wholly owned by China Power Investment.

#### *(2) Asia World Company*

AWC is controlled by Stephen Law (Tun Myint Naing) and his family. Law's father, Lo Sit Han, the chairman of Asia World, has been labeled a "drug warlord" and linked to money laundering by the US government.<sup>3</sup> The Law family is also very close to the current regime's Vice President, Thiha Thura Tin Aung Myint Oo.<sup>4</sup>

#### *(3) Sub-contractors*

- China Gezhouba Group Corporation won a contract for the "discharge structure" valued at USD \$153 million (978 million RMB) – a task that will take 46 months to complete (SASAC, 7 January 2011).
- China Power Investment Corporation Materials and Equipment Co Ltd (in the CPI group) has a \$75 million (480 million RMB) contract for concrete construction.

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<sup>1</sup> Aung San Suu Kyi, Irrawaddy Appeal, Aug. 11, 2011.  
[http://www.internationalrivers.org/files/Irrawaddy%20Appeal%20by%20DASSK\\_0.pdf](http://www.internationalrivers.org/files/Irrawaddy%20Appeal%20by%20DASSK_0.pdf)

<sup>2</sup> China's Ministry of Commerce, 缅甸政府向我企业颁发投资许可证等法律文件, 26 September 2010,  
<http://mm.mofcom.gov.cn/aarticle/ddfg/tzzhch/201009/20100907158715.html>

<sup>3</sup> Thomas Maung Shwe, "Win Tin, Environmentalists Alarmed by Myitsone Dam," *Mizzima*, Jan 28, 2011.

<sup>4</sup> Aung Din, "Killing the Irrawaddy," *The Irrawaddy*, Aug 4, 2011.

- Sinohydro's Number 4 and 11 bureaus have contracts for road building and some civil engineering works.

### *Chinese-Burma government cooperation*

China's role in Burma's hydropower development projects was sealed in an agreement between Burma's Ministry of Electric Power and China's National Energy Administration in March 2009.<sup>5</sup>

Burma's Electric Power 1 Minister Zaw Min on September 11, 2011 in a press meeting said that the Myitsone project will continue to be built despite protests from domestic and international civil and environmental groups.

### *Kachin Independence Organization*

The Kachin Independence Organization (KIO) is a political organization that effectively controlled the Kachin state from the 1960s to the 1990s. Even after the 1994 Ceasefire Agreement, the key issues between Burmese government and KIO were not resolved and tensions remain. The KIO has its own army, the Kachin Independence Army, which still controls much of Kachin State.

### **Environmental and Social Impacts**

The Irrawaddy has been under the ecological threats of rapid deforestation and erosion, unregulated gold mining, and industrialization. Sandbank formation, saline intrusion, as well as water pollution has severely impacted the ecosystem around the river. Dams along the Irrawaddy will exacerbate many of the existing problems and the ability of the system to respond to climate change.

The Myitsone project will not only influence the ecosystem around the dam site but will also influence downstream flows of the Irrawaddy, upon which downstream communities rely for rice production. The dam will prevent the seasonal migration of fish to their upstream spawning areas. Altered hydrology will disrupt the natural replenishment of nutrients.

In the early stages of construction there have been many geological problems including a tunnel collapse and seismic issues.

### **Environmental Impact Assessment Process**

CPI funded and commissioned Changjiang Institute of Survey, Planning, Design and Research (CISPDR) from China, to conduct the EIA with Burmese experts from the Biodiversity and Nature Conservation Association (BANCA). CISPDR was in charge of technology and the

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<sup>5</sup> "Myanmar, PRC Sign Agreements," *The New Light of Myanmar*, Mar 27, 2009, [http://www.burmalibrary.org/docs6/NLM2009-03-27-Myanmar-PRC\\_sign\\_agreements.pdf](http://www.burmalibrary.org/docs6/NLM2009-03-27-Myanmar-PRC_sign_agreements.pdf).

overall quality of environmental assessment; BANCA was responsible for environmental baseline and biological impact assessment (finalized in October 2009).

In March 2010, CISPDR finalized the full EIA, but the document was held in secret until September 2011.<sup>6</sup> The Biological Impact Assessment and environmental baseline report by BANCA had been leaked to NGOs and other interested groups earlier.

There are no legal obligations to conduct EIAs in Burma. However the EIA's recommendations have been published by CPI on its Myitsone website, some of which are contradictory to the BANCA findings.

BANCA's Chairman, Dr. Htin Hla, said that BANCA's environmental base line assessment report and the broader EIA could not be regarded as a perfect observation document. He revealed that the survey period normally takes seven months to finish. However, due to other demands on Chinese experts, the study was concluded within five months.

The BANCA report recommends building two smaller hydropower dams to substitute the Myitsone Dam, and establishing two national parks and additional measures to ensure that dam workers do not impact and destroy forests during construction.

CPI also did not wait for the EIA to be finalized before commencing construction and resettlement. Construction began in December 2009, three months before the final EIA was reportedly available to CPI from CISPDR in March 2010.

### **Security and Political Interests**

There has been long-standing conflict between the ethnic Kachin people and the military government. The tension and violence has worsened since construction began on the Myitsone Dam. Upstream areas and north of the confluence are the locations where Kachin Independent Organization (KIO) military centers are stationed. KIO believes that the dam constructions threaten the traditional livelihoods of the Kachin people. They believe that the resettlement and relocation plans also serve the government's interest to control the Kachin military forces. Despite correspondence between KIO leaders and Burmese government, no resettlement agreement has been achieved. Failure to reach agreement has led to a series of explosions since April 2010 and fighting erupted in June 2011, breaking a 17-year ceasefire and spreading to ten townships.

Widespread bombings, including on the main supply route to the site, and clashes near the Myitsone Dam have caused over 20,000 Kachin state residents to flee to the Chinese border and to towns, including the Kachin capital of Myitkyina, 40 kilometers south of the dam site. The Kachin Women's Association of Thailand has documented 32 cases of rape by Burma Army troops since the fighting began.

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<sup>6</sup> Environmental Impact Assessment for Myitsone Dam, released September 29, 2011: [http://www.uachc.com/Liems/esite/content/showDetail.jsp?nid=6897&newtype\\_no=2248](http://www.uachc.com/Liems/esite/content/showDetail.jsp?nid=6897&newtype_no=2248)

As late as September 20, 2011, the Kachin Independence Army was blocking construction materials from reaching the dam site at the Lahpai tollgate located near Laiza close to the Burma-China border.

### **Energy and Economic Interests**

Chinese investment in the project is USD \$3.6 billion and the profit is to be shared between China and Burma. CPI has reported that about 90% of the electricity generated from the project will go to China. When the electricity is eventually transmitted to China, the Burmese regime will receive about 20% of the revenue, or USD \$500 million annually. China will receive 70% of the annual profits, and the remaining 10% will be distributed as brokerage fees. Despite this, CPI anticipates that Burma's income within the first 50 years will be as high as USD \$54 billion from the total cascade of dams.

Top benefactors are alleged to include Snr-Gen Than Shwe, First Vice-President ex-Gen Tin Aung Myint Oo, and Electric Power 1 Minister Zaw Min.<sup>7</sup>

### **Disagreement within the Government**

On September 17, 2011, the Burmese government hosted a workshop in Naypyidaw, with ministers, Chinese investors and NGOs to discuss the hydropower projects on the Irrawaddy. Government ministers differed on whether to continue or suspend the Myitsone project, and the issue may be brought before government.

At the workshop, Minister for Industry-1 and Industry-2 ex-vice admiral, Burma's industrial development committee chairman Soe Thein, openly called for a review of the terms of the contract, and spoke about reviewing the project from a social, economic and defensive standpoint. He said, "CPI currently has control over the EIA—this is not the right way to proceed."

Sources said an ongoing internal disagreement has evolved over Myitsone and other issues between so-called hardliners led by First Vice-President ex-Gen Tin Aung Myint Oo alongside Information and Culture Minister ex Brig-Gen Kyaw Hsan, Finance Minister ex Maj-Gen Hla Tun, Upper House speaker ex Maj-Gen Khin Aung Myint, against the "reformers": Thein Sein, Lower House speaker ex-Gen Shwe Mann, Commander-in-Chief Min Aung Hlaing and a few others.<sup>8</sup>

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<sup>7</sup> Wai Moe, "Burma's Burning Issue – The Myitsone Dam Project," *The Irrawaddy*, Sept 16, 2011, [http://irrawaddy.org/article.php?art\\_id=22094](http://irrawaddy.org/article.php?art_id=22094).

<sup>8</sup> Wai Moe, "Myitsone Controversy Sparks Discord," *The Irrawaddy*, Sept 19, 2011, [http://irrawaddy.org/article.php?art\\_id=22103](http://irrawaddy.org/article.php?art_id=22103).

## Major Events Timeline

<b>2005</b>	CPI and Asia World establish joint venture to build hydropower projects in seven locations along Mali Hka and Nmai Hka rivers.
<b>2006</b>	On December 28 <sup>th</sup> , The Ministry of Electric Power-1 and China Power Investment Corporation sign an MoU.
<b>2007</b>	<p>In May, agreement to build the 7 dams is signed.</p> <p>In June and July, KIO chairman approaches Yunnan Province State Council (6/11), Head of State Senior General Than Shwe (7/6) and Head OF Myanmar Military Northern Command in Kachin State (letter of Tanghpri villagers, 7/6).</p> <p>In December, Changjiang Survey, Planning, Design and Research (CSPDR) completes planning report for the feasibility of the hydropower projects.</p>
<b>2008</b>	<p>In March, terms of reference for the EIA is completed, and subsequently approved.</p> <p>In December, Yunnan Power Investment Co Ltd is created for the primary purpose of the development, construction and operation of hydropower projects on the Irrawaddy.</p> <p>On December 24<sup>th</sup>, BANCA and CPI sign an agreement to conduct an EIA special investigation.</p>
<b>2009</b>	<p>From January to July, Chinese and Burmese experts from the Changjiang Survey, Planning, Design and Research Co Ltd, Chinese Academy of Sciences, Ministry of Water Resources, South China Botanical Garden of the Chinese Academy of Sciences, South China Institute of Endangered Animals, and Burma's Biodiversity and Nature Conservation Association conduct a special investigation on the upper Irrawaddy.</p> <p>In August, notes on the CPI website reflect that site management was concerned about an outbreak in armed conflict in parts of Burma. Instead of withdrawing the 1,000 or so Chinese workers, they instigate a range of safety measures.</p> <p>In October, the baseline environmental impact assessment by BANCA is finalized.</p> <p>In December, stage 1 (out of a total of 5 construction stages) begins on the Myitsone Dam site. The resettlement of people begins.</p>

<b>2010</b>	<p>In March, CISPDR finalizes the EIA Report.<sup>9</sup></p> <p>In April, four explosions occur at the Myitsone Dam site - three at the worksite and one at the workers housing area (as reported by Xinhua, April 17). Other media reports that the blasts killed three people and injured 20.</p> <p>In September, Government declares that despite the 1994 Ceasefire Agreement with the KIO, communications and cooperation would be halted. KIO invites CPI to discussion and received no response.</p>
<b>2011</b>	<p>In January, developers finalize the overall EIA for hydropower projects on the upper Irrawaddy.</p> <p>In March, security measures tighten at the dam site, KIO declares itself not responsible for civil war if the military government invades KIO area. The Chairman of KIO also sends a letter to the Chairman of Chinese Communist Party (3/16).</p> <p>On June 9<sup>th</sup>, fighting erupts, affecting the construction site.</p> <p>In July, full scale construction resumes.</p> <p>Electric Power 1 Minister Zaw Min, under a pen name, describes in the <i>New Light of Myanmar</i> the benefits of the dam and dismisses any environmental impacts.<sup>10</sup></p> <p>In August, Daw Aung San Suu Kyi publishes letter: Appeal to Save the Irrawaddy.</p> <p>On September 17<sup>th</sup>, the Burmese government hosts a workshop in Naypyidaw to discuss impact of hydropower projects on the Irrawaddy River.</p>
<b>2018</b>	<p>Target date for project completion.</p>

<sup>9</sup> “Ensure Harmony of Project Development and Environment Conservation,” CPI Upstream Ayeyawady Confluence Basin Hydropower Corporation, [http://www.uachc.com/Liems/esite/content/showDetail.jsp?nid=6861&newtype\\_no=2248](http://www.uachc.com/Liems/esite/content/showDetail.jsp?nid=6861&newtype_no=2248).

<sup>10</sup> “Perpetual Natural Heritage Relayed with Good Volition,” *The New Light of Myanmar*, Aug 9, 2011.