Resettlement in the Jiangxi Shihutang Navigation and Hydropower Complex Project: Meeting the Complex Needs of a Relocated Population

Executive Summary

This case study examines how the Government of China’s Jiangxi Shihutang Navigation and Hydropower Complex Project, supported and co-financed by the World Bank, overcame significant challenges to meet the needs and concerns of residents facing relocation. The case explores how the agency responsible for implementing the project secured successful and timely project delivery through focusing on and responding constructively and positively to residents’ needs and concerns; basing decision-making on consultations and compromise between branches of government and the local population; and helping resettled residents achieve sustainable livelihoods, both through modernizing farming practices, and increasing their access to employment in the secondary and tertiary sectors.

Introduction

In the late morning of October 30, 2011, five barges, bound for Ganzhou, slowly passed through the locks at Shihutang. Since its completion the Shihutang Complex has greatly improved waterway shipping and transport upriver from

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Securing Fair and Timely Resettlement to Meet Multiple and Complex Local Needs

GLOBAL DELIVERY INITIATIVE

Nanchang, benefitting over 15 million people through promoting economic growth in the region.

The project has also enhanced the standard of living for those resettled during its implementation. A local, Hua Wei, pointed to Xinzhou Island and said, "Before the construction of the Shihutang Complex I used to live on the island and, while I was happy, most of the buildings were in bad shape and it wasn’t easy to get around. When it rained we had to use boats and, if there was a flood, we could only eat what we had at home." Since their resettlement into new buildings, each household now enjoys road access and a better quality of life. Large-scale projects of this type can be disruptive for local residents. Taking this into consideration, the project identified and minimized the adverse effects of relocation on the local population.

Development Challenge: Limited Waterway Access for Shipping and Transport

The Gan River flows south to north through Jiangxi Province into Lake Poyang before then flowing into the Yangtze River. It is Jiangxi’s largest navigable river, and historical records show that during the Ming and Qing dynasties the river was part of a national transportation network that also included the Grand Canal, the Yangtze River, and the Pearl River. Jiangxi spans a third of this 3,000 kilometer network, known as the ‘golden corridor’. Historically, though, widely varying water levels and the intermittently shallow riverbed of the Gan River and its tributaries imposed a bottleneck on the region’s waterway transport. This was complicated further by an uneven distribution of small ports, ill served by outdated infrastructure. The region lacked transport hubs capable of linking waterways and other forms of transport, suppressing the collection and distribution of goods, and consequently limiting industrial development.

There had been some successful attempts to upgrade waterways in the lower reaches of the Gan River along the Nanchang-Hukou corridor to Grade II status, permitting the passage of 1,000 dead weight ton (dwt) vessels. However, the transportation access upstream from Fengcheng remained poor, limiting access to Zhangshu, Ji’an and Ganzhou (Jiangxi Provincial Communication Department. 2006). This was particularly the case during dry seasons when many vessels were forced to remain in port, resulting in significant economic losses.
**Delivery Challenges: Meeting Residents’ Complex Resettlement Needs**

The Shihutang Navigation and Hydropower Complex Project required the acquisition of land in 53 villages and resettlement of 141 households comprising 515 people. The resettlement plan encountered strong resistance from villagers affected by the project. The major challenge faced by the project implementation team was to ensure that residents’ welfare needs and construction deadlines were both met, achieving a balance between the project’s socio-economic and ecological benefits.

**Tracing the Implementation Process**

The National Reform and Development Commission (NDRC) approved the Shihutang Navigation and Hydroelectric Complex in April 2007. Construction began on April 1, 2009, and took approximately three years. The Jiangxi Provincial Transportation Department (JPTD) established the Shihutang Navigation and Hydroelectric Complex Project Management Office (PMO), which took on responsibility for construction, coordination and management. In Taihe County, where the land acquisition and resettlement would take place, the County government also established a Project Coordination Office to help monitor the project’s progress, and resolve any land acquisition and resettlement issues. In order to meet residents’ complex resettlement needs, the project had to focus on resolving the following issues: a) responding to villagers’ needs and concerns; b) finding compromises that could satisfy all parties wherever possible; and c) helping the resettled population achieve a sustainable and enhanced quality of life after moving.

**Minimizing the Scope of the Project’s Impact in the Design Phase**

The main component of the project was the construction of Shihutang Complex, a single integrated infrastructural unit that would form a reservoir with an elevation of 56.5 meters and storage capacity of around 166.8 million cubic meters. Its backflow would extend 38.2km, submerging 78.5km (Ibid) of land belonging to Taihe County and its five townships, and affecting 53,700 people and 4,580 mu of farmland. The second component was a series of flood protection mechanisms that would consist of approximately 43 kilometers of dikes and 56 kilometers of diversion canals, six sets of pumping stations, two sets of free drainage sluices, and two sets of regulating sluices.

The project team optimized its design in order to minimize the number of residents affected by relocation. Firstly, in the areas containing concentrated populations and farming activities that would be temporarily or
shallowly submerged, fields were elevated to reduce inundation, meaning farmers could continue to work on their land. Secondly, a protective wall was incorporated into the design of the main dam to reduce the number of villages that would be affected by its construction. After building the protective wall, some of the villages did not need to be resettled, and villagers could still hold on to their land nearby.

These adjustments significantly reduced the number of inhabited areas affected by the project. According to the Implementation Completion Report, 70.6 ha of land was acquired temporarily, almost 259.4 ha less than was estimated at appraisal. Farmland would account for only 8.7 percent of the total land acquired, and 141 households comprising 515 people were ultimately relocated, fewer than the 169 households containing 597 people initially identified (World Bank 2014). Consequently, the adverse impact on the agricultural activities and lifestyles of the residents involved was also reduced. Of the people affected, 70 percent lived on Xinzhou Island, and belonged to two village groups, Xinzhou Shangpeng and Xinzhou Xiapeng.

Conducting Surveys of Affected Residents and Areas to Identify Needs

Between 2006 and 2007, the PMO commissioned the Jiangxi Water Conservancy Planning Design Institute to carry out social impact surveys and assessments in the areas potentially affected by the project—Taihe County and its five subsidiary townships. Beginning in October 2006, these onsite surveys assessed land use in areas potentially affected by the project, the possible number of households that would be relocated, the socioeconomic conditions of these households and villages, and the feelings of locals who faced resettlement.

Results were initially encouraging among the farmers who would potentially lose their land, with 95 percent of those surveyed saying they were broadly supportive of the project. Among them, 33 percent identified land as their major or sole source of income, meaning the Shihutang Project would have a significant impact on their livelihood. They agreed with the measures proposed to help them restore their livelihoods after resettling, including adjustments on land ownership, improvements to low-yield farmland, and the promotion of animal husbandry. Of the households that would lose their land, 91 percent believed these measures would enable them to maintain or improve their income. The biggest concern, expressed by nearly half of all households surveyed, however, was whether financial compensation for resettlement was in place.

In August 2007, after a thorough consultation, these villagers and the PMO reached consensus on land acquisition compensation standards. This compensation scheme was designed according to the Large and Medium Scale Hydropower Complex Construction Land Acquisition Compensation and Resettlement Regulations issued by the central government in 1991.

Adjusting Land Acquisition Compensation Schemes for Villagers

In April 2008, just as the project’s resettlement plan was about to be implemented, a new situation emerged that led villagers to change their mind about the compensation scheme offered by the Shihutang Project. The Shiji Highway project between Shicheng and Ji’an was underway, and also required the acquisition of land and relocation of residents in a number of the same areas as the Shihutang Project. The Shiji Highway project, though, applied a different set of compensation standards. Specifically, the Shiji Highway compensation plan provided RMB 20,000 per mu for paddy fields and RMB 10,000 per mu for dry fields, regardless of the quality of the land. The Shihutang Complex Scheme, however, used a differentiated compensation plan that distinguished between land of primary and secondary quality. It offered RMB 18,882 per mu for paddy fields of primary quality, and RMB 15,323 per mu for paddy fields of secondary quality. For dry fields, it offered RMB 13,417 and RMB 10,352 per mu for primary and secondary quality land respectively. While owners of dry fields were offered better compensation under the Shihutang Project resettlement plan, owners of paddy fields felt frustrated that they would receive less compensation for their land under the Shihutang Project than was offered by the Shiji Highway Project. Furthermore, fund allocation and reimbursement to villages for the Shiji Highway Project progressed more quickly.

So, while the initial resettlement plan for the Shihutang Project was formulated in order to comply with existing regulations and the World Bank’s policies, villages felt discontent with its comparatively slow rate of reimbursement and low rate of compensation for paddy fields. These frustrations threatened to delay the project.
With the start date for construction work looming, this issue became increasingly pressing. The Taihe County Project Coordination Office conducted interviews with the villagers and compiled information on the situation, which it submitted to the PMO for discussion. After reflecting on the situation the PMO agreed that the residents’ concerns over different levels of compensation were reasonable. It decided to adjust the Shihutang Project compensation plan accordingly to match that of the Shiji Highway Project. It submitted the amendments to the Jiangxi Provincial Government, which approved the changes. The government then wrote to residents confirming the adaptation of the compensation scheme, helping allay their concerns.

Two models of resettlement were adopted: individual resettlement and collective resettlement. Under the first model, 98 households were able to stay in the same villages so long as they moved to safe zones more than 100 meters from the reservoir’s banks or 50 meters from the dikes. The impact on these households was limited, and they were generally satisfied with the relocation arrangements. Another 74 households containing 345 individuals, though, needed to be relocated collectively to different areas. These residents faced drastic changes both in where and how they lived, and thus were concerned that their lifestyles and livelihoods would come under threat.

Their demands were consequently more complex and three key problems emerged during the process of collective resettlement. The first was that the resettlement sites were on average 5km to 10km away from the original villages, far enough away to cause disruption to the residents’ lifestyles and working patterns, and create a sense of instability and anxiety. Secondly, the number of people involved in collective resettlement meant that there was a wide range of reactions to it. Finally, the movement of larger groups of people meant that more extensive construction was required to build the requisite housing and infrastructure, and that a greater amount of land was needed to secure adequate rates of production. The residents of Xinzhou Island, who would have to leave the island where they had lived and farmed for generations, felt these concerns particularly acutely.

- Reaching compromise while identifying the resettlement sites. During the project’s preparation and consultation phase, the residents from Xinzhou could not reach consensus on the relocation site. The site initially proposed by the County Government was Taihe Farm, where there was enough land to support farming. At 20km, however, the villagers thought that Taihe Farm was too far away from their original dwellings. Additionally, they felt the transport and public facilities were rudimentary. Throughout 2008 the Xinzhou villagers continued to negotiate with the County Project Coordination Office. After some back and forth, in early 2009, Xinzhou’s residents and the County Government finally agreed to resettle on a site near Donggang Village. While the site provided less land than Taihe Farm it possessed convenient transportation links and easy access to schools, hospitals, government offices, and an industrial park.

- Debating resettlement compensation. There were disagreements among the Xinzhou residents over the nature of the resettlement compensation policies, particularly whether farmers should be compensated with land or subsidies in place of land. While the residents of Xinzhou Island were mostly farmers, some villagers wanted to trade the compensatory land for what they perceived to be more generous and useful cash subsidies. One young man said, “I’ll be out looking for work no matter what. I don’t want to work the fields anymore. Even if they give me land, I would still have someone else farm it. It would be better if I just got money instead.” The County Coordination Office, though, was concerned that cash subsidies would only offer a temporary solution unable to ensure a means of sustainable livelihood for the relocated villagers. By contrast, compensating the villagers with land would allow farmers to choose between continuing to farm, and leasing out the land for cash. Going against the wishes of some local residents the PMO therefore maintained a ‘resettlement with land’ policy. In addition to replacement land, cash compensation was made to compensate for crops planted on the land that was taken.

- Increasing investment in settlement site infrastructure. After resolving these issues, another key issue was getting houses and infrastructure built at the new Donggang Resettlement Site. Because of the delay in deciding its location, the construction of the site was not included in the initial project budget and, after its reintroduction to the project, the total budget needed to stretch further to cover its construction. The limited construction budget on infrastructure caused dissatisfaction among the resettled villagers, who wanted increased investment and guaranteed construction
standards. In order to incentivize the villagers to move to Donggang, the PMO, Country Government, and the Design and Monitoring Teams researched various options before deciding to increase the budget for infrastructure in the site. Total investment for the Donggang Site and another site in Wuxi Fenchang was increased to RMB 12 million, RMB 10.65 million more than initial estimates.

- **Seeking funding for constructing new houses.** Another obstacle facing Xinzhou residents was a lack of funding with which to build their new houses in Donggang. The compensation standard for housing was based on the value of the residents’ original houses, but since most of the Xinzhou villagers had lived in old wooden or mud-brick houses they were compensated at a low rate and found that they could not afford to construct their new houses. For instance, Hongji Kang, a resident of the Xinzhou village group, received a total compensatory settlement of RMB 31,167.49 for his old house.\(^1\) To build a new three-story brick-concrete home based on the government’s unified design, however, would cost him at least RMB 100,000. In order to fill the funding gap for constructing new house, the Taihe County Government sought multiple channels to apply for subsidies from the government budget, and eventually secured an additional RMB 7,000 for each villager. This alleviated some of the financial burden on the villagers.

**Encouraging Villagers to Engage in the Resettlement Process**

Because of the delay in deciding their location, the planning and design of Donggang Village lagged behind, and began in early 2009. After waiting for the land development plan, funding for land acquisition, and the design of the construction plans, it was not until early 2010 that planning was completed. The reservoir was to be filled by early 2011, meaning the residents needed to be resettled by the end of 2010 (Jiangxi Provincial Communication Department, Shihutang Navigation & Hydropower Complex Project Construction Office 2015).

Living on an island in the middle of the Gan River, with ties that went back for generations, Xinzhou’s residents were largely at the mercy of the rainy seasons, which could seriously disrupt their life, work, and transportation. Despite these inconveniences, villages felt a great sense of sentimental attachment and loyalty to Xinzhou, and were reluctant to leave.

Mr. Xiao, Director of the County Project Coordination Office, said, “If people had not been encouraged to take initiative everyone would have waited for other people to start, which would have slowed down overall progress. At the time, the project needed to move quickly. A delay in resettlement would have meant the reservoir could not have been filled, locks could not have been closed, and electricity could not have been produced. The project would have failed.”

- **Conducting face-to-face consultations to promote the benefits of resettlement.** A member of the Taihe County Coordination Office said that successful resettlement required “emphasizing the benefits of resettlement over and over again, including easier access to transportation, schools, and hospitals, and the chance for jobs at the industrial park.” The office sought to actively promote the benefits of resettlement by posting resettlement site-design blueprints on village noticeboards, arranging village meetings and extending party member meetings to discuss the plans, and introducing working groups to give voice to villagers’ needs and concerns. Taihe County leaders even visited villagers on the island personally to discuss the issues directly with them. This process of highlighting the benefits associated with resettlement helped to increase the villagers’ confidence in the plans.

- **Implementing differentiated incentive structures.** Two forms of policies were used to incentivize resettlement. One was a ‘first come, first served’ policy, which gave villagers who committed early to building their new homes the first pick of the available construction sites. The second policy offered a RMB 3,000 reward for the first ten new households that completed the first floor of their homes. In Xinzhou more than 30 households agreed to resettle after the roads to the new sites were completed in the second half of 2010. Spurred by the additional incentives, a further 49 households sought to become the first to construct their new homes.

In an extra push to get the homes constructed, the government stipulated that all households would need to have resettled and completed construction “of the first

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\(^1\) This data comes from the Shihutang Complex Resettlement Statistics Report provided by the Taihe County Project Coordination Office.
story of their homes by September 20, 2011.” These late arrivals would also need to pay a deposit to the village dependent upon the size of their house, which would be returned to them upon completion of the first story. Deposits would not be returned to those that failed to complete the first story of their homes before September 20, 2011, and instead transferred into a public works fund. It was also announced that this would be the last opportunity for Xinzhou residents to take part in collective resettlement. If they missed this window, they would have to apply to the land management authorities to construct a new home individually.2

Achieving Sustainable Livelihoods

Due to the limited land in Donggang Site, farmers’ household plots decreased in size and quality. When the villagers lived on the Xinzhou Island, they possessed relatively large plots of land averaging around 0.13ha each, on which they could produce cash crops such as peanuts, plantain seeds and penny potatoes3 in return for a good income. The Donggang Resettlement Site offered good land and transportation links, but on average each farmer would receive only 0.04ha of land. With nearly half of Xinzhou residents’ income coming from the sale of primary goods, farmers feared the smaller plots of land would lead to a significant loss in earnings, and they could no longer sustain sufficient household incomes.

In response to this issue, the following measures helped to achieve a sustainable quality of life for the resettled villagers:

- **Improving the Efficiency of farming practices.** To support the successful uptake of the ‘resettlement with land’ policy, an average of 0.02ha per person was provided for the 1,904 individuals affected (Jiangxi Provincial Communication Department, Shihutang Navigation & Hydropower Complex Project Construction Office 2015). Improvements were made to medium- and low-yield fields by improving irrigation systems, helping to secure stable yields during both droughts and floods. This measure increased production per unit of land, which meant less land was needed to maintain pre-existing levels of production. Closer proximity to nearby towns and better transport links meant planting methods could be optimized through the use of technology, increasing the number of cash crops sown. Farming practices became more ecological and sustainable.

- **Increasing employment in the secondary and tertiary sectors.** The resettlement site was located near a regional industrial park, and the county government encouraged local businesses to employ suitable new locals. Twenty percent of residents resettled from Xinzhou found employment in the industrial park. In addition, relocated families also received additional allowance from the central government to support rural development and poverty reduction. They also

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2 This material comes from meeting notes for the Forum on Collective Resettlement and Home Construction for the Xinzhou Community of Caoping Village. (August 4, 2011).

3 A popular vegetable south of the Yangtze River, the penny potato is one of China’s few organic foods. It is planted widely in Wanhe Township and is called ‘southern ginseng.’ It is rich in starches and sugars with additional protein, vitamins, and minerals.
received social development funds to support transport, telecommunication, health and education. Thirty percent of the resettled households transitioned to raising livestock, and 124 individuals moved into the secondary or tertiary industries.

**Lessons Learned**

To meet the delivery challenge associated with meeting residents’ needs and concerns about resettlement, the PMO adopted three key overarching strategies:

**Focus on Responding Constructively and Positively to Villagers’ Needs**

During its planning phases the team managing the Shihutang Hydrocomplex Project made several adjustments to the project’s design that meant the adverse effects of the reservoir on the human and natural environment were dramatically reduced. These measures involved putting flood control systems in place that achieved two things: they significantly reduced the size of the geographical areas affected by the dam, reservoir, and backflow; and they ameliorated the negative impact in areas of denser population where flooding remained unavoidable by elevating fields and therefore safeguarding agricultural livelihoods. These measures pre-empted and in many cases placated residents’ concerns before construction even began.

The project teams then undertook surveys of the villagers who would still be required to resettle to assess their concerns and needs. While these surveys produced largely positive results, indicating villagers were supportive of the project and its aims, they revealed considerable levels of concern around the compensatory schemes on offer to those affected by resettlement. Initially these surveys ensured the PMO and locals could achieve consensus on the conditions of compensation, and that these conditions aligned with central regulations.

Villagers were disconcerted, though, when another major project offered differing (and in cases more generous) levels of compensation for farmland. To allay their objections that the Hydrocomplex Project was unfairly compensating them, the PMO responded promptly and decisively, raising the minimum level of compensation available to villagers to ensure it matched the compensation offered by the second project.

**Basing Decision-Making on Consultations and Compromise**

Another key problem faced during the project was the emergence of bottlenecks that inhibited the resettlement of villagers. In each case, consultation between officials and locals underpinned the processes that enabled these factors to be resolved, and in doing so also ensured residents’ concerns could be balanced against tight budgets and scarce resources.

Villagers expressed concerns that the nominated location for their resettlement—Taihe Farm—was too far away from their native Xinzhou Island. Following a process involving discussions between the project teams and residents, a different resettlement site near Donggang Village was chosen that more adequately met the locals’ needs.

Residents also queried the form of compensation for their land, with a number saying they wanted financial reimbursement rather than new land. After giving the issue careful consideration the PMO decided not to deviate from providing like-for-like compensation, and insisted villagers accept the new farmland. While some villagers felt unhappy about this the government was adamant that land would better secure sustainable livelihoods for the resettled residents, protecting their longer-term interests. Villagers ultimately accepted this logic, and were able to lease their farmland for cash if they so desired.

Residents expressed concern and frustration that the budget for the resettlement site was too low, threatening the quality of the houses, infrastructure, and quality of life they would subsequently be able to enjoy there. After careful deliberation the PMO decided to increase its budget for the Donggang resettlement site, and this compromise helped allay the residents’ concerns.

Another issue inhibiting villagers’ moving to the resettlement site was inequity between the level of compensation they received for their houses on Xinzhou Island and the cost of constructing their new homes in Donggang. They had been living in relatively poor conditions in houses made of rudimentary materials on the island, which made the cost of the comparatively more advanced houses at the resettlement site unaffordable. To assist the residents the County Government sought and ultimately located subsidies to help absorb some of the cost of these new buildings.

To increase trust in the project and encourage more villagers to engage with the resettlement process local
and county government officials personally visited the island to speak face-to-face with residents. The PMO also introduced incentive structures to catalyze the movement of residents to Donggang, such as offering financial rewards for residents who began constructing their properties first. Combined, these strategies built engagement among villagers with the project and its aims, quickened the process of moving to the resettlement site.

**Achieving Sustainable Livelihoods through Modernizing Farming and Employment**

After moving to the Donggang resettlement site, residents engaged in two broad processes that helped secure sustainable improvements to their quality of life. The first was to improve the efficiency of farming practices, meaning that, although farmers had smaller plots of land they were able to maintain or even increase crop yields. This was achieved by improving irrigation, so that droughts and floods had less impact on crops, and modernizing the farmers’ practices for producing primary products.

Another shift was in the employment opportunities to which the newly relocated residents found themselves exposed. Near an industrial park, many residents took up employment in the secondary or tertiary sectors, enabling them to reduce or even remove their reliance on producing agricultural goods.

Both of these processes have led to sustainable and pronounced improvements to the residents’ quality of life.
Annex 1: Shihutang Navigation and Hydropower Complex
Timeline

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Rational/Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>Completion of the Wan’an Complex on the Gan River</td>
<td>There were 17 shoals in the river basin 38km downstream from the Wan’an Complex and ships could only operate during high waters. It was very dangerous and the waterway was only given a Grade VI rating</td>
</tr>
<tr>
<td>2006</td>
<td>Jiangxi Provincial Inland Waterway Shipping Development Plan (2006) reviewed and passed</td>
<td>The plan called for the corridor from Ganzhou to Nanchang (450km) to be upgraded to Grade III status (allowing 1,000dtw ships to pass year-round) by 2020</td>
</tr>
<tr>
<td>April 2007</td>
<td>Jiangxi Provincial Department of Communication establishes the Shihutang Navigation and Hydropower Complex Project Management Office (PMO)</td>
<td>Marked the start of the Shihutang Complex project</td>
</tr>
<tr>
<td>2008</td>
<td>World Bank agrees to provide technical and financial support for the project</td>
<td>World Bank representatives review project progress and draft an MoU</td>
</tr>
<tr>
<td>March 21, 2008</td>
<td>Drafting, review and passing of the Land Allocation and Resettlement Planning Report for the Shihutang Navigation and Hydropower Complex Project</td>
<td>Marked the official beginning of land allocation and resettlement work</td>
</tr>
<tr>
<td>April-May 2008</td>
<td>Residents resist land allocation efforts</td>
<td>Varying compensation standards offered by different projects in the same area cause disaffection among farmers</td>
</tr>
<tr>
<td>2008</td>
<td>Provincial Government issues interdepartmental directive</td>
<td>New unified compensation standards regain the support of farmers</td>
</tr>
<tr>
<td>November 2008</td>
<td>PMO and Taihe County Government sign a Resettlement Agreement; Taihe County establishes the Shihutang Navigation and Hydropower Complex Project Coordination Office (project coordination office)</td>
<td>Coordinated project and resettlement progress</td>
</tr>
<tr>
<td>December 29, 2008</td>
<td>Construction of Shihutang Complex officially begins</td>
<td>Progress of resettlement officially affected the progress of project construction</td>
</tr>
<tr>
<td>2008–2009</td>
<td>Resettlement delayed</td>
<td>Opposition to collective resettlement and concern about life after resettlement</td>
</tr>
<tr>
<td>First Half 2010</td>
<td>Compromise on location and multiple options for relocation</td>
<td>Consideration of farmers’ needs and their convenience</td>
</tr>
<tr>
<td>Second Half 2010</td>
<td>Integration of unified/independent construction plan and policy incentives</td>
<td>Some residents changed their mind and proactively resettled</td>
</tr>
<tr>
<td>2010–2014</td>
<td>‘Resettlement with Land’ and ‘Protective Raised Fields’ implemented</td>
<td>Farmers become confident of life after resettlement and approve of plans</td>
</tr>
<tr>
<td>September 13, 2013</td>
<td>Resettlement work speeds up and coordination meeting held to review work</td>
<td>Review work completed successfully and remaining resettlement problems discussed</td>
</tr>
<tr>
<td>September 2014</td>
<td>Taihe County holds phased (closing of locks) self-review of resettlement work</td>
<td>Compiled resettlement experiences and improved upon support planning</td>
</tr>
<tr>
<td>March 24–25, 2015</td>
<td>Ji’an City and Jiangxi Provincial Departments of Communication and Shipping hold an initial phased review of the Shihutang Navigation and Hydropower Complex project</td>
<td>All resettlement and demolition work completed; work and living conditions of relocated communities generally stable</td>
</tr>
</tbody>
</table>
Annex 2: Process Map

Problem: Despite being a major artery for inland waterway transport, the Gan River lacked sufficient capacity and could not meet development needs.

Solution: Upgrade Gan River conduits to Grade III standards to improve shipping capabilities.

Intervention: Construction of the Shihutang Navigation & Hydropower Complex focusing on improving shipping capabilities.

Delivery Challenge: To maintain the project schedule while dealing with complex needs of the resettled communities.

Implementation Strategy: Establish project management office (PMO), project coordination offices, and outsource design and monitoring agencies.

Rationale: Accurate evaluation of project impact on land and individuals to serve as a guideline for later work.


Obstacle: Conflicts over compensation, expression of demands and interests of resettled communities.

Intermediate Outcomes: Confirmation of compensation levels and resettlement sites.

Implementation Strategy: Setting of compensation levels followed by government approval; discussion of resettlement sites with government, individuals, and design agency.

Obstacle: Delayed resettlement affected project progress.

Intermediate Outcomes: Resettlement implemented in phase; demolition and relocation completed gradually.

Implementation Strategy: Increased infrastructural investment; preferential government policies to disadvantaged groups to secure support.

Outcome: Improved quality of living and working conditions for resettled communities.

Output: Expected navigation and power generation goals achieved after completion of the Shihutang Complex.

Action: Establishing system of government assistance and social support.

Intermediate Outcome: Gradual resettlement of production elements.

Implementation Strategy: Supports gradually put in place, priority given to social programs, support policies and employment.

Intermediate Outcomes: Resettlement implemented in phase; demolition and relocation completed gradually.
Annex 3: Stakeholder Map

Legend:
- Strong Professional Links or Leadership Roles
- Vertical Administrative Relationships—the point of the arrow indicates the senior level
- Weak Professional Links
- Continually Stressed Relationships
## Annex 4: List of Interviewees

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
<th>Position</th>
<th>Date of Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lisheng Yang</td>
<td>Project Management Office (PMO)</td>
<td>Deputy Director</td>
<td>November 18, 2015</td>
</tr>
<tr>
<td>Xiaodong Liu</td>
<td>PMO</td>
<td>Chief Engineer</td>
<td>November 18, 2015</td>
</tr>
<tr>
<td>Baoquan Wang</td>
<td>PMO</td>
<td>Section Chief</td>
<td>November 18, 2015</td>
</tr>
<tr>
<td>Weijia Lei</td>
<td>PMO Section 1</td>
<td>Deputy Section Chief</td>
<td>November 19, 2015</td>
</tr>
<tr>
<td>Yonghua Xie</td>
<td>PMO Section 2</td>
<td>Deputy Section Chief</td>
<td>November 20, 2015</td>
</tr>
<tr>
<td>Xulong Tu</td>
<td>PMO Section 1</td>
<td>Senior Engineer</td>
<td>November 19, 2015</td>
</tr>
<tr>
<td>Wenming Zhu</td>
<td>PMO</td>
<td>Senior Engineer</td>
<td>November 20, 2015</td>
</tr>
<tr>
<td>Huayong Li</td>
<td>PMO</td>
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</table>
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Ministry of Finance People's Republic of China

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