On 13 November 2005, an estimated 100 tons of toxic chemicals, metals, and other pollutants spilled into the Songhua River following an explosion at a petrochemical plant in Jilin Province, China. The incident affected the Heilongjiang River of the adjacent province of Heilongjiang, as it joins the Songhua River in forming a natural border with the Russian Federation. This proved detrimental to the area as initial reports presented that the concentration level of nitrobenzene exceeded the limit allowed in the surface water.[1] The government then classified the river as "not fit for public use" and acknowledged it as one of the four most polluted rivers in the People's Republic of China (PRC). This had great impact, as an estimated three million depend on the river for daily water consumption. Coupled with the onset of rapid urbanization and challenges in urban planning, management, and governance, the pollution in the Songhua River Basin posed a significant threat to the health and environment of the residents of Jilin and Heilongjiang provinces. The area houses more than 60 million people with 43 percent residing in urban areas, which have been determined to be significant zones of economic development due to the establishment of PRC's largest chemical industries in the upper areas of the Songhua River Basin (SRB).[2]

The large and still growing population had brought about an increase in the amount of pollution present in the region, as waste and other products are continuously thrown in the river. This has wrought serious and detrimental effects to the health and worsened living conditions of the residents. The various implications of water pollution on health include typhoid, cholera, paratyphoid fever, dysentery, jaundice, amoebiasis, malaria, cancer, damage to the central nervous system, and poisoning.[3]

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1 United Nations Environment Programme (2005). The Songhua River Spill: China, December 2005 Field Mission Report.

2 Asian Development Bank (2003). *Technical Assistance to the People's Republic of China for Songhua River Water Quality and Pollution Control Management.* Manila, Philippines: Asian Development Bank.

3 TheWorldCounts (2014). *How does water pollution affect humans?* Retrieved June 2016 from http://www.theworldcounts.com/stories/how-does-water-pollution-affect-humans; Woodford, C. (2016). *Water pollution: An introduction.* Retrieved June 2016 from http://www.explainthatstuff.com/waterpollution.html

This case was written by Shiela Se under the supervision of Professor Benjamin Bagadion, Jr., Asian Institute of Management. All materials are prepared solely for the purpose of class discussion. It is neither designed nor intended to illustrate the correct or incorrect management of problems or issues contained in the case.

As a significant area of development, it was important to address the heightening case of water pollution in the area as pollution has been identified as a major constraint in the sustainability of PRC's economy.

In order to oversee water use and pollution in the SRB, the Songliao Water Resources Commission (SLWRC) was established in the 1990s, which was under the supervision of the Ministry of Water Resources (MWR). Within the SLWRC, the Songliao River Basin Water Resources Protection Bureau (WRPB) was established to manage the water quality and pollution control in the Songhua and Liao River Basins. The WRPB also served as the secretariat of the Songliao Watershed Protection Leading Group (SLWPLG), the group responsible for the SRB water pollution control management and quality restoration. The SLWPLG includes Jilin, Liaoning, Heilongjiang and Inner Mongolia Autonomous Region, SLWRC, and the Bureau of Water Resources and Environmental Protection (see Annex 1).

The Songhua River Basin Water Pollution Control and Management Project[4]

As a response to the immense challenges brought about by the pollution of the Songhua River, the Songhua River Basin Water Pollution Prevention Control Master Plan (SRBPCMP) was developed jointly by the government and by the Asian Development Bank (ADB). The plan was to be included in the ADB's lending program in 2008 which subsequently led to the Songhua River Basin Water Pollution Control and Management Project (SRBWPCMP). The plan established a long term goal of improving water quality in the region from Class IV and V (not fit for public use) to Class III (lowest class safe for human consumption) as well as reducing the incidence of waterborne diseases by 2020.

With regard to area concentration, the project had two target areas: Heilongjiang and Jilin provinces. Its three components focused on the needs of each province:

1. improved and expanded water supply and wastewater services in 11 counties and cities in Heilongjiang province (13 counties and cities at completion);
2. improved and expanded wastewater facilities and solid waste management (SWM) in 15 counties and cities in Jilin province; and

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4 Asian Development Bank (2015). People's Republic of China: Songhua River Basin Water Pollution Control and Management Project (Completion Report). Manila, Philippines: Asian Development Bank

3. capacity development for all project-implementing agencies on management and tariff reform.

In addition to addressing the pollution issue of the Songhua River Basin, the project was also aimed towards an integrated water resource management in the entire SRB. Its public-private partnership (PPP) component promotes collaboration, especially with concerns regarding project funding.

Components and objectives

As part of the first component, improved and extended water supply services has been one of the project's goals in Heilongjiang province. It aimed to provide potable water through financing four water treatment plants (WTP) and 16 deep well pumping stations to four cities, namely: Fujin, Tangyuan, Tonghe, and Yanshou.

Another goal of the project's first component was to improve and expand wastewater treatment services in the region, particularly in eight cities and counties (Fangzheng, Fujin, Harbin Xinyigou District, Jiamusi East District, Nenjiang, Qiqihaer, Shuangyashan, and Tangyuan) as well as addressing water shortage through reuse in two cities (Jiamusi East District and Qitaihe). Given this, the project design's target was to construct nine wastewater treatment plants (WWTP) and two effluent reuse plants.

Meanwhile, the first major ADB investment to directly address the pollution issue in the SRB was the Jilin Water Supply and Sewerage Development Project in 2005. Continuing the advocacy in the area, plans for wastewater treatment, waste management, and river improvement were made in the Jilin province, which were included in the project's second component. With regard to pursuing the goal towards improved and expanded wastewater treatment services, eight cities and counties (Dehui, Gongzhuling, Fusong, Fuyu, Jingyu, Liuhe, Tonghua, and Yushu) were targeted with a plan to construct nine WWTPs. The goal was to have a total treatment capacity of 175,000 m3/d with 367.6 km of sewer pipelines. Also, part of the second component of the project was to improve and expand the solid waste management services of the province. Targeting 10 cities (Da'an, Fusong, Huinan, Jiaohe, Jingyu, Liuhe,

Meihekou, Tongyu, and Yushu), plans were made to construct 10 sanitary landfills with a capacity of 2,400 tons per day.

Another subcomponent of the plan was the Changbaishan integrated river improvement. This aimed to construct two WWTPs with a total capacity of 3,100 m3/d, 17.26 km of sewer pipelines, and three solid waste transfer stations with a capacity of 40 t/d.

Lastly, capacity development training for implementing agencies was provided in order to guide the overall implementation of the project. Among the topics and subjects were project management and construction supervision, management information system and project performance, strategy preparation with a time-bound action plan, financial management and financing modalities, improvement of operations and maintenance (O&M), and monitoring and reporting, including compliance with ADB's plans and policies.

Major stakeholders

Major stakeholders involved in the project were the ADB, the PRC national government, Heilongjiang and Jilin provincial governments, municipal units, implementing agencies, and the communities around the Songhua River Basin.

The ADB has had a longstanding partnership with the Heilongjiang and Jilin provincial governments, with relations dating back to as early as 1999. In 2005, the ADB assisted the government in devising a long-term water pollution control plan through a technical assistance (TA) project. The SRB project being a key component of this partnership, the ADB accounted for a total of USD195.42M (45.96%) of the USD425.21M total project cost. The TA has also helped develop a strategic plan for pollution control and water resource management of the SRB from previous plans and included a 15-year investment program, both of which were included in the project design.

The PRC national government was responsible for the design of the project, which was developed with the support of prior technical assistance projects with ADB. With the goal of addressing the challenges of pollution in the SRB, the SRBPCMP was developed and subsequently approved by the State Council in March 2006. This was formulated in line with the

PRC's strategy of reinforcing environmental improvement and pollution control as outlined in the Twelfth Five-Year Plan (2011-2015).

Heilongjiang and Jilin provinces, on the other hand, were the provinces mainly affected by the Songhua River situation. With these provinces relying heavily on the river's water supply, the government was primarily responsible for developing and implementing projects for its residents. As such, the provincial governments of Heilongjiang and Jilin were appointed as executing agencies (EA) of the project, forming a project leading group (PLG) headed by the governor. The PLG then provided guidance during project implementation, coordinating the various relations among relevant government agencies.

Meanwhile, a project management office (PMO) was also established under each EA to serve as the secretariat of their respective PLGs. They were primarily responsible for coordination among departments, agencies involved, and the ADB. PMOs were mostly in charge of specific affairs, including the implementation of environment management plans (EMP), and publication of annual internal environment monitoring reports. They were also tasked to recruit external monitors as well as consult design institutes and companies to aid in design, construction supervision, and resettlement monitoring. In addition, it was also part of the PMO's tasks to hire consultants for the capacity-building of implementing agencies, in aspects such as environmental and construction management.

Municipal units such as the health and environmental protection bureaus were engaged chiefly in the social aspects of the project. Issues such as labor, gender, environment, sanitation, and other community-based activities were handled through each subproject's respective municipality. Municipal units also played major roles in addressing concerns in tariff adjustments and in implementing the land acquisition and resettlement (LAR) process in several project areas.

In the case of the private sector, Tongfang (Harbin) Water Engineering Co., Ltd. (TVVE) was identified by ADB to be the private sector vehicle to contribute in the execution of the SRBWPCMP. TVVE is a company based in Harbin, Heilongjiang province and is the primary investee and borrower company in the project. Established in 2004 for Tsinghua Tongfang Co., Ltd.'s (TTC) largest sanitation investment, TVVE undertook tasks defined in the SRBPCMP

according to its understanding with the Heilongjiang government. From ADB's financing, TVVE was responsible for the water supply and wastewater treatment subprojects in the SRB such as its rehabilitation, expansion, upgrade, privatization, and general operations.

Under TVVE, thirty-one (31) implementing agencies were contracted to handle the 31 subprojects across Jilin and Heilongjiang. The implementing agencies were responsible for day-to-day subproject implementation, i.e. construction, operations, and maintenance of the intended facility (water supply, wastewater treatment or solid waste management). Through funding from the ADB and assistance from the provincial government and PMOs, implementing agencies were trained not only in technical and financial operations but also in ADB policies and procedures.

Current situation of the Songhua River Basin and other impacts

In a preliminary assessment, the project received a rating of most likely to be sustainable. This is due to a sound project design, facilities built, efficient implementation, effective capacity building and training, as well as the project's long- term benefits to the population. Positive support was also provided by its beneficiaries, better ensuring the likelihood of sustainability.

The public-private partnerships established in the program for the Songhua River Basin has indeed improved the welfare of the region abundantly. Together with the government, the private sector has been viewed as a catalyst for economic growth and environmental improvement in the region by helping implement projects such as the SRBWPCMP.

Funding is needed in order to deliver basic services efficiently, and one identified role of the private shareholders is to provide financial assistance to these kinds of projects. Supplementing the funds from the national and local government, the assistance brought about by these private institutions has helped realize the entire project, from conception down to implementation and its sustainability.

The project has proved to be a resource mobilization model in environment protection as careful planning and execution have been done in order for it to succeed. With ADB's related operations, the project has seen the mobilization of other bodies and units such as the domestic

private sector, international governments, and foreign investors that may work together to realize the environmental goals of the project.

Initial outcomes and impacts have shown the effectivity of this approach in such programs; for example, actively addressing the needs of the community with regards to pollution and water supply sanitation. With the establishment of the facilities done as part of the project, the increase in the coverage of wastewater treatment as well as the supply of potable water was achieved. Pollution control in the SRB has also become better due to the efficiency of the project design. An increase in sanitary and improved water supply was effectively and efficiently delivered to the program's target regions. The project has had great impacts on the urban environment and general health of the public, as well as the urban residents' overall quality of life within the region.

Being readily exposed to the hazards of pollution, poor residents are most affected by pollution mainly through different kinds of waterborne diseases. This becomes detrimental more so due to increased medical costs that those in poverty cannot afford. This has been lessened by the improved wastewater treatments brought about by the project. Productivity has also increased due to better health conditions, which has resulted in lower annual health expenditures and lost income on sick days.

The project has provided jobs to 13,000 people. In addition to this, vegetable sheds and pig farms were created from converted lands. Shops and restaurants were also created from the land acquisition and resettlement (LAR) compensation as the affected villages were located in suburban areas; hence, the need for non-agricultural jobs. In line with this, free skills training programs were provided for capacity building according to labor market demands. Furthermore, the project has also contributed greatly to the economic growth of the region. First, jobs were provided for a large percentage of the region's population. Increase in the industry's savings was also made possible because there was no longer a pressing need to treat polluted water; this in turn served to improve the quality of industrial products. The project also helped address water shortages, issues on water procurement, and reduction in unaccounted-for water (footnote 4).

While a large number of residents were affected due to the project's land acquisition processes, implementing agencies reported that these were done under laws and policies concerning land acquisition. Relocation was accomplished and concerned persons were given the choice between full monetary compensation or part monetary compensation and land area for house construction. Reports have shown that majority chose the latter. Also, there were no grievances reported and residents were also satisfied with the compensation that the project provided (footnote 4).

Higher tariff structures were imposed in order to achieve the amount needed to repay the loan funded by ADB and ensure sustainability. With this, the local and national governments, together with the private sector, have a significant role in maintaining the program's sustainability. Effective management and administration highly depend on the partnership between these bodies, which in turn would lead the community to embrace the ownership of these water supply and wastewater management facilities that have been established in the SRB region. Also, as it is determined to be beneficial to both the private and public sectors, the project encourages the idea of possible similar pollution control and waste management programs, not just in the region, but in other provinces as well.

From the project point of view, the ADB-SRBWPCMP was highly successful overall. Implementation was carried out smoothly and on time, with only a few changes in scope and a 98% disbursement rate (see Annex 2). While disbursement was initially slow due to the LAR issues and project design changes, this gradually accelerated as a result of the timely fund release from PMOs and the ADB. Moreover, the project was also an essential component of the government's sector and development strategies, being part of ongoing environmental programs in the region rather than a stand-alone investment. With regard to project costs and economic returns, the final report has indicated a minimal cost increase from appraisal to completion (see Annex 3). Regulations have also been made in order to pave way for all areas' full cost recovery.

Success of the ADB SRBWPCMP

What has contributed to the success of the Songhua River Basin Water Pollution Control and Management Project? Arnaud Heckmann,[5] urban development specialist at the East Asia Department of the Asian Development Bank, shares that the success of the project can be attributed to several factors, the most important of which was the active engagement and commitment of all stakeholders involved in the project.

ADB's early involvement

Since the early stages of the project, Heckmann recounts that there was tactful engagement among stakeholders, both in the sovereign and non-sovereign sectors. He notes that a strong directive at the top level (i.e., the government) and commitment at the bottom (i.e., the private sectors and residents) was an effective combination throughout the course of the project. Accordingly, this seamless interaction between stakeholders was a product of early action and careful planning. As previously mentioned, the ADB has had longstanding relations with the provincial governments of Heilongjiang and Jilin. Since 1999, even before the benzene spill, the ADB had participated in a policy dialogue with both governments regarding the rehabilitation of the Songhua River. At around the same time, similar projects on wastewater management were launched in China.[6] After these projects proved successful, in 2002, the PRC requested advisory TA for the cleanup of the Songhua River basin, leading to various projects for the Songhua River Basin rehabilitation.

One of the immediate objectives in this TA was to assist the Chinese government and its assigned agency, the WRPB, in the development of basin-wide regulatory enforcement, executing mechanisms, and short- to long-term pollution control plans. This involved a series of studies and surveys that were aimed at bridging technical knowledge gaps and

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5 Mr. Heckmann has worked on a number of the ADB's urban development and technical assistance projects in the PRC and Mongolia. Previously, he worked with several international organizations on projects concerning urban and regional infrastructure design and planning as well as development scenarios formulation. He obtained his master's degree in comparative development research from EHESS (School of Higher Studies in Social Science) and master's degree in human geography from Toulouse University, both in France. He also holds a diploma in Chinese language and culture from Paris University.

6 Asian Development Bank (n.d.). Combatting Pollution in Songhua River Basin, an EARD-PSOD Collaborative Approach (Progress Report Presentation).

building the capacity of the WRPB in terms of development and management of an integrated water quality and pollution control plan. Furthermore, the TA was also aimed at developing dissemination mechanisms to inform and educate the public on the adverse effects of water pollution and the benefits of water protection. This initial cooperation with key stakeholders in the sovereign sector from more than 10 years ago ignited synergy across the ADB, the provincial and local governments, and other relevant public agencies to work on the current project on Songhua River.

To jumpstart the SRBWPCMP, the ADB and the government cooperated once again to study the river's main sources of pollution, the cities primarily affected, and the institutional policies surrounding the SRB problem. Plans that were previously developed by different institutions under the initial TA were integrated into the current project design. Cities with high commitment and ownership were identified to host the subprojects.

Top-down management approach

Following this initial assessment, the overall strategy and main objectives of the project were identified and discussed thoroughly with the national and regional government. This led to the development of the SRBPCMP approved in March 2006. Once this was established, the goal was to endorse the strategy and objectives down to provincial, prefectural, and city governments until to the residents' level. This was done in order to forge ownership of the project, not just at the level of government but at the level of the people who will be affected both in the process and after completion of the project. Several public consultations were carried out during the course of the project to address not only environmental impact issues but also social issues such as land acquisition and resettlement.

Heckmann remarks that this top-down approach was meant to elicit a strong level of commitment and engagement from public stakeholders, so that the issue was a top priority in terms of local development. He added that democratic centralism in China has somehow helped facilitate the process of engagement amongst regional, provincial, and city governments. Due to the hierarchical nature of the administration system, there is a strong incentive at the lower levels of government to implement the overall strategy.

This coordination between stakeholders is considered the most important contributing factor for project implementation success. Essential to this, Heckmann adds, are communication, protection of all interests, and the mobilization of the enthusiasm of all parties involved.

Clear, organized public-private structure

Aside from the nature of governance in China, Heckmann cites that the success of stakeholder engagement can largely be attributed to the detailed structure and organized roles of both sovereign and non-sovereign stakeholders.

The implementation arrangements were primarily executed by the provincial governments of Jilin and Heilongjiang. As previously mentioned, a project leading group (PLG) and project management office (PMO) were established under each government to provide guidance and monitor coordination, respectively. The PLG comprised the heads of the province's finance department, housing and urban-rural development department, land and water resources departments, and the development and reform commission. Heckmann remarks that the finance department and reform commission were especially strongly coordinated, with continuous communication between the two agencies and representatives always present at meetings. This steady coordination between key agencies greatly helped in providing guidance during implementation of the project.

Meanwhile, the monitoring of project implementation on a day-to-day basis was successfully carried out by PMOs under the leadership of the provincial development and reform commissions. PMOs were established not just at provincial level but also in cities and counties. According to one of ADB's consultants on the project, the participation of local offices related to poverty alleviation, audit, disciplinary supervision, and women's groups were also usually requested whenever possible. This allowed for a more holistic approach to project implementation.

The establishment of this intricate, carefully planned structure from the beginning of the project was instrumental in ensuring the tight and consistent coordination between the relevant public and private agencies. In the evaluation of the performance of key stakeholders in the project, it was acknowledged that both the Jilin and Heilongjiang provincial governments showed

steadfast engagement with the project, and their respective PMOs handled project implementation issues well. The PMOs were also quick to learn ADB procedures and regulations.

Heckmann observes that with regard to the private sector, private companies were now starting to play bigger roles in China. Although the project relied chiefly on the sovereign sector for the most part, there was active participation from private companies not just in terms of financing but also in operations. The successful dialogue on cost recovery and tariff reforms between ADB and the government, coupled with the previous TA's preparation on national water and wastewater tariff regulations, contributed to an enabling environment for private sector participation. In turn, private companies also played a critical role in preparing the market conditions to regulate the increase in tariffs following completion of subprojects. Moreover, private sector participation also facilitated the inauguration of the Longjiang Environmental Protection Share Company (LJEP) which helped achieve many of the SRB pollution control objectives, its establishment being closely related to infrastructure program at the municipal and provincial level. Private sector selection in the project was heavily influenced by the ADB East Asia Regional Department (EARD)'s previous interventions on the Songhua River. As with the cities selected to invest in subprojects, private companies that showed high commitment to the project were chosen. The project also saw that the private sector was closely aligned with the overall urban development and natural resources strategy, so that they responded well to demands of the local governments.

The creation of LJEP showed the best practices of private sector involvement in the PRC, and remains a model project recognized by the Private Sector Operations Department (PSOD) of the ADB. The company has carried out ADB's social and environmental safeguards in its corporate policies and in turn, the project has successfully supported the expansion of LJEP to build, rehabilitate, and operate WWTPs and urban water supply networks in the SRB. Through ADB's assistance, LJEP has also expanded into the treatment and disposal of sludge (wastewater treatment byproduct) in its processing plant in the city of Harbin, the first of its kind in Heilongjiang province. The project has also managed to bring in third-party investments for LJEP to support its emergence as the leading wastewater treatment provider in the province. In

addition, ADB has signed up two foreign banks, the Korea Exchange Bank and Natixis in France, to participate in the project.[7]

Heckmann explains that the interaction between the sovereign and non- sovereign sectors of the project was deemed successful because it followed an upstream design structure. Owing to the strategy decided from the initial assessment, it was made clear what the needs were in each of the identified cities and what investments and efforts were expected from the stakeholders. This clearly outlined roadmap allowed the two sectors to coordinate well. Particularly, the combined efforts of PLGs, PMOs, and implementing agencies in a three-tier implementation framework ensured sufficient control over implementation of the project. Aside from the structure itself, there was also adequate definition of the roles, responsibilities, and relationships among the relevant agencies, so that all aspects of the project including institutional arrangements in the case of environment management and LAR were carried out effectively and with minimal to no delays.

Public stakeholder engagement

Finally, aside from ensuring the strong coordination between the public and private sectors, the project was also successful because it aimed to engage all stakeholders including the residents affected by the project. With a large scope of 28 cities across two provinces, it was not an easy feat to inform and engage the millions of affected residents who are ultimately the primary beneficiaries of the project. Overall, however, the project was successful in this endeavor as the residents later surveyed expressed satisfaction with the improvements brought about by the project.

The public was largely involved in assessments of environmental impact, being the foremost stakeholders to experience changes in the environment during and after implementation of the project. Environmental concerns during construction and in project design were also two of the major public issues Heckmann identifies. As such, the public was chiefly engaged in the preparation of EMPs. Public opinion surveys for each subproject were conducted during preparation of domestic environmental impact assessments (EIA). These were also done again

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7 Asian Development Bank (2015). *SRB Private Sector Project Brief May 2015.* Manila, Philippines: Asian Development Bank.

in the years 2011-2015 to assess the construction and operation subcomponents of the project. Results of the surveys were documented in the annual environmental monitoring reports.

Several rounds of public consultation with participants from all relevant agencies and local communities in both provinces were also conducted in 2008 and 2012 to discuss issues such as effectiveness of mitigation measures. Techniques such as focused group discussions, surveys, and casual interviews were used to gather residents' opinions on the different aspects of the project. Overall, more than 4,000 public consultations were made over the course of the project. Furthermore, local communities were adequately consulted during construction, trials, and operation. Comments and suggestions were solicited to improve EMPs. Since several subprojects are located in scenic areas, the environmental impact was fully considered and minimized as much as possible in the scheme design. Environmental recovery was also emphasized after project completion.

To ensure transparency, public information display boards were posted at construction sites, stating the subproject, the implementing agency, and contractor involved. These boards also provided contact numbers, so that local communities could lodge any grievances immediately (see Annex 4). These and any queries or concerns could be filed through the local environmental protection bureau website during the course of construction.

In addition, to sustain the benefits of pollution control and management in local communities, the project also sought to strengthen environmental and sanitation awareness among project area residents. With the support of the government, public environmental awareness and health education programs were held in each project county and city. PMOs assisted the executing agency and PIAs in the design and implementation of public environment and hygiene education awareness programs by engaging several public environment and hygiene awareness specialists. Lectures, performances, posters, brochures, mass media, and other means were used to educate the public on these issues. Through these campaigns, the number of people that participated in dialogues gradually increased between 2009-2012. This positively affected project activities and results.

Aside from the environmental component, the general public was also consulted with regard to tariff standards and adjustments so that they were well- informed of any increase in tariffs and

could raise any concerns regarding this aspect. PIAs held discussions on wastewater tariff standards and solid waste tariff on an average frequency of twice a year. The local government developed policies and provided subsidies for poor households who unable to pay the tariff adjustments.

Lastly, the project also made sure to consult local communities in one of the most important issues involving the public, that of land acquisition and resettlement (LAR). The project attempted to minimize the impacts of LAR by acquiring arable land and avoiding residential areas where power plants and telecommunication lines were already in place.[8] However, due to the nature of the civil works needed, land acquisition became an inevitable component of the project. Whether the affected households had to turn over all or part of their land for the project, LAR had a significant social impact on the lives of affected residents. These include displacement of residence, loss of income and/or livelihood. In order to mitigate such impacts, several measures were taken in cooperation with relevant agencies to ensure that the living standards of affected persons (APs) would not be adversely affected.

In July 2008, before the start of any resettlement or land acquisition programs, resettlement information booklets were distributed to affected residents. These contained information on the project and proposed policies for resettlement. Through several consultation meetings, policies regarding compensation rates, delivery, and income rehabilitation programs were discussed with affected households and their needs and suggestions were included in the formulation of resettlement plans. Issues that were frequently raised during the consultations include compensation adequacy and options (i.e., cash vs. housing), resettlement options (e.g., government- sponsored resettlement housing vs. self-construction), post-resettlement livelihood rehabilitation, and the timing of compensation delivery. According to the policy, the grassroots government, which includes the city/district resettlement office, was in constant communication with the project implementation units and neighborhood committees to provide practical assistance to people affected by the project. For instance, for communities where relocation was needed, the neighborhood (village) committee provided assistance in community mobilization and the relocation process. The selection of relocation sites, distribution and utilization of community compensation funds, and design of relocation houses were discussed

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8 Mudanjiang Water Affairs Bureau (2012). *Mudanjiang Urban Wastewater Treatment Plant Phase II and Intercepting Drainage Pipeline Network Resettlement Plan*. Manila, Philippines: Asian Development Bank

with those affected. The committee also provided effective employment information to help improve income levels especially for those areas where production recovery was needed. Furthermore, on-site resettlement offices were established to enable quick responses to questions and requests.

Aside from the compensation for land expropriation, training and employment opportunities were introduced to help the AP's revenue recovery. Most of the affected people were able to benefit from many local employment opportunities. Property rights transfer, monetary compensation, or a combination of both was applied to urban residents affected by the housing relocation, while the reallocation of homestead to build a new house was applied to those in the rural areas.

As the APs were affected in different ways by LAR activities, the measures varied greatly from simply providing cash compensation for lost farmland to organizing training sessions to enable APs to move into other types of work. In cases where the affected households needed to change livelihoods, opportunities were provided by the PMO to secure their livelihood recovery and income rehabilitation. For example, in the case of Tonghua County in Jilin Province, there were three village groups affected, with one vulnerable household. After consultation with the APs, compensation for green crops that were lost as a result of land acquisition were paid directly to the affected members. Cash compensation for lost farmland was also provided, with residents agreeing to allocate 40 percent of the funds to the village collective. The fund would then be used for improvement of village infrastructure and further assistance to vulnerable households. During follow-up consultations, the APs remarked that they could use the cash compensation to supplement their daily expenses, and some expressed interest in using the money to invest in other sources of income complementary to farming such as animal husbandry, greenhouse, and vegetable and herb plantations. Some female household members, meanwhile, were interested in migrant work such as housekeeping. To support the APs in their aspirations for income improvement, the PMO arranged the necessary training needed in cooperation with relevant local agencies such as departments of labor and social security, finance, science and technology, and education. More than 500 people, including 127 females, were included in the training. At project completion, when land temporarily occupied for

construction was cleared and turned over back to the village, land readjustment was made and the land was equally redistributed to all three village groups affected.[9]

Vulnerable households, which include those with low income, persons with disabilities, and elderly persons, were also given special attention. A more thorough consultative process was employed after these households were identified at the beginning of resettlement. In Tonghua County, there was one vulnerable household affected by land acquisition, with their head of family constantly ill. Since the two children of the household would have graduated middle school at the time of plant completion, they were offered full-time jobs at the wastewater plant with an average monthly salary offer of CNY900 (approximately USD 137).[10]

Meanwhile, in Heilongjiang's Mudanjiang City, APs were not hesitant to give up farmland due to the low income they received from farming. Instead, their concerns were more on fair compensation and timely payment, which were addressed properly by the project. During the consultations, APs conveyed their interest in investing in small businesses after receiving the cash compensations. These businesses include catering and food service, beauty salons, waste collection, grocery stores, pharmacies, and transport/logistics. In order to make sure that APs would be able to invest their money properly and improve income, an analysis was done on the annual predicted gross and net incomes of the AP's choice of livelihood recovery measures. The livelihood choices of APs needed to be consistent with the current features and labor market requirements of their local economy. Based on this analysis, the compensation was more than enough for them to invest in new businesses and the predicted net income was greater than their previous income from farming. To ensure success in their choice of business, practical training was also provided for APs in Mudanjiang City, as with those in Tonghua County (footnote 8).

During project construction when APs had just relocated and were awaiting delivery of compensation, temporary job opportunities at the construction site were offered to the affected villagers. Jobs included greening and maintenance, WWTP operation and maintenance, security, and logistics. Qualified residents were hired and/or given on-the-job training. Moreover,

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9 Tonghua County Water Supply Company (2008). PRC: Songhua River Basin Water Pollution Control and Management Project - Tonghua County Wastewater Treatment Project Resettlement Planning Document. Manila, Philippines: Asian Development Bank.
10 Ibid.

setup of grocery pavilions to provide food, beverage, and other necessities for workers were also permitted and those with their own additional structures were allowed to provide the space to the contractor to serve as offices or workers' living spaces. These activities were carried out through the coordination of the PMOs with the district government, vocational education department, and village committees, including women's groups.

In some cities like Yushu City in Jilin, it had been agreed upon in consultation meetings that social insurance would be available for those who will lose ⅔ of their farmland. In cooperation with the state and village cooperatives, affected farmers could make individual and collective contributions to their pension programs. Furthermore, since most of the APs in the city preferred to continue farming with only a few moving to migrant work sectors, a land rehabilitation option was reserved for some of the affected households that might change their minds later on, since the city's Lixin Village had about 231 mu (15.4 ha)[11] of village reserve land available for rehabilitation. Nevertheless, training was still provided for those who opted to work in other sectors such as animal husbandry and small businesses. Housekeeping and laundry service training were also targeted towards female villagers to help them further contribute to the family income.[12]

Meanwhile, there were also other cities such as Jilin's Gonzhuling City, where there was only one household that was directly affected by land acquisition. The head of the affected household, a farmer named Zhang Min, operated a grain/oil processing plant in addition to corn farming. Mr. Zhang leased land from the village and was on the third year of his 10-year lease. Since 82% of his leased land was to be permanently acquired for the project, an income loss of 14.8% was calculated. The household was amenable to the proposed cash compensation for the crops, 10-year lease contract, and other impacts. The compensation was planned to be used by Mr. Zhang to move into pig farming. Since Mr. Zhang had prior experience in pig farming, no additional training was required. Moreover, as the acquired land was being leased from the village, compensation was also given to the affected village committee. Quingquan

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11 mu is a Chinese unit of measurement. 1 mu = 0.067 ha
12 Yushu Project Management Office (2008). PRC: Songhua River Basin Water Pollution Control and Management Project – Yushu City Wastewater and Solid Waste Treatment Project Resettlement Planning Document. Manila, Philippines: Asian Development Bank.

Village planned to utilize the compensation to build a feed factory, which was expected to bring more job opportunities to villagers and usher in economic development.[13]

Accordingly, the most challenging aspect of LAR was the search for the best locations and the right timing for consultations. Locations had to be close to the target participants and the timing had to be convenient for the residents to be encouraged to join in the discussions.

Bridging gaps between ADB and PRC policies

With regard to the gaps between ADB and PRC policies, no major differences were present except on procedure policies and the determination of compensation rates. PRC policies do not necessarily require resettlement plans during the project proposal stage and there were no requirements for a specific office to handle resettlement affairs. However, from the point of view of ADB, LAR is unlikely to be successful without a thorough resettlement plan. These gaps were addressed by training and coaching implementing agency staff to take into account both ADB and PRC policies on resettlement (footnote 9). Policies on disclosure and transparency were also not included in local laws but ADB pushed through with its policy after consulting with government (footnote 8).

In terms of the compensation rate, this was usually determined by local government based on market value as per PRC policy. In the case of ADB, however, compensation is usually determined based on replacement value. This gap was gradually realigned following a series of dialogues with central government. Additionally, in order to make sure that compensation was fair and conformed to the usual standards, ADB ensured the inclusion of compensation rates in the discussions with APs. Implementing agencies and resettlement offices were again coached to ensure that people understood the policies, standards, and procedures of LAR. Grievance mechanism procedures were also improved so that any complaints could be addressed properly.

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13 Jilin Provincial Guoding Municipal Engineering Group Corporation (2008). PRC: Songhua River Basin Water Pollution Control and Management Project – Gongzhuling City Fanjiatun Urban Wastewater Treatment Project Resettlement Planning Document. Manila, Philippines: Asian Development Bank.

.As a result of these proactive efforts to engage the public, no major grievances were reported during implementation and the minor concerns that were raised were addressed quickly. For instance, during the course of implementation, APs voiced out concerns regarding their preference that the implementing agency acquire small non- agricultural pieces of land. This concern was reportedly well addressed. Independent reports from external monitors also revealed that APs were generally satisfied with procedures and compensation, noting that the project achieved the primary objective of improving the affected persons' living standards after relocation (footnote 4).

Outputs and outcomes of the SRB project

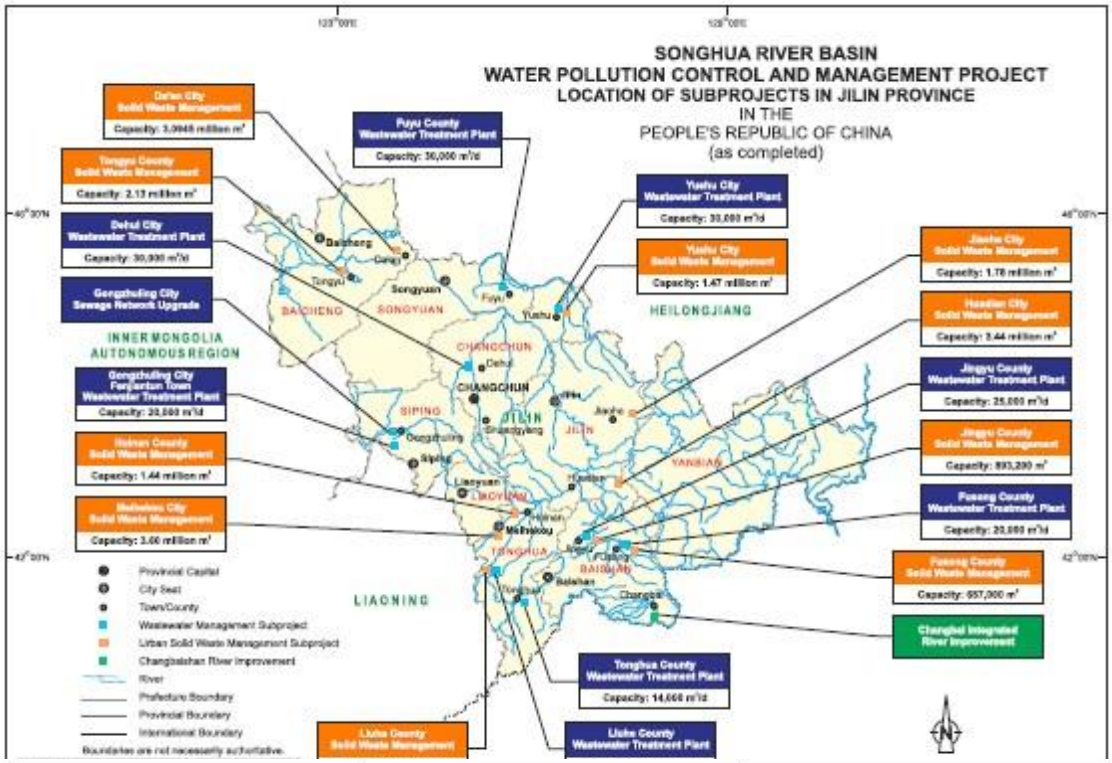
Various objectives and outputs of the SRB project were achieved in both the Heilongjiang and Jilin provinces. The completion of the project components meant the construction of deep well pumping stations, better sewerage systems, WWTPs, WTPs, and water treatment and distribution facilities which led to increased access to potable water for the residents of these provinces. These were also key in addressing the water supply and overall water problems in the SRB, serving more than 200,000 residents during its first months of operation. In addition to this, the completion of the Changbaishan integrated river improvement reformed solid waste transfers and systems, serving an estimated 55,000 people in the area.

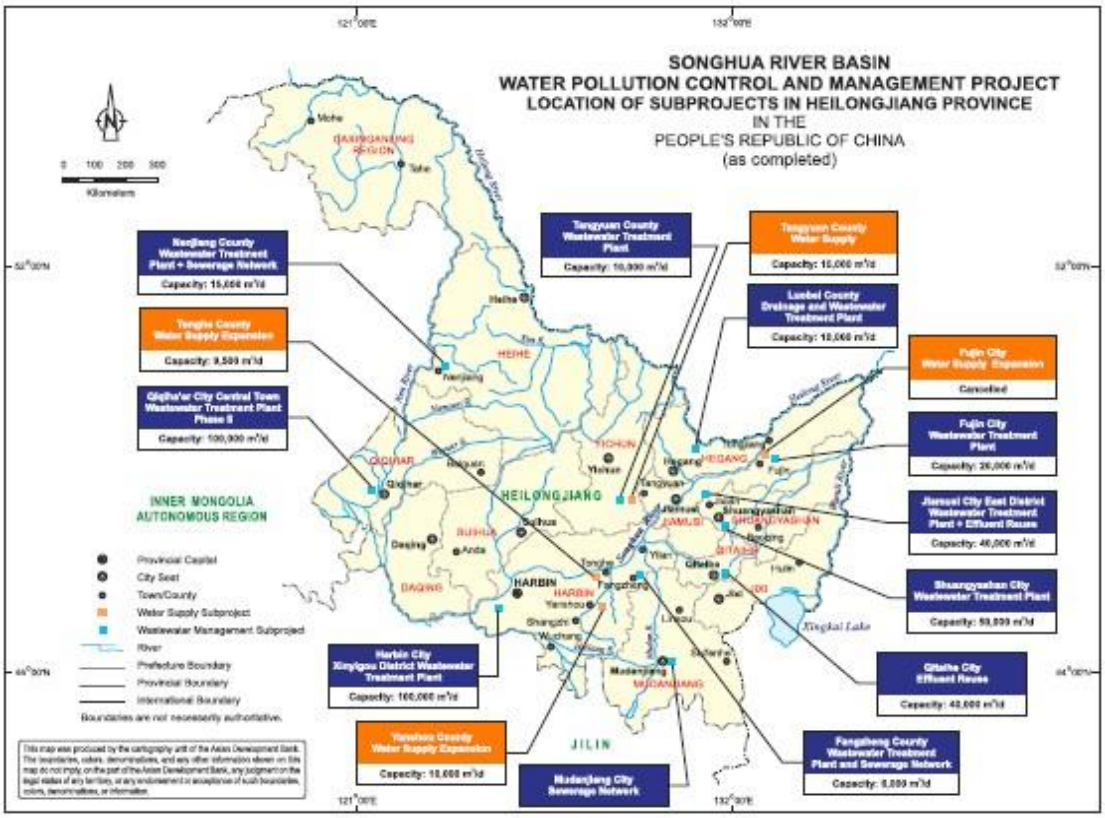
Overall, external monitors rated the project effective and highly efficient, having achieved intended outcomes and objectives in water treatment, supply, and project sustainability. Significant benefits to society, including general improvement of water supply and conditions, better public health, and reduction of surface water pollution, were achieved at project completion. Furthermore, the increase in access to potable water contributed to Millennium Development Goal 7 (Environmental Sustainability) and to the government's effort in controlling the severe water and environmental pollution in the SRB.

Annex 1

Location map of SRBWPCMP project and subprojects

Source: Songhua River Basin Water Pollution Control and Management Project Completion Report (ADB, 2015)





Source: Songhua River Basin Water Pollution Control and Management Project Completion Report (ADB, 2015)

Annex 2

Disbursement table

Year	Quarter	Quarterly Disbursement ($ million)	Cumulative Disbursement ($ million)	Percentage Disbursed (%)
2009	IV	3.10	3.10	1.6
2010	I	0.70	3.80	1.9
	II	4.70	8.50	4.3
	III	9.41	17.91	9.2
	IV	13.74	31.65	16.2
2011	I	16.41	48.05	24.6
	II	11.48	59.54	30.5
	III	9.03	68.56	35.1
	IV	19.96	88.52	45.3
2012	I	9.15	97.67	50.0
	II	12.35	110.02	56.3
	III	10.83	120.85	61.8
	IV	11.62	132.47	67.8
2013	I	4.68	137.15	70.2
	II	5.26	142.40	72.9
	III	7.85	150.26	76.9
	IV	13.88	164.14	84.0
2014	I	1.95	166.08	85.0
	II	8.55	174.64	89.4
	III	12.68	187.32	95.9
	IV	8.10	195.42	100.0
Total		**195.42**		

Note: Numbers may not sum precisely because of rounding.
Source: Asian Development Bank and Heilongjiang and Jilin provincial governments.

Source: Songhua River Basin Water Pollution Control and Management Project Completion Report (ADB, 2015)

Annex 3

Project costs

PROJECT COST AND FINANCING PLAN

Item	Appraisal: Asian Development Bank Amt.	%	State Bonds Amt.	%	Appraisal: Local Gov't Equity, Domestic Banks and Tariffs Amt.	%	Private Sector Equity Amt.	%	Total Amt.	%	Actual: Asian Development Bank Amt.	%	State Bonds Amt.	%	Actual: Local Gov't Equity, Domestic Banks and Tariffs Amt.	%	Private Sector Equity Amt.	%	Total Amt.	%
A Heilongjiang Component																				
Water Supply																				
Civil works	0.63	30.36	1.45	69.64	0.00	0.00	0.00	0.00	2.09	100.00	3.54	6.49	1.80	3.31	49.19	90.21	0.00	0.00	54.52	100.00
Survey and design	0.00	0.00	2.51	100.00	0.00	0.00	0.00	0.00	2.51	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Equipment	11.46	81.62	0.03	0.21	2.55	18.16	0.00	0.00	14.04	100.00	4.78	100.00	0.00	0.00	0.00	0.00	0.00	0.00	4.78	100.00
Land acquisition and resettlement	0.00	0.00	0.00	0.00	0.71	100.00	0.00	0.00	0.71	100.00	0.00	0.00	0.44	100.00	0.00	0.00	0.00	0.00	0.44	100.00
Subtotal	**12.09**	**62.51**	**3.99**	**20.64**	**3.26**	**16.85**	**0.00**	**0.00**	**19.35**	**100.00**	**8.32**	**13.92**	**2.24**	**3.75**	**49.19**	**82.33**	**0.00**	**0.00**	**59.74**	**100.00**
Wastewater Treatment																				
Civil works	12.15	26.91	32.71	72.45	0.29	0.64	0.00	0.00	45.15	100.00	45.35	43.23	0.00	0.00	59.54	56.77	0.00	0.00	104.89	100.00
Survey and design	0.00	0.00	2.69	22.64	8.68	73.06	0.51	4.29	11.88	100.00	0.00	0.00	0.00	0.00	0.00	0.00	6.61	100.00	6.61	100.00
Equipment	63.79	89.08	7.03	9.82	0.00	0.00	0.79	1.10	71.61	100.00	39.91	100.00	0.00	0.00	0.00	0.00	0.00	0.00	39.91	100.00
Land acquisition and resettlement	0.00	0.00	0.00	0.00	3.88	100.00	0.00	0.00	3.88	100.00	0.00	0.00	13.43	100.00	0.00	0.00	0.00	0.00	13.43	100.00
Subtotal	**75.94**	**57.31**	**42.42**	**32.01**	**12.85**	**9.70**	**1.30**	**0.98**	**132.51**	**100.00**	**85.26**	**51.72**	**13.43**	**8.15**	**59.54**	**36.12**	**6.61**	**4.01**	**164.84**	**100.00**
B Jilin Component																				
Wastewater Treatment																				
Civil works	13.16	40.39	14.17	43.49	5.25	16.11	0.00	0.00	32.58	100.00	22.79	48.04	18.86	39.76	5.78	12.19	0.00	0.00	47.43	100.00
Survey and design	0.00	0.00	5.57	100.00	0.00	0.00	0.00	0.00	5.57	100.00	0.00	0.00	0.00	0.00	6.87	100.00	0.00	0.00	6.87	100.00
Equipment	27.07	81.91	0.00	0.00	5.98	18.09	0.00	0.00	33.05	100.00	18.08	65.01	7.68	27.60	2.05	7.39	0.00	0.00	27.81	100.00
Land acquisition and resettlement	0.00	0.00	0.00	0.00	3.50	100.00	0.00	0.00	3.50	100.00	0.00	0.00	2.95	40.61	4.32	59.39	0.00	0.00	7.27	100.00
Subtotal	**40.23**	**53.86**	**19.74**	**26.43**	**14.72**	**19.71**	**0.00**	**0.00**	**74.70**	**100.00**	**40.87**	**45.72**	**29.49**	**33.00**	**19.02**	**21.28**	**0.00**	**0.00**	**89.39**	**100.00**

Item	Appraisal: Asian Development Bank Amt.	%	State Bonds Amt.	%	Appraisal: Local Gov't Equity, Domestic Banks and Tariffs Amt.	%	Private Sector Equity Amt.	%	Total Amt.	%	Actual: Asian Development Bank Amt.	%	State Bonds Amt.	%	Actual: Local Gov't Equity, Domestic Banks and Tariffs Amt.	%	Private Sector Equity Amt.	%	Total Amt.	%
Solid Waste Management																				
Civil works	20.54	58.35	0.00	0.00	14.66	41.65	0.00	0.00	35.20	100.00	20.65	48.32	11.45	26.79	10.64	24.89	0.00	0.00	42.73	100.00
Survey and design	0.00	0.00	0.00	0.00	6.15	100.00	0.00	0.00	6.15	100.00	0.00	0.00	0.00	0.00	8.05	100.00	0.00	0.00	8.05	100.00
Equipment	19.27	100.00	0.00	0.00	0.00	0.00	0.00	0.00	19.27	100.00	30.54	98.16	0.57	1.84	0.00	0.00	0.00	0.00	31.11	100.00
Land acquisition and resettlement	0.00	0.00	0.00	0.00	13.24	100.00	0.00	0.00	13.24	100.00	0.00	0.00	3.01	20.39	11.74	79.61	0.00	0.00	14.74	100.00
Subtotal	**39.81**	**53.90**	**0.00**	**0.00**	**34.05**	**46.10**	**0.00**	**0.00**	**73.86**	**100.00**	**51.19**	**52.97**	**15.02**	**15.55**	**30.42**	**31.48**	**0.00**	**0.00**	**96.63**	**100.00**
Integrated River Improvement																				
Civil works	0.47	21.36	0.00	0.00	1.73	78.64	0.00	0.00	2.20	100.00	2.85	55.66	0.00	0.00	2.27	44.34	0.00	0.00	5.12	100.00
Survey and design	0.00	0.00	0.00	0.00	0.71	100.00	0.00	0.00	0.71	100.00	0.00	0.00	0.00	0.00	0.93	100.00	0.00	0.00	0.93	100.00
Equipment	3.76	80.00	0.00	0.00	0.94	20.00	0.00	0.00	4.70	100.00	1.87	61.31	0.00	0.00	1.18	38.69	0.00	0.00	3.05	100.00
Land acquisition and resettlement	0.00	0.00	0.00	0.00	0.19	100.00	0.00	0.00	0.19	100.00	0.00	0.00	0.00	0.00	0.45	100.00	0.00	0.00	0.45	100.00
Subtotal	**4.23**	**54.23**	**0.00**	**0.00**	**3.57**	**45.77**	**0.00**	**0.00**	**7.80**	**100.00**	**4.72**	**49.48**	**0.00**	**0.00**	**4.82**	**50.52**	**0.00**	**0.00**	**9.54**	**100.00**
C Project Management/Training and Consulting Services																				
Heilongjiang																				
Consulting services	0.86	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86	100.00	1.29	100.00	0.00	0.00	0.00	0.00	0.00	0.00	1.29	100.00
Training	0.30	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Project management	0.35	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	**1.51**	**100.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.51**	**100.00**	**1.29**	**100.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.29**	**100.00**
Jilin																				
Consulting services	0.65	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	100.00	0.55	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55	100.00
Training	0.30	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	100.00	0.15	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	100.00
Project management	0.28	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	100.00	0.25	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	100.00
Subtotal	**1.23**	**100.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.23**	**100.00**	**0.95**	**100.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.95**	**100.00**

Source: Songhua River Basin Water Pollution Control and Management Project Completion Report (ADB, 2015)

Item	Asian Development Bank Amt.	%	State Bonds Amt.	%	Appraisal Local Gov't Equity, Domestic Banks and Tariffs Amt.	%	Private Sector Equity Amt.	%	Total Amt.	%	Asian Development Bank Amt.	%	State Bonds Amt.	%	Actual Local Gov't Equity, Domestic Banks and Tariffs Amt.	%	Private Sector Equity Amt.	%	Total Amt.	%
Total Base Cost	**175.05**	**56.30**	**66.15**	**21.27**	**68.45**	**22.01**	**1.30**	**0.42**	**310.96**	**100.00**	**192.59**	**45.60**	**60.19**	**14.25**	**162.99**	**38.59**	**6.61**	**1.57**	**422.38**	**100.00**
D Contingencies																				
Physical	0.00	0.00	0.00	0.00	22.35	91.30	2.13	8.70	24.48	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Price	0.00	0.00	0.00	0.00	35.93	100.00	0.00	0.00	35.93	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	**58.28**	**96.47**	**2.13**	**3.53**	**60.41**	**100.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
E Financing Charges During Implementation																				
Heilongjiang	10.45	99.81	0.00	0.00	0.02	0.19	0.00	0.00	10.47	100.00	1.45	100.00	0.00	0.00	0.00	0.00	0.00	0.00	1.45	100.00
Jilin	14.50	100.00	0.00	0.00	0.00	0.00	0.00	0.00	14.50	100.00	1.38	100.00	0.00	0.00	0.00	0.00	0.00	0.00	1.38	100.00
Subtotal	**24.95**	**99.92**	**0.00**	**0.00**	**0.02**	**0.08**	0.00	0.00	**24.97**	**100.00**	**2.83**	**100.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.83**	**100.00**
Total Project Cost	**200.00**	**50.46**	**66.15**	**16.69**	**126.74**	**31.98**	**3.43**	**0.87**	**396.33**	**100.00**	**195.42**	**45.96**	**60.19**	**14.15**	**162.99**	**38.33**	**6.61**	**1.56**	**425.21**	**100.00**

Amt. = amount.
Source: Asian Development Bank.

Economic Rate of Return

Heilongjiang Component	At Appraisal (%)	At Midterm (%)	At Completion (%)
A. Water Supply			
Fujin city water supply expansion[a]	28.0	0	Dropped
Tangyuan county water supply	14.5	13.8	16.9
Tonghe county water supply expansion	17.4	13.0	16.1
Yanshou county water supply expansion	15.6	13.5	17.0
B. Wastewater Management			
Fangzheng county WWTP + sewerage network	15.2	15.2	14.9
Fujin city WWTP	19.2	20.2	15.7
Harbin city Xinyigou district WWTP	14.1	21.5	15.5
Jiamusi city east district WWTP + effluent reuse	34.7	14.0	16.3
Nenjiang county WWTP + sewerage network	25.7	16.0	15.5
Qiqihaer city WWTP (phase II)	36.9	15.5	18.1
Qitaihe city effluent reuse	15.7	13.7	17.8
Shuangyashan city WWTP	14.2	12.9	16.4
Tangyuan county WWTP	13.6	15.0	15.2
Luobei county drainage and WWTP	0.0	0.0	14.9
Mudanjiang city sewerage network	0.0	0.0	12.1

Jilin Component	At Appraisal (%)	At Midterm	At Completion (%)
A. Wastewater Management			
Dehui city WWTP	19.1	17.2	16.4
Gongzhuling city Fanjiatun town WWTP	19.8	16.1	16.9
Gongzhuling city sewage network upgrade	18.3	18.1	16.9
Fusong county WWTP	17.9	16.7	16.4
Fuyu county WWTP	18.0	18.5	21.8
Jingyu county WWTP	18.2	15.0	17.1
Liuhe county WWTP	18.7	15.0	17.1
Tonghua county WWTP	18.8	16.3	14.8
Yushu city WWTP	19.5	15.2	22.9
B. Solid Waste Management			
Da'an city SWM	16.4	17.6	19.6
Fusong county SWM	19.9	15.7	17.0
Huadian city SWM	18.0	13.2	19.7
Huinan county SWM	19.1	17.3	18.2
Jiaohe city SWM	19.3	14.7	19.3
Jingyu county SWM	17.2	16.8	17.5
Liuhe county SWM	19.2	15.4	17.3
Meihekou city SWM	19.0	15.3	19.6
Tongyu county SWM	19.3	14.6	20.1

Source: Songhua River Basin Water Pollution Control and Management Project Completion Report (ADB, 2015)

Annex 4
Appeal procedure (sample)

APs can propose any complaint related to resettlement issues and compensation. The Project has established a transparent grievance channel in addition to the existing grievance channels of local government. The basic appeal procedures include the following:

1. If any AP is aggrieved by any aspect of the land acquisition and resettlement, he/she can state his/her grievance and appeal to the village committee or in oral or in written form. If an oral appeal is made, the village will record it on paper and process it. Village committee will make decision on or resolve it in two weeks. The AP will be informed of the result via written notice.

2. If the aggrieved AP is not satisfied with the decision in Stage 1, he/she can appeal to the township government office after receiving the decision; the township government office will reach a decision in two weeks. The AP will be informed of the result via written notice.

3. If the aggrieved AP is still not satisfied with the decision of the township government office, he/she will appeal to the Project Management Office (PMO) or Land Resource Bureau (LRB) after receiving the decision. The PMO or LRB will reach a decision in two weeks. The AP will be informed of the result via written notice.

4. If the aggrieved AP is still unsatisfied with the decision of the PMO or Mudanjiang LRB, he/she will appeal to the Heilongjiang LRB after receiving the decision. The Heilongjiang LRB will reach a decision in two weeks. The AP will be informed of the result via written notice.

5. If the AP is still dissatisfied with the decision of the Heilongjiang LRB, he/she will appeal to the civil division of a people's court according to the civil procedural law after receiving the decision from Heilongjiang LRB. The AP will be informed of the result via written notice.

6. The APs can take judicial proceedings on any aspect of the LAR including compensation standards and payments. If the APs want to complain, they can raise their issues to Mudanjiang City Land Resources Bureau. The person in charge is Section Chief, Mr. Jiang Dewen. The telephone number is: 0453— 6277149.

7. PMO will employ IMA to be in charge of all the monitoring and evaluation in this project. In the resettlement, IMA will check and report the speed of resettlement as well as the organization of the PMO and different levels of institutional framework in the LAR.

Source: Mudanjiang Urban Wastewater Treatment Plant Phase II and Intercepting Drainage Pipeline Network Resettlement Plan (Mudanjiang Water Affairs Bureau, 2012)