



Partnership for Delivering Infrastructure

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Challenges

- Create dynamic clusters
 - how to address unattractive destinations (small population, low per capita income, remoteness from main investors, lack of quality labor force and domestic supporting industries)
 - how to minimize transaction costs
- Technologies breakthrough
 - how to address smaller projects with new technologies
 - how to address new wave of PPP opportunity for upgrading existing projects
- Cross-jurisdiction
 - how to mitigate additional risks and uncertainties
 - how to engage national policymakers responsible for allocating budgets and requesting assistance from multilateral institutions

Case Study

Flow of Private Sector Participation

River Basins



▶ Key Opportunities

- Still not fully open for private sector participation

Tap Water Treatment



▶ Key Opportunities

- Build-Operate-Transfer (BOT) opportunities since the late 1990s
- ▶ **ADB Finance in:**
 - 1989 (first project finance)
 - 2011 (small cities)

Distribution / Collection



▶ Key Opportunities

- Partnerships with local government-owned water companies
- ▶ **ADB Finance in:**
 - 2011 (small cities)
 - 2013 (urban-rural integration)

Wastewater Treatment



▶ Key Opportunities

- BOT or Transfer-Operate-Transfer (TOT)
- ▶ **ADB Finance in:**
 - 2011 (city)
 - 2012 (city)
 - 2013 (high quality)
 - 2014 (rural area)

Needs:

- Stable access to safe water
- New connection to link urban-rural integration
- Retrofit and upgrade of aging plants and pipeline networks
- Integrated plan to enhance water efficacy improvement

PPP in Wastewater Treatment in Cities

- Primary cities have completed flagship PPP projects based on concession



Why Private Sector Participation?

- Smaller cities need more private sector's management and technical expertise as well as finance
- Each city will invite a private sector based on Design, Financing, Build, Operate, Own, Transfer basis for 30 years
- Concession agreement is based on the national template
- The private sector can enjoy exclusive business in a designated areas
- The private sector is allow to launch associated services (customer service centers, 24 hours helpline, rapid-response repair services)
- The end-user can benefit from improved services
- Risk allocation was based on the template set by the Central Government with each city's input on local conditions (such as tariff)

PPP in Wastewater Treatment in Rural Areas

- Urban-Rural gap has been widening. Outside of the major city areas, wastewater treatment facilities and sewage pipelines are limited. Less than 20% of wastewater was treated.
- Access to finance is limited. City commercial banks are less active in rural areas. Rural credit cooperatives and village and township banks are the main official banking institutions outside of cities. Each branch office cannot operate beyond its designated location.
- Associated infrastructure (such as sewage pipeline) and tariff collection are not open to private sector participation.
- Conventional technologies cannot effectively treat small volume and also require highly skilled staff for operation and maintenance.
- **BUT** technological advances is now creating novel opportunities in small-size infrastructure.

Private Sector Infrastructure Finance

Typical challenges:

- High upfront capital costs
- Relatively low return and uncertainties over tariff level and collection
- Credit risks of host government
- Technical and economic criteria of equipment
- Operational and maintenance risks
- Substantial project preparation time regardless project size.

Rural areas face additional challenges:

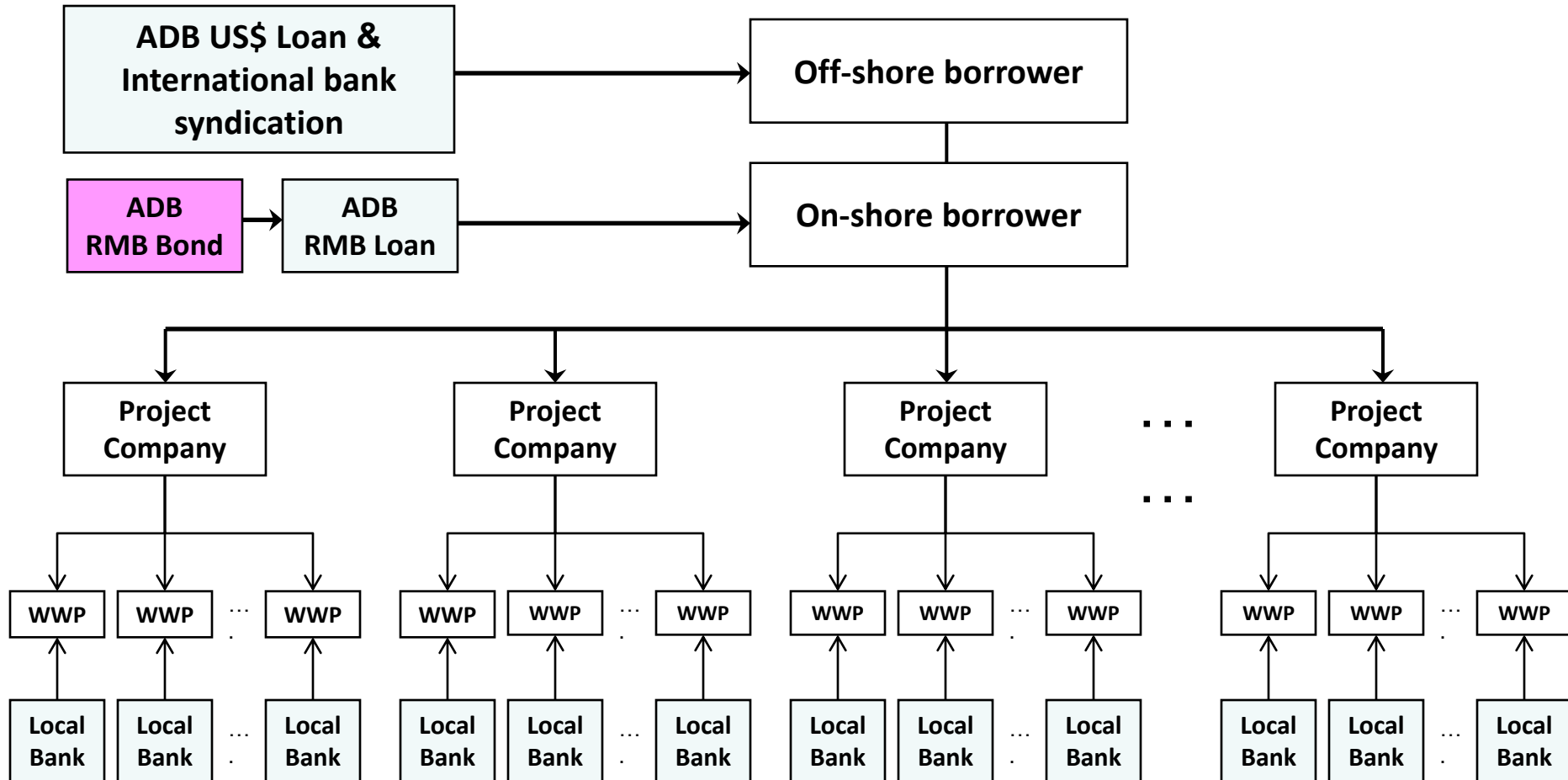
- Limited private sector investors/ commercial banks interest
- Small infrastructure projects face unproportionally high transaction costs

Beyond Project Finance

- ADB took a “portfolio” approach to support rural wastewater treatment projects based on PPP, often too small and time-consuming for international banks to finance on stand-alone basis.
- ADB’s loans have two components:
 - Direct Loan: USD/ RMB dual currency loan of up to \$100million equivalent , backed by ADB’s RMB bonds
 - Co-finance: funded by commercial banks
- Loans channeled to subprojects to support new concession scheme where country governments are bundling plants in multiple townships/villages.



Project Structure



WWP = Wastewater Treatment Plant

Together We Deliver