



EAST ASIA DEPARTMENT 2014

Knowledge Management Initiatives

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Note: In this publication, “\$” refers to US dollars.

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Divisions and/or Offices in East Asia Department (EARD)

EAAE	= Environment, Natural Resources and Agriculture Division
EAEN	= Energy Division
EAOD	= Office of the Director General
EAPF	= Public Management, Financial Sector and Regional Cooperation Division
EASS	= Urban and Social Sectors Division
EATC	= Transport Division
MNRM	= Mongolia Resident Mission
PRCM	= People’s Republic of China Resident Mission

ADB Departments:

IED	= Independent Evaluation Department
SDCC	= Sustainable Development and Climate Change Department

Foreword

This annual publication of the Asian Development Bank (ADB), now in its eighth year, is a compendium of abstracts from strategic knowledge products and services prepared by ADB's East Asia Department (EARD) in 2014, with web links to select full reports. It showcases EARD's knowledge work for the year.

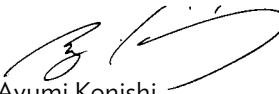
Knowledge and innovation underpin ADB's cooperation with Mongolia and the People's Republic of China (the PRC), as well as with the East Asia region in general, with knowledge solutions being one of ADB's five drivers of change. ADB knowledge support is produced in response to country demand and is highly valued by Mongolia and the PRC in priority areas of inclusive economic growth—poverty reduction, increased productivity, and enhanced food security for Mongolia; and macroeconomic management, energy efficiency, environmental protection, poverty reduction, and interprovincial cooperation for the PRC.

During 2014, ADB strengthened its knowledge-sharing activities in East Asia. It helped create new knowledge platforms and hubs that focused on green growth, urban development, transport, technical and vocational education training, and public–private partnerships (PPPs). Assistance helped to stage a knowledge-sharing platform on PPPs in Beijing, foster an initiative to exchange information on rural–urban poverty, and establish an eco-compensation hub at the [People's Republic of] China Agricultural University. The Regional Knowledge Sharing Initiative, launched in 2012 by ADB and the PRC's Ministry of Finance, played a major role in disseminating development experience among ADB's developing member countries. ADB also produced 70 knowledge products and services, and organized 80 knowledge-sharing activities for the PRC and Mongolia in 2014. Key works include urban poverty in Asia, local government finance in the PRC, bus rapid transit systems, Mongolia's water–energy–mining nexus, sustainable grasslands management, population aging, livable cities and water safety plans.

In 2014, the PRC became the first country to benefit from the “One ADB” approach of the Midterm Review of Strategy 2020 Action Plan. This approach encourages ADB departments to work together to provide knowledge solutions for its developing members, and urges resident missions to seek knowledge partnerships and dialogue opportunities with other developing members. The Government of the PRC received policy recommendations based on work of EARD and with the collaboration of various ADB departments in October 2014, to help the nation transition to a high-income country. The recommendations were discussed ahead of the formulation of the PRC's Five Year Plan, 2016–2020.

In Mongolia, stocktaking of knowledge work among ADB departments was initiated. Knowledge cooperation continued with policy advisory support and policy research training for the Ministry of Finance. The handbook on PPPs was launched. An exhibit on the Japan Fund on Poverty Reduction–Japan Fund for Information and Communication Technology impact's on the poor was held; and knowledge sharing on health sector reform, Tuul River improvement, and gender equality were conducted.

Knowledge ++ (knowledge plus finance plus leverage) will be the cornerstone of ADB's knowledge plans in Mongolia and the PRC from 2015 onwards as ADB delivers innovative knowledge solutions to the challenges of rising inequalities, aging populations, and environmental degradation, building on the lessons from ADB assistance, and at the same time leveraging global and South–South knowledge exchange.



Ayumi Konishi
Director General
East Asia Department

Policy Notes Series



Rural Financing and Microfinance in the People's Republic of China (Knowledge Brief)

Despite progress in improving the delivery of rural finance and microfinance services in the People's Republic of China by a variety of financial institutions, with different legal forms, and under varying regulatory regimes, considerable demand for rural loans, ranging from \$484 to \$6,450 (CNY3,000 to CNY40,000), remains unmet. These amounts are considerably smaller than those offered by most traditional and newly established rural finance and microfinance service providers.

Even factoring in informal lending, on which rural households largely depend, an estimated demand for formal credit of about \$210 billion to \$370 billion (CNY1.3 trillion to CNY2.3 trillion) from 10 million to 17 million households and microenterprises remains.

Despite unmet credit demand particularly in rural areas, financial resources (deposits) flow from rural to urban areas, and from lower- to higher-income groups of the population. Regulatory constraints prevent market forces from driving the evolution of successful rural finance and microfinance institutions into larger institutions that can provide a broader range of better financial products and services. These constraints are highly specific to the various types of financial service providers.



Challenges and Opportunities of Population Aging in the People's Republic of China (Observations & Suggestions)

<http://www.adb.org/publications/challenges-and-opportunities-population-aging-peoples-republic-china>

The population in the People's Republic of China (PRC) is aging rapidly. The proportion of people aged 60 years and above is expected to increase from 12% in 2010 to 33% by 2050, turning the PRC into the oldest population in the world. Health care costs and dependency ratios will increase in parallel.

Aging results in labor force shortages, which in turn increase average salaries, undermining the economy's competitiveness. Rapid population aging, if not addressed, might hamper the industrial transformation process

needed to attain higher income status. The fact that the PRC is aging at a low level of income magnifies the challenge.

Given the limited health resources and safety nets in the PRC, aging will exert financial pressure on the provision of healthcare services, in particular long-term care for a growing number of elderly. This will aggravate fiscal constraints in local governments, who shoulder the bulk of providing these services.

While aging poses great challenges, it also provides opportunities for jobs and services development, which are priorities in the government reform agenda. However, capturing the benefits requires policy actions to speed up the transformation of the pattern of growth, coupled with labor market reforms and improved human capital to foster labor productivity. Higher public expenditure to finance the growing needs of the elderly, including pensions, is also needed.



Property Taxation in the People's Republic of China (Observations & Suggestions)

<http://www.adb.org/publications/property-taxation-peoples-republic-china>

A property tax is a general tax imposed on all property owners based on the value of their properties. Property taxation is common throughout the world due to its numerous advantages. It is regarded as a steady source of local government revenue.

The property taxation system in the People's Republic of China (PRC) is still developing and does not include important features that would make it efficient. For instance, residential property is excluded from the tax base. This has contributed to real estate speculation, income disparity, and revenue losses.

A well-functioning local property tax system in the PRC would provide an efficient, equitable, and sustainable way to finance local development and government spending. By helping to align expenditure responsibilities with revenue allocations at the local level, property taxation could reduce inequality in the provision of public goods and foster local government ability to provide them. Further, it will reduce the incentive for speculative behavior mitigating housing bubbles.

To further develop property taxation in the PRC it is recommended to gradually strengthen and expand the existing pilots in Chongqing and Shanghai, supported by clear principles on the delegation of taxation responsibilities, the definition of a nationally standardized tax base, an affordable tax rate, and enhanced local government capacity.



Tariff Suggestions to Stimulate Concentrated Solar Power Development (Observations & Suggestions)

A feed-in-tariff (FiT) that assures adequate returns to investors has been well proven to stimulate the rapid development of new renewable energy technology in many countries. FiT has worked well in the People's Republic of China (the PRC) for the rapid deployment of wind power and solar photovoltaic (PV) technologies.

Solar PV and concentrated solar thermal power (CSP) are distinct solar technologies at different stages of maturity in the PRC. Unlike solar PV, CSP in combination with thermal energy storage can generate electricity at any time of the day and does not pose grid integration issues. A common FiT for solar PV and CSP at this early stage of CSP demonstration would therefore severely constrain CSP development.

The many possible configurations of CSP plants make it inadvisable to rush into setting up FiT when the first demonstration plant is built. The following phased approach should be adopted instead: (i) in the first phase (2014–2016), tariffs would be set for individual plants up to a cumulative capacity of 500 megawatts; (ii) in the second phase (2017–2020), FiT, equal to the solar PV tariff plus a CSP premium, would be considered for plants with a cumulative capacity of up to 3 gigawatts; and (iii) in the third phase (2021 onward), a common FiT would be considered for solar PV and CSP.

The above phased approach would lead to right CSP tariff setting, taking into account cost improvements as the CSP market grows. Asian Development Bank studies in the PRC also suggest that this phased approach would provide incentives to early movers and stimulate demonstration of several CSP plants with different configurations in the first phase. This will generate enough knowledge about the appropriate FiT for CSP plants in the second phase, and enable CSP to compete with solar PV technologies once critical installed capacity is reached in the third phase. In parallel, other incentives, such as an enhanced tax concession regime and more flexible use of natural gas, may be encouraged to further reduce the required FiT.



Carbon Capture and Storage (CCS)—Ready Policy to Facilitate Future CCS Deployment in the People's Republic of China

Carbon capture and storage (CCS) is a proven technology and currently the only near commercial technology that can allow up to 90% reductions in carbon dioxide (CO₂) emission from coal fired power plants. The Asian Development Bank (ADB)-supported *CCS Road Map for the People's Republic of China* (the PRC) identifies large-scale CCS deployment essential from 2030 to achieve the cost-effective CO₂ mitigation in the PRC.

To date, CCS use is in the early stages in the PRC because of economic drivers such as adequate price on carbon and perceived and real risks associated with any complex technology. Early CCS demonstration is crucial but it is likely to be a gradual learning process to build confidence in the technology and its subsequent large-scale uptake. During the intervening

period, a large stock (estimated to be 100 gigawatts by 2020) of new coal-fired power plant is likely to get built, which, if not made ready for carbon capture and storage, will lock them on to a high CO₂ emission, potentially risking them as stranded assets.

It is recommended that new coal-fired power plants be mandated as carbon capture and storage-ready (CCSR) adopting the following phased approach: (i) in 2015, define CSSR criteria, clarify approval and permitting authorities, and integrate necessary additional regulations into the existing framework; (ii) from 2015–2016, stipulate that large power bases planned in northwestern and western PRC be designed as CCSR; and (iii) stipulate that all new installations be constructed within 200 kilometers of an oilfield be designed as CCSR.

The introduction of a CCSR policy is expected to increase capital costs of large coal power plants by less than 0.3%, which is unlikely to impact the financing or financial performance of the CCSR plant in any significant way.

Special Publications



Managing Subnational Debt in the People's Republic of China

Before the approval of the amended Budget Law on 31 August 2014, the law forbade subnational governments in the People's Republic of China (PRC) from borrowing. As a consequence, subnational borrowing has been informal and not transparent. The root of the problem lies in the system of intergovernmental fiscal relations that has resulted in a mismatch between the fiscal revenue and expenditure obligations in subnational governments. At present, while subnational governments are responsible for 85% of total expenditure according to official data, their share of the country's total revenue is less than 50%. Unable to borrow to close the gap, and under pressure to meet increasing infrastructure demands from rapid urbanization, subnational governments have often turned to off-budget financing sources, thus accumulating significant debt.

While the amount of subnational government debt appears manageable at present, its rapid expansion outpacing growth of fiscal revenue is worrisome. Moreover, almost half of this debt has been incurred by nontransparent local government investment vehicles (LGIVs), which emerged to circumvent the Budget Law's prohibition on subnational government borrowing. The unregulated expansion of LGIVs has resulted in significant off-budget transactions that threaten the fiscal stability of subnational governments.

Taking control of this potentially destabilizing situation requires increasing transparency by legalizing and regulating borrowing by subnational governments. While the amended Budget Law provides legal framework, debt management also requires close oversight and monitoring of actual borrowing with standardized data reporting and collection practices. Government actions to date permit bond issuance on a pilot basis by selected subnational governments are steps in the right direction, but greater efforts are required.

The PRC has yet to build a sound regulatory framework to manage subnational government debt efficiently. The current reliance on land use fees and unregulated access to off-budget resources is not sustainable. The need is magnified by the financial challenges posed by the government's new urbanization strategy. Advancing urbanization requires large investments in urban infrastructure to accommodate the growing number of rural residents moving into cities. Moreover, the announced relaxation of the household registration (*hukou*) policy implies that 100 million

migrants will become urban residents by 2020. Their entitlements to public goods and services will significantly increase financial needs at all levels of government.

In this context, more conventional financing options should be considered for subnational governments to manage their debt in a fiscally sustainable manner. One approach, already acknowledged by the PRC's authorities, is to develop subnational bond markets. Bond markets offer several advantages. These include increasing the availability of resources to finance infrastructure and urbanization, strengthening fiscal transparency and good governance, deepening capital markets, and freeing up central government budget resources to support regions that are not able to access capital markets. In addition, bond financing should lead to lower financing costs for subnational governments, as costs incurred by LGIVs with banks and trust companies are higher.

The adoption of subnational bonds needs to be complemented with a reliable debt management system. A sound regulatory framework will facilitate access to finance by subnational governments while reinforcing fiscal discipline and mitigating risks. Without such a system, there are risks that the new debt instruments will be used inappropriately. Policy actions are needed to establish a legal framework. That ensures subnational governments evaluate debt affordability and take due diligence in deciding the type of debt and how to raise it. In this process, efforts are also required to create independent debt rating assessments, supported by early warning systems and mechanisms to deal with subnational fiscal distress and insolvency.

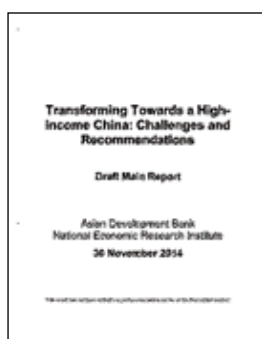
Drawing on relevant international experiences, the report formulates a wide range of policy recommendations for the PRC to establish a subnational debt management system. By doing so, the report aims to contribute to ongoing public finance reforms in the PRC, and serve as an input into the forthcoming preparation of the 13th Five-Year Plan (2016–2020).



Learning from the Urbanization Experience of the People's Republic of China

This Asian Development Bank (ADB) blog article, which appeared on 27 March 2014 at <http://wcm.adb.org>, describes the urbanization process in the People's Republic of China (the PRC) as going through four stages. The first phase focused on developing the three main coastal regions as industrial and urban service centers, namely the Beijing–Tianjin area, the Yangtze River Delta, and the Pearl River Delta. The second phase promoted the development of second-tier megacities and metropolitan cities in the country's central and western regions. The third phase promoted the development of sustainable development of small and medium-sized cities, along with balanced urban–rural development. The newly released urbanization plan introduces a fourth phase of policies promoting a people-centered, environmentally sustainable urbanization.

ADB has supported the PRC's urban sector. For instance, ADB started a partnership with Tongji University on the urban knowledge hub in 2010. The urban knowledge hub will need to expand its South–South cooperation activities and continue to provide expertise especially in light of the PRC's new urban agenda. The hub should among others address the impacts of the country's new social and environmental policies, as well as how to manage and reduce air and water pollution. Establishing environmental zoning to guide urban development and promote land use efficiency and reducing demand for land, transportation and energy will also be activity areas. Finally, the challenges of strengthening institutions and horizontal communications in administration of cities and agglomerations will also be addressed.



Transforming Toward a High-Income People's Republic of China: Challenges and Recommendations

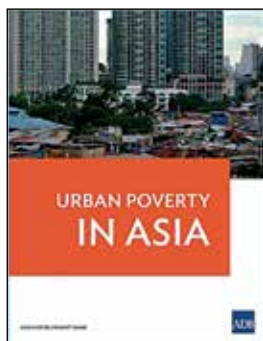
This knowledge work was prepared as part of the Asian Development Bank (ADB)–People's Republic of China (the PRC) policy dialogue on the formulation of PRC's 13th Five-Year Plan. The report identified the following eight key areas: The objective of the research is to analyze the key issues under each of these eight challenges and provide practical policy recommendations. More specifically:

- (i) **Industrial transformation.** This examines how industrial transformation will contribute to the new growth model, in particular, through technological progress and innovation, industrial upgrading, strengthening of the service sector, and promoting small and medium-sized enterprises. It analyzes the binding constraints and examines the roles of the government and the market in facilitating this process.
- (ii) **Balanced development of rural and urban areas.** This examines how balanced development of rural and urban areas will contribute to reducing regional inequality and improving livelihoods for those who have been made vulnerable by rapid socioeconomic change. It analyzes and recommends improvements in rural financial services, integrated supply chains, and access to markets for farmers, welfare and pension systems, integrated social assistance, and supporting migrants through more inclusive public services and social assistance.
- (iii) **Human resource transformation.** This examines how best to strengthen human capital, which is essential to increase labor productivity and a priority for the PRC as it transitions to a high income economy. It focuses on three critical pillars that must be tackled to ensure this transition: (a) expansion of human capital stock, (b) improvement of the quality and relevance of education to make it flexible and responsive, and (iii) promotion of innovation for development of a knowledge economy. It analyzes key challenges and opportunities for improving labor force productivity and moving up the value chain, in the context of the PRC's new growth model and demographic transformation.

- (iv) **Environmental protection.** This examines the key current environmental challenges for the PRC, such as air pollution, solid waste management, soil pollution, natural disasters, and degraded ecosystem. It analyzes the barriers to environmental protection, including institutional, regulatory, and legal aspects. It also examines the roles of the government and the market to help resolve environmental problems and promote environmental protection.
- (v) **Climate change.** This analyzes the urgent need to scale-up efforts on climate change, and how such efforts could have significant cobenefits. It highlights the role of the market in selecting mitigation and adaptation solutions, and the role of the government in guiding the market by setting appropriate targets and performance standards and creating the right environment to deal with climate change and promote climate technology innovations.
- (vi) **Water scarcity.** This examines how current water shortages and imminent scarcity require aggressive investments in water efficiency and productive technologies across all sectors, a shift to water demand management, and deeper reforms to enable the private sector and market forces to contribute to closing the water supply–demand gap. Recommendations on practical actions for improved integrated river basin planning and management, optimal infrastructure, the introduction of new economic and financial instruments, and the augmentation of existing disaster response capacities are proposed. Given the importance of water security for the PRC’s sustainable development, findings from ADB’s ongoing Country Water Assessment for the PRC are also incorporated in the recommendations.
- (vii) **Subnational debt management.** This focuses on the importance of introducing a sound regulatory framework to manage subnational government debt in the PRC in light of the financial challenges posed by government plans for economic transformation and rapid urbanization. It reviews best international practices in the establishment of subnational debt management systems to formulate policy recommendations for the PRC to adopt a debt management framework. As part of the overall regulatory framework, it identifies suitable policy actions to develop subnational government bond markets in the PRC. The introduction of credit rating and early warning systems, critical elements to mitigate risk in subnational government bond markets, is also analyzed.
- (viii) **Further integration of the PRC with the international economic system.** This analyzes the strategies for advancing the PRC’s integration with the global economy. It analyzes how the PRC can promote further integration through trade and investment, and further integration into the global financial system. It assesses the roles of the government and the market in facilitating this process.

PPPwiki Website

PPPwiki was launched in September 2014 under an Asian Development Bank (ADB) technical assistance as a public account in WeChat, the most popular social medium in the People's Republic of China. This website publishes articles selected from ADB reports and training materials. It provides information in Chinese on public-private partnerships, promotes publications from other institutions, and releases information from government and media. To date, the site has 4,400 followers and 150,000 cumulative hits.



Urban Poverty in Asia

<http://www.adb.org/publications/urban-poverty-asia>

This report provides an overview of important urban poverty questions: What defines urban poverty and how is urban poverty measured? What other factors beyond consumption poverty need to be tackled? Who are the urban poor? What relations exist between urban poverty and city size? What linkages exist between urbanization, income, and urban poverty? What policy responses to urban poverty are implemented in selected Asian countries? The report served as a background study for the International Policy Workshop on Urban Poverty and Inclusive Cities in Asia, organized by the Asian Development Bank and the International Poverty Reduction Center held from 24–25 June 2013 in Suqian, Jiangsu Province, the People's Republic of China (the PRC).

The report *Urban Poverty in Asia* looks at the different dimensions of poverty in Asia, both income and nonincome, its two main regions, including a brief account of who and what class of people are affected most by poverty and deprivation. This paper analyzes the effect of recent urbanization and gross domestic product growth trends—which distinguish Asia from other regions—on poverty. It also simultaneously explores other factors that may have affected levels in Asia, delves into the key features of urban poverty in selected Asian countries, and looks at public policy responses and initiatives that Asian countries have taken to address issues on access of the urban poor to services, livelihood, shelter, and social security systems. The paper concludes that Asia is in the midst of urban poverty and deprivation challenges that are evolving with the processes of growth and urbanization—the PRC being a case in point. The welfare of the millions of urban poor will depend on how Asia, where many of its cities represent the new global frontier, and the world prepare for the inevitable growth of urbanization, and how this phenomenon of urbanization is managed and taken forward.

Sector and Thematic Paper Series



Analyzing Triangle Relationship between Growth, Poverty, and Inequality in Mongolia

Despite the significant economic growth achieved since 2000, high poverty incidence and vulnerability to poverty are two disturbing phenomena for Mongolia. This working paper aims at analyzing poverty and vulnerability to poverty using the Household Socio-Economic Surveys 2002–2003 and 2007–2008. Poverty incidence remained high at over 35% during the two survey periods. A significant gap in poverty incidence was observed between rural and urban areas, and the gap widened between the two survey periods. The poverty analysis indicates that household size, dependency ratio, education level of household mother, assets of household, and the region where the household lives are all important determinants to poverty. Increased social welfare pension and allowance did not have any substantial impact on the reduction of poverty, which might be because inflation may have eroded the potential impact of such social welfare measures. Vulnerability analysis concluded that nonpoor households were much more vulnerable than poor households in both periods, and high vulnerability levels of both poor and nonpoor households increased slightly between the two survey periods.



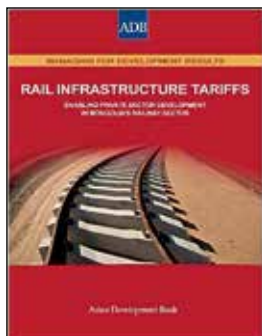
The Effect of Food Prices on Consumer Price Index in Mongolia and International Experience

In a market economy, the central tenet of government policy is to achieve macroeconomic stability. Inflation is one of the key measures of macroeconomic stability for countries in transition to market economies, as it has a significant influence on many economic and social development indicators. The inflation measure is influenced by both monetary and nonmonetary factors, as well as domestic and external factors, and identifying these factors is needed. The impact of nonmonetary factors such as food price changes on inflation can lead to significant volatile general price changes, raising the question of whether inflation is a result of a persistent, long-term trend, or of short-term shifts in prices.

The objectives of this research are to study the effect of food prices on the consumer price index and inflation in Mongolia and other countries; distinguish seasonal and temporary shocks on food prices from changes in demand and supply of food; study different measures of core inflation; and determine factors affecting prices of selected imported food products denominated in domestic currency, including the exchange rate pass-through.

This research demonstrates that nonmonetary determinants have a significant impact on inflation in Mongolia. Food prices fluctuate significantly compared with other goods and services. This is attributed to a supply shock, which occurs frequently in Mongolia. Supply shocks occur not only due to seasonal availability of agricultural products but also due to seasonal fluctuations in the supply of imported goods. Given that fluctuations in food prices are not aberrant phenomena in Mongolia, it is essential to estimate the core inflation to monitor changes in inflation caused by macroeconomic factors. Moreover, core inflation would inform policy makers on the appropriate long-term monetary policy.

Food price inflation affects the poor most. This study estimates the effectiveness of monetary policy to contain food price inflation and analyze its impact on households with different income groups.



Managing for Development Results: Rail Infrastructure Tariffs—Enabling Private Sector Development in Mongolia's Railway Sector

<http://www.adb.org/publications/mfdrs-rail-infrastructure-tariffs-enabling-private-sector-development-mongolias-railway>

The Mongolia railway market is dominated by the Ulaanbaatar Railways (UBTZ), which was founded in 1949 and is jointly owned by the government of Mongolia and the Russian Railways Joint-Stock Company. UBTZ is responsible for infrastructure and operations on the main line between the borders with the Russian Federation and the People's Republic of China, and on some branch lines and a separate section in the east. Until recently, it was the only railway carrier in Mongolia. The Mongolian Railway Company (MTZ) is a joint-stock company 100% owned by the state that was established in 2008 to act as a recipient of foreign aid. MTZ is expected to manage a new railway construction and implement the government's railway network plan.

This study examines the system of tariffs for the use of railway infrastructure that is needed to enable liberalization of the freight market. The report first examines international experience on railway reform, which provides the several lessons for Mongolia.

The report provides recommendations on infrastructure tariffs in Mongolia. The tariffs need to generate sufficient funding for new investment by UBTZ or MTZ, and provide an adequate return on any private investment in new lines. Infrastructure tariffs in Mongolia should therefore be based on average costs, not marginal costs. To avoid discriminating against smaller carriers, the report recommends a one-part variable unit tariff, rather than a two-part tariff (fixed and variable).

To implement the tariff regulations, the report proposes the establishment of a full-time tariff unit, and a working group—to meet on an ad hoc basis—within the Railway and Maritime Transportation Policy Implementation Coordination Department, a government implementation agency under the Ministry of Roads and Transportation. Initially, technical support will be required from the Competition Commission and possibly other regulatory agencies. Consideration should be given to expanding the tariff unit once new lines are built.

The report indicates that the existing law is suitable for opening up the market, but that changes should be made to ensure fair access to infrastructure and services.



Food Stamps and Medicaid Impact Evaluation Report

This publication reports on the impacts of the Food Stamps Program (FSP) and the Medicaid Program in Mongolia. The impact evaluation is based on a comparison of a quantitative survey of recipients of the FSP and Medicaid in Selenge, Orkhon, and Ulaan Baatar, with similar households in the same areas that did not receive the FSP or Medicaid. These households were interviewed in November 2011 (when 564 recipient and 559 nonrecipient households were interviewed) and November 2012 (when 762 recipient and 762 nonrecipient households were interviewed). Due to technical issues with the baseline data, which are explained in detail in section 2.2 on the survey sample, this evaluation only takes into account the results obtained with the analysis of follow-up survey data.

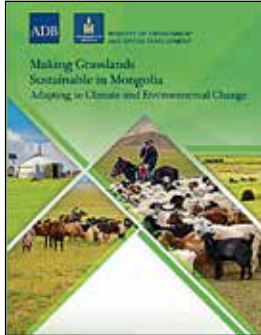
The results emerging from this evaluation can be divided in two categories: key impacts and secondary impacts. The evaluation model's estimates show strong and robust impacts produced by the programs on key indicators of interest related to food security and coping strategies. Limited or no impacts were detected across areas such as health, education, and employment, which represent the secondary impacts.

The interpretation of the key impacts suggests that food stamps are an appropriate and effective tool for reducing vulnerability to food insecurity of poor households in Mongolia. The data indicate positive and significant impacts in the areas of dietary diversity, food adequacy, and food-related coping strategies. The program had no adverse effects on employment, thus excluding the existence of a disincentive effect on labour supply. These findings echo the positive impacts on food security, financial dependence, and self-assessment found in qualitative work conducted during the same period. Based on these results and considerations, the report recommends the government to fully adopt FSP.

The Medicaid Program has not shown similar positive impacts to date. This is probably due to the short duration of implementation of the program in the surveyed areas at the time of assessment in November 2012, rather than weaknesses in the design. As of the evaluation period, the program still lacked awareness, uptake, and satisfaction. Given that people must be aware of (and trust) health services in order to use them, it is not surprising that low awareness and low impacts have been found.

Awareness, use, and impact of Medicaid will almost certainly improve just with time. Should the government decide to resume the implementation of the program, which was discontinued due to fiscal constraints, Medicaid must address these operational issues. This involves ensuring that:

- (i) Service providers are clear about their responsibilities and citizens' entitlements.
- (ii) Medicaid holders are clear about their entitlements and responsibilities.
- (iii) Accredited health providers have adequate supplies of drugs and can undertake consultations.
- (iv) Budgets for reimbursing health facilities and recipients are always available, throughout the year.
- (v) Grievances related to the program are dealt with swiftly and fairly.



Making Grasslands Sustainable in Mongolia Volume 1— Adapting to Climate Change and Environmental Change

<http://www.adb.org/publications/making-grasslands-sustainable-mongolia-adapting-climate-and-environmental-change>

The significance of mobile pastoralism and the potential role of mobile pastoralists in the conservation of drylands are globally recognized. Mobility has been a traditional practice in the millennia in Mongolia's nomadic culture and is recognized as a key management strategy for the sustainable use of semi-arid and arid grasslands. Its decline, with subsequent overgrazing, has led to widespread pasture degradation.

Unlike in many countries, mobile pastoralists in Mongolia are not culturally marginalized, and they are a large part of the country's cultural identity. Despite this, pastoralists face enormous challenges as a result of competition for land use with the extractive industry. The total economic value of grassland environmental services has not been established, but it may be undervalued in the face of increasing contributions to gross domestic product by the growing mining sector.

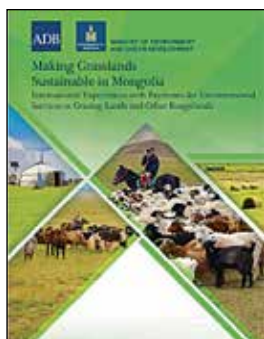
Climate change poses a new threat that will have a measurable impact on grassland ecosystems and herders' livelihoods. Mongolia's climate is rapidly warming: the country's annual mean temperature rose by 2.1°C during 1940–2007. In view of these changes, this study reviews grassland management and traditional nomadic pastoralism in the local Mongolian context, and identifies potential adaptation strategies and practices.

Adaptation strategies for livestock husbandry and grassland management have some global commonalities, many of which are relevant for adaptation practices in Mongolia. The study identified a number of adaptation actions and practices in social organization, and pasture and livestock management.

Herders and local government representatives identified the lack of a legal framework to regulate pasture use and weak enforcement of pastureland management rules as key constraints for implementing improvements and

adaptive practices. Additional constraints included the lack of technical and financial capacities in local government to perform land management functions, the lack of financing for herders for pasture management measures, and limited opportunities for processing and marketing.

Contributions to *soum* development funds from the central budget increased in 2013. Support to the adaptation actions and practices suggested in this report are only a modest beginning. The government and stakeholders are urged to review the appendixes and modify them, as needed, for their strategies and plans.



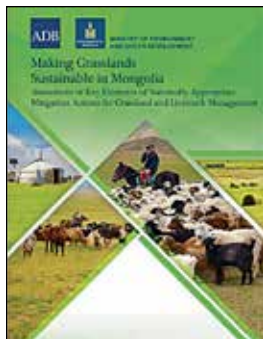
Making Grasslands Sustainable in Mongolia Volume 2— International Experiences with Payments for Environmental Services in Grazing Lands and Other Rangelands

<http://www.adb.org/publications/making-grasslands-sustainable-mongolia-international-experiences-payments-environmental>

Payments for environmental services (PES) are a potential mechanism to provide incentives for sustainable management of grasslands and reduction of greenhouse gas emissions. PES is not widely practiced in Mongolia, but has been included in the Green Development Strategy of the Government of Mongolia. This knowledge product provides an overview of 50 PES schemes in operation in grasslands and other grazing lands worldwide as well as a number of schemes being developed in Mongolia. It also discusses key issues relating to the design of PES schemes in the context of grasslands in Mongolia.

There has been considerable interest in the potential for economic incentive schemes to support stakeholders to conserve forests and biodiversity and to provide watershed services. Less attention has been paid to the potential of incentive schemes to deliver improved environmental services (also called ecosystem services) in grasslands and other grazing lands. Grasslands and other grazing lands store up to 30% of the world's soil carbon, and provide a range of other values, including biodiversity and soil conservation, water supply and retention, recreation, and nonphysical values.

PES has the potential to provide land users in grasslands with incentives to increase grassland use (e.g., biodiversity), and decrease soil erosion or carbon emissions, among others. The main distinction between PES and other forms of incentives is that PES schemes make payments conditional on the performance of improved management or delivery of environmental services. Evidence suggests that PES schemes could result in an increase in the supply of environmental services. A reason for limited environmental impact is that market-based instruments may be less effective in contexts where other markets are missing or not working well, since these constrain the opportunities for land users to pursue more profitable livelihood options. Even where schemes are able to increase the supply of one environmental service, there may be trade-offs with other environmental services. Similarly, not all PES schemes have improved incomes for the poor or addressed equity concerns. Careful design and a thorough assessment of these issues can improve PES implementation.



Making Grasslands Sustainable in Mongolia Volume 3— Assessment of Key Elements of Nationally Appropriate Mitigation Actions for Grassland and Livestock Management

<http://www.adb.org/publications/making-grasslands-sustainable-mongolia-assessment-key-elements-namas>

Historically, Mongolia has made relatively minor contributions to global climate change, although its greenhouse gas (GHG) emissions per capita are relatively high and are continuing to rise. Emissions come primarily from the energy (54%) and agriculture (34%) sectors. Climate change is acknowledged as a significant threat to Mongolia's economic growth, sustainable development, and fragile environment. Mongolia recognizes that well-designed actions to mitigate climate change can provide multiple benefits, including socioeconomic development and resilience to climate variability and change.

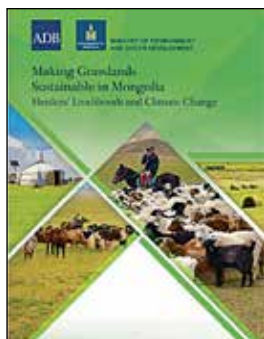
This study identifies and assesses the main technical, institutional, and policy elements that need to be put in place to develop and implement Nationally Appropriate Mitigation Actions (NAMA) in the grassland and livestock subsector. NAMAs are nationally determined policies and actions that reduce GHG emissions against a “business-as-usual” scenario, i.e., the emissions that would have occurred in the absence of NAMA implementation. These actions are selected and undertaken voluntarily by developing countries with support from developed countries. In 2010, Mongolia communicated its intention to implement NAMAs to the United Nations Framework Convention on Climate Change.

The technical elements include estimates of GHG mitigation potential, economic costs and benefits, GHG measurement options, adaptation benefits, and barriers to adoption and identification of policies and measures. The main institutional elements include sector policies and procedures, monitoring and evaluation procedures, financing vehicles, and arrangements for stakeholder involvement. Important policy elements include the alignment of the proposed NAMA with national policies, priority and target setting, and the legal framework. To provide the technical analysis to support the development of a NAMA in the grassland and livestock subsector, this study assessed the state of readiness for NAMA implementation in relation to each element in the sector. On the basis of this assessment, priority actions are recommended to help put these elements in place.

Eight types of GHG mitigation action in the grassland and livestock sector have been assessed. On the basis of these assessments, the following priority activities have been identified as suitable for promotion through a NAMA: sheep, beef, and dairy livestock breeding activities to increase productivity; reduction of milk losses in the milk supply chain; and sustainable grassland management. Additional analysis is required to identify cost-effective fodder production options and to quantify the benefits of actions to improve animal health.

It is estimated that together the identified activities have potential to mitigate about 411,000 tons of carbon dioxide equivalent over the remaining period of the National Livestock Program, 2013–2020.

The government is encouraged to develop a plan for implementation of a NAMA based on the recommended actions, or to take the priority actions to produce a well-developed NAMA proposal.



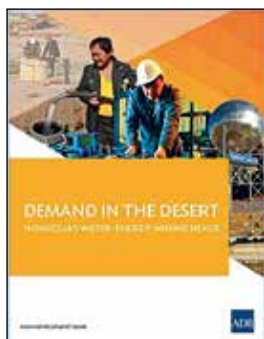
Making Grasslands Sustainable in Mongolia Volume 4— Herders' Livelihoods and Climate Change

<http://www.adb.org/publications/making-grasslands-sustainable-mongolia-herders-livelihoods-and-climate-change>

As herders have experienced over the past decades, temperatures have increased and rains during the growing season have decreased. Autumn and winter precipitation (rain and snow) has increased slightly. Snow is melting earlier in springtime. Average winter temperatures have increased more than average summer temperatures. The period of summer heat is getting longer, especially in Western Mongolia. The period of winter cold is getting shorter, especially in the Gobi region. All of these climatic changes are having an impact on nature, pasture, people, and livestock.

This publication seeks to explain climate change, its impacts on livelihoods and ecosystems, and its causes for herders and the general public. It explains basic processes, such as the greenhouse effect, and outlines how the Government of Mongolia is responding through the National Action Program on Climate Change and the National Livestock Program. It identifies actions and practices that can help herders and local communities adapt to climate change impacts, particularly the negative impacts on livelihoods.

The publication explains how herders and local communities can reduce greenhouse gas emissions from livestock and degraded grasslands, and discusses potential new financial incentives for sustainable practices from voluntary carbon markets and nationally appropriate mitigation actions. Collaborative planning and implementation of sustainable pastureland management practices are identified as essential to building community resilience to climate change.



Demand in the Desert: Mongolia's Water-Energy-Mining Nexus

<http://www.adb.org/publications/mongolia-water-energy-mining-nexus>

Mongolia's mining-based economic development and the sustainability of its urban economies depend on both water and energy. The examination of the water-energy nexus in two river basins in Mongolia shows that water availability is the binding constraint as energy facilities, mining operations, agriculture, and urban water users compete for scarce water resources. Development of new technologies for efficient water and energy use, introduction of renewable energy options, and water demand management through economic instruments are recommended. However, achieving greater water security requires integration of water resource considerations into energy and mining development decision making, while strengthening the capacity of newly-formed river basin organizations.

The following recommendations provide some general guidance for the national government to consider in decisions that relate to water, energy, and mining, which are inextricably linked:

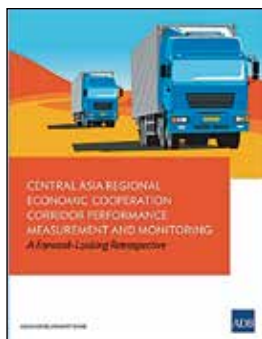
Integrate water resource considerations into decisions on energy and mining development. Current programs and plans for mining development should undergo a strategic environmental assessment under the new Mongolia Environmental Impact Assessment Law. For example, the recently completed update to the Energy Sector Development Plan should have been subjected to a strategic environmental assessment that would have examined the potential environmental and social impacts of the proposed expansion and integration of the energy systems in Mongolia. In this context, the assessment should have examined water resources availability and the impacts on competing water resource users.

Support green procurement for water and energy technologies. Under the green development policy of Mongolia, 2% of gross domestic product will be allocated for green procurement in the water and energy sectors to develop greener technologies. These funds should be targeted on increasing energy efficiency at the industrial and household levels. To increase the sustainability of water supply, new and innovative projects for rainwater collection and recycling of wastewater should be developed.

Reduce the water intensity of energy production. Mongolia's existing thermal power stations are inefficient in their use of water. All new facilities should be designed to minimize water use and apply cooling technologies and practices consistent with international good practices. In addition, energy-efficient technologies for water use and good practices for energy efficiency should be adopted. It is also necessary to introduce environmentally friendly methods such as renewable energy (e.g., wind, solar) to reduce the water intensity of energy production.

Get the economic incentives right. Now is the time to improve the payment system for water services (i.e., water use fees, water service charges, pollution fees, and discharge fees) for water use by the energy and mining sectors. A transparent incentive structure that is clearly communicated to the public should be prepared, focusing initially on urban households, mining and the energy sector.

Strengthen water management institutions. The newly formed water management organizations need to be strengthened so that they can fulfill their mandates under the new Water Law (2012). Better facilities, trained staff, financing, and support systems are needed for river basin authorities and river basin councils. Water information systems need to be developed, and scientific understanding of water resources in Mongolia needs to be improved. South-South cooperation should be undertaken to facilitate exchange of information on water management practices with other countries. This is already being addressed in the Tuul River Basin through the proposed Tuul River Improvement Project (\$20 million) funded by the Asian Development Bank. In South Gobi, institutions are being strengthened through a groundwater management project funded by the World Bank and Australian Aid (\$3.23 million).



Central Asia Regional Economic Cooperation Corridor Performance Measurement and Monitoring: A Forward-Looking Perspective

<http://www.adb.org/publications/carec-corridor-performance-measurement-and-monitoring-forward-looking-retrospective>

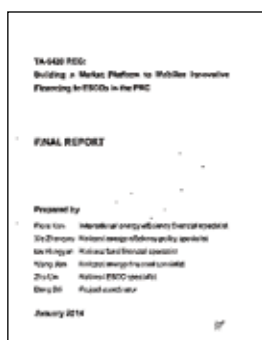
This report describes how Central Asia Regional Economic Cooperation (CAREC) corridor performance measurement and monitoring (CPMM) helps to achieve the objectives of CAREC's Transport and Trade Facilitation Strategy 2020 and its implementation action plan. The report presents the CPMM methodology and discusses the roles and responsibilities of key stakeholders, especially the private sector. It highlights ongoing efforts to provide accurate and reliable indicators despite the challenges of measuring corridor performance in CAREC.

Trade facilitation indicators have been developed to inform CAREC's development effectiveness review. These indicators provide a basis of comparison or benchmarking of one location (border crossing point or corridor segment) against another in terms of border management agency efficiency in regulating trade; infrastructure quality; and, in due course, the quality and performance of trade logistics service providers. Time and cost constitute the core components of these indicators. Selected corridor performance data are then analyzed to identify the physical and nonphysical barriers to trade and transit traffic encountered at specific locations, helping to pinpoint the causes of excessive delays and costs. With this study, the Asian Development Bank underscores the value of CPMM for CAREC countries (and for countries participating in other subregional programs) as they craft policies and consider investments to facilitate trade.

The report presents the CPMM methodology and discusses the roles and responsibilities of key stakeholders, especially in the private sector. It describes how CPMM's process-based methodology captures data on the time and cost of moving freight within the CAREC region, particularly at border crossing points, to spur operating efficiency, reduce bottlenecks along the CAREC corridors, and improve international and regional trade flows. Despite the challenges of measuring corridor performance in the CAREC context, efforts are being made to provide accurate and reliable indicators. The depth of data and the richness of information provided by CPMM—which has been used to measure CAREC corridor performance since 2009—supports detailed and well-grounded policy analysis, formulation, and implementation.

Ancillary transport and other logistics-related infrastructure can and must be developed—CPMM has made this clear. Better institutional frameworks must also be created or existing ones reformed, particularly as they relate to border crossing points, where incidence analysis points to occasional unnecessary delays due to misunderstandings and operational issues. CAREC corridors serve a variety of purposes, some unique and others overlapping. Since the corridors are the arteries for trade flows, initiatives that facilitate trade through more efficient transportation, fewer choke points, and fewer unnecessary delays (either along a stretch of road or at a node during transit) must be supported. Through its formal implementation, CPMM has addressed this issue, with a particular focus

on recording and understanding in detail the border-crossing activities for road and rail transport. As roads still carry most of the cargo flow within the CAREC region (80% of the total volume of goods is shipped by road; only 17% by rail), policy makers must be mindful of the implications of overdependence on heavily trafficked corridors. Sufficient redundancy must be built into the road network to ensure seamless cargo flow. Efforts are under way to extend selected corridors so that they connect with seaports and intermodal logistics hubs. Transport and Trade Facilitation Strategy 2020 highlights the need to increase geographic coverage and interconnectivity between corridors through road and rail to maximize the effective flow of trade. CPMM has begun to include these corridor extensions in its analysis.



Building a Market Platform to Mobilize Innovative Financing to Energy Service Companies in the People's Republic of China

By reviewing the existing research results and referring to the latest situation and features the energy service company (ESCO) industry faces in the People's Republic of China (the PRC), the report summarizes the following.

- (i) Most ESCOs do not have many fixed assets, mortgage assets, bank credit records, and have a relatively short life. This results in serious financing difficulty, which becomes one of the major bottlenecks impeding the fast growth of the ESCO industry;
- (ii) The People's Republic of China Banking Regulatory Commission (CBRC) has circulated the Green Credit Guidelines. On that basis, some commercial banks have launched special financial products with future revenue seen as pledges. A few guarantee institutions, capital leasing companies, trust companies, and fund companies have achieved success. However, ESCO financing problems still need to be further mitigated in an innovative way, and both the World Bank and the Asian Development Bank researches recommend the establishment of a dedicated ESCO financing fund or small and medium-sized enterprise (SME) financing platform.

International experience provides useful information but must be adapted to local conditions. According to ESCO market development, maturity of financial market as well as legislative and regulatory framework in the PRC are needed. The report recommended two forms of designing ESCO financing platforms. One is to establish cooperation alliance consisting of different financial institutions but not having investment function (Cooperation Alliance Platform). The other is to establish an entity with clearly defined legal status and investment functions (Legal Entity Platform).

Based on potential funding sources and current development of private equity funds in the PRC, sorted in terms of the platform's sponsor, the report identifies mainly three options to build the platform:

- (i) **Option 1.** Central government as sponsor of the platform. The central government serves as a major sponsor and cornerstone investment of the platform, along with local governments and other potential investors to set up the platform. Sovereign funding from international financial institutions obtained with government guarantee is the major source of central government's investment.
- (ii) **Option 2.** Investment institutions or energy-efficiency enterprises as sponsor of the platform, with funding from central government and international financial institutions. Investment institution or energy efficiency enterprise (domestic or foreign) serves as a major sponsor and cornerstone investor of the platform, along with other potential investors to set up the platform. Sovereign funding of international financial institutions will be provided to the major sponsor in the form of loan, and the sponsor will use the sovereign loan as its major source of capital to invest in the platform.
- (iii) **Option 3.** Investment institutions or energy-efficiency enterprises as sponsor of the platform, without central government funding and sovereign funding of international financial institutions. Investment institution or energy efficiency enterprise (domestic or foreign) serve as a major sponsor cornerstone investor of the platform, along with nonsovereign funding of international financial institutions and market-oriented funding (domestic and foreign) and funding from local governments to set up the platform. Sovereign funding of international financial institutions and central government funding will not participate in establishment of the platform.

The platform will use a method of from-simple-to-complex to provide products and services by phases so as to meet the specific demand of the ESCOs financing and the platform function. The relation among products and services shall be mutually supporting and complementary with an eye to satisfying needs and avoid unnecessary competition. In general, the innovative financing platform will establish: (i) ESCO equity investment, (ii) project equity investment, (iii) guarantee, (iv) capital leasing, (v) on-lending loan on the basis of international financial institution sovereign loan, (vi) regional cooperation fund with pilot provinces and cities, (vii) consulting and accreditation, and (viii) capacity building and training. Exit channels for the main products provided by the platform include: initial public offering (IPO), merger and acquisition, project cash flows, asset securitization, buyback by shareholder, and buyout by host enterprises.



Soil Pollution and Contaminated Land Management in the People's Republic of China—A Review with Recommendations for the 13th Five-Year Plan

From 2005 to 2013, the Government of the People's Republic of China (the PRC) conducted a nationwide survey to establish a comprehensive inventory for land contamination. The survey covered 6.3 million square kilometers and types of land surveyed included agricultural, industrial, and mining, among many others. Contaminants tested include 13 heavy metals, 2 pesticides, and polycyclic aromatic hydrocarbons.

Based on the *Communique: the National Survey of Soil Pollution*, issued on 17 April 2014 by the Ministry of Environmental Protection (MEP) and the Ministry of Land Resources, soil pollution in the PRC is alarming in general and severe in some regions, particularly at industrial sites, and in wastewater irrigation and mining areas. The results indicated that about one-fifth of the agricultural land and almost three-fourths of the land with wastewater irrigation are contaminated; over one-third of industrial and waste disposal sites are contaminated sites; and about one-fifth of the land along the highways is contaminated. Compared with the baseline soil quality surveyed during the 7th Five-Year Plan, 1985–1990, the 2005–2013 survey results indicate a significant increase of heavy metal contaminants in the surface soil. MEP concluded that soil pollution in the PRC threatens the food supply and safety, endangers the public health, and damages the ecological system in some regions.

The soil contamination problem is most severe in the Yangtze River Delta, the Pearl River Delta, and Bohai industrial belt (the three economic engines in the PRC), and the old industrial bases such as those in the northeast PRC. MEP concluded that the main drivers for these land contaminations include poor environmental management, excessive industrial and mining wastewater discharges, wastewater irrigations, overuse of fertilizers and pesticides, spillage of mining mud, automobile emissions, and air pollutant deposits.

Two widely cited bottlenecks for the PRC with regard to the management of contaminated land are the lack of a legal mandate (i.e., Soil Protection Law); and the lack of funds for soil pollution prevention, control, and remediation. Other challenges often reported include the lack of competent remediation professionals and service providers, lack of a comprehensive national strategy in tackling the agricultural soil pollution issues, and lack of cost-effective remedial technologies suitable for the PRC.

Recommendations include:

- (i) Establish a comprehensive soil protection law;
- (ii) Strengthen capacity building on remediation technologies;
- (iii) Implement the next phase of the National Survey of Soil Pollution, targeting specific high priority areas;
- (iv) Invest in the development and growth of the remediation industry;
- (v) Pilot innovative financing mechanisms such as public–private partnership; and
- (vi) Strengthen information disclosure and public participation.



Strengthening Environmental Statistics in the People's Republic of China—An Interim Analysis with Recommendations

The environmental statistics of the People's Republic of China (the PRC) require a deep retrofitting of its institutional, management, and methodological frameworks to catch up with the most advanced international standards and to efficiently play its role in environmental policy making. The paper provides the following policy recommendations for improving the environmental statistics system in the PRC.

Revise the Regulation on Environmental Statistics Management.

The Regulation on Environmental Statistics Management should be revised to ensure it conforms to the 2014 Environmental Protection Law. The regulation should further strengthen and subdivide the responsibilities of enterprises concerning environmental data and information disclosure.

Establish a restructured environmental statistics management system and improve its operation.

The environmental statistics management system should be restructured to ensure the acquisition, processing, and dissemination of environmental statistics, independent from the intervention of authorities, particularly the local governments. A first option is to designate the National Statistics Bureau to develop the environmental statistics work, in cooperation with the environmental administrations. A second option is to set up a horizontal environmental statistics office within the Ministry of Environmental Protection.

Establish a steering committee, a consultative council, and an environmental statistics center under the Ministry of Environmental Protection. These would improve the capacity of the ministry and provide technical support for environmental statistics, as well as conceptual developments for environmental indicators.

Develop institutional arrangements to improve quality and efficiency of data collection. Establish a peer review mechanism to strengthen quality control of environmental statistics, a data quality reporting system, and an on-site verification system. Enhance public participation in supervising environmental statistics work by promoting information disclosure as soon as possible.

Improve technical methods for environmental statistics. Strengthen the 'State-Owned Pollution Source Direct Reporting System' by reviewing its relevant functions and adjusting its software.

Strengthen international cooperation. Derive lessons from the European Union and individual countries' experiences to extend the services from environmental statistics. For instance, develop the PRC's own comprehensive pollution map, by integrating a geographic information system, and demographic and economic information with environmental information for public use and for environmental management.



Strengthening Environmental Enforcement in the People's Republic of China—Recommendations for the 13th Five-Year Plan: Changing Minds, Adding Resources, Engaging in the Entire Law Enforcement Chain

Following a major milestone in the revision of the Environmental Protection Law, this paper highlights some of the environmental enforcement challenges that the People's Republic of China (the PRC) continues to face, and provides recommendations to strengthen environmental law enforcement in the PRC during the 13th Five-Year period. These recommendations fall under the following three headings.

Change Incentive Structures

- (i) Broaden the use of environmental performance measures to all areas and levels of government and gradually increase the weighting of environmental performance in cadre assessment;
- (ii) Further study the effects of fiscal policy on the incentive framework for environmental compliance and sound resource management at the local level;
- (iii) Educate all levels of government on the harmful and destabilizing effects of pollution and the economic benefits of biodiversity; and
- (iv) Emphasize the PRC's commitment to a healthy environment as a key aspect of the [People's Republic of] China Dream and Beautiful [People's Republic of] China and back up that commitment with resources and incentives.

Fully Engage Bottom-up Approaches

- (i) As full information to government and public is key to enforcement, collect and disseminate emissions and pollution information, and "name and shame" noncompliant enterprises and administrative regions where information is delayed or inaccurate, or where inspections are resisted or incomplete;
- (ii) Encourage the public and nongovernment organizations (NGOs) to monitor and report noncompliance, provide channels, investigate and respond to complaints and government to cooperate with NGOs; and
- (iii) Increase the use of cooperative compliance approaches, for example by establishing an independent monitoring agency similar to that in the United Kingdom that is empowered to apply a range of compliance tools, including negotiation, but that is backed up by a genuine threat of strong penalties.

Increase Resources

- (i) Encourage innovations—such as the Ministry of Environmental Protection's recent creation of a phone app to allow citizens to report pollution—but provide sufficient resources to the environmental compliance agencies to act on the information;
- (ii) Engage the entire law enforcement chain;
- (iii) Support the use of environmental public interest civil lawsuits and clarify standing of the public and NGOs to bring administrative

- actions in the case of failures of local environmental protection bureaus (EPBs) or other government agencies to implement environmental law requirements; and
- (iv) Devote greater economic and scientific resources to research and establish a sound basis for the measurement of “green gross domestic product,” “ecosystem services,” and valuation of environmental harms so that sanctions for violations of environmental law can more closely approximate actual harms to the environment.



Logistics Information System

Successful supply chain management requires extensive information sharing among different logistics-related stakeholders. Information sharing significantly improves supply chain coordination, decreases logistics costs, and enhances supply chain performance.

Information sharing among private logistics stakeholders and government entities is crucial to having an efficient, cost-effective coordination. The single-window system in business-to-government and business-to-business transactions is important in order to integrate and streamline existing applications and platforms. Studies have shown that an integrated system saves costs on logistics and is environmentally friendly. Updates and maintenance could mitigate security risks.

The paper reviews different logistics information systems and gleans some factors that contributed to the success of the systems. Some of the factors that contributed to the success of the initiatives were strong leadership from the public (Republic of Korea and Singapore) and private sectors (Germany); cooperation and commitment among all stakeholders; staged approach to full implementation (use of a pilot project); willingness to invest in new technologies; detailed development of a master plan before implementation, and creation of the legal framework for efficient development of the systems.



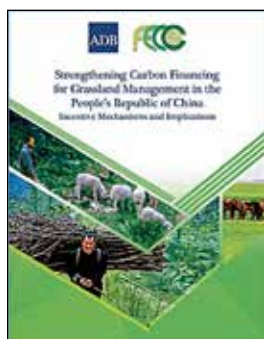
Rural Logistics

Logistics in rural areas is the efficient flow of agricultural products from the producer to the consumer. It is an efficient and effective process of planning, implementing, and controlling the flow and production of agricultural products, information, and funds to the final user. The aim of logistics in agriculture is to increase production of agricultural products to care for its continuous operation; optimize the cost of production, storage, transport and distribution; increase value-added agricultural products; and satisfy the consumer. This paper reviews the characteristics and problems in rural logistics and suggests actions to improve rural logistics in the People’s Republic of China (the PRC).

Problems in rural logistics in the PRC include demand of the commodity is rare, leading to little supply and demand of logistics; relatively weak

infrastructure and high costs of logistics; dispersed rural farmers, where agricultural production cannot achieve economies of scale; lack of capacity in a highly technologically advanced field of agricultural production; deficient communication and information on agricultural technology and practices; uncoordinated product delivery system for farmers, who transport most of the produce; and long transport time and distance leading to spoilage.

The development of rural logistics may help increase farmers' income, promote farmers' quality of life, reduce agricultural costs, and increase job opportunities. According to the Food and Agriculture Organization, rural transport in developing countries should be focused on collection, packaging, storage, and distribution of agricultural products. Among the urgent tasks identified are to improve transport and related infrastructure for agricultural products; improve and expand storage capacity, distribution, and marketing system; develop transport and communications; and train farmers to reduce loss due to harvest and temporary storage. The reduction of spoilage and damages that could improve the marketing value of the produce may necessitate the availability of adequate processing, packaging, and storage and transport facilities and management for each variety of produce. Logistics centers or intermediate urban centers can play a role as links in the marketing system of agricultural products. Information about suppliers and producers is crucial in agricultural markets. Improvement of communication systems for distribution of information is also necessary in rural communities.



Strengthening Carbon Financing for Grassland Management in the People's Republic of China Volume 1: Incentive Mechanisms and Implications

<http://www.adb.org/publications/prc-strengthening-carbon-financing-grassland-management-incentive-mechanisms>

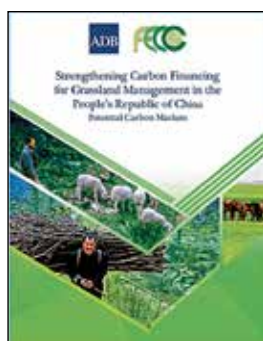
This report summarizes the legal and policy framework for incentive programs related to improving grassland management in the People's Republic of China (the PRC); assesses the impacts of these programs on soil carbon stocks; and analyzes the implications of existing experience with incentive mechanisms for the development of grassland carbon finance projects, specifically for domestic carbon markets. The Grassland Law of the PRC (2002) provides the legal framework for national and provincial regulations on grassland management, and empowers the government to implement major programs to address grassland degradation and sustainable management of grasslands.

Grassland degradation and desertification restrict the development of grassland animal husbandry and negatively affect herders' incomes. Government-supported programs that provide financial incentives to herders to improve grassland management are being implemented in about 60% of the PRC's grassland area, and therefore constitute an important part of the context for developing and implementing carbon finance initiatives in grassland areas.

Three main incentive programs are being implemented in the PRC: the Beijing–Tianjin Sandstorm Source Control Program, which promotes the cultivation of forage resources and the restoration of degraded grasslands on 3.5 million hectares (ha); the Grassland Retirement Program, which promotes reseeding and grazing prohibition on 41 million ha of heavily degraded areas, and seasonal resting of less severely degraded grasslands; and the Grassland Ecology Conservation Subsidy and Reward Mechanism, which provides incentives for sustainable stocking rates on 217 million ha.

The results of these programs have been mixed. There is considerable interest in the PRC in the potential for the sustainable management of grasslands to generate carbon revenues to offset costs and replace lost income for herders as an incentive to implement management activities. Seven pilot provinces and cities are currently developing local carbon markets in the PRC.

The primary limitations to carbon finance as an incentive are the lack of approved carbon accounting methodologies for grassland and livestock management, the lack of familiarity with carbon finance among grassland managers, and limited demand for carbon offsets in the domestic carbon markets. It is recommended that the Ministry of Agriculture organize training workshops and develop pilot carbon finance projects, document effective approaches and method for replication of successful pilot initiatives; use existing data collection systems as the basis for monitoring of carbon projects to reduce costs; and implementing agencies consider how improvements in monitoring data could better support existing incentive programs and community-based grassland management needs, since carbon finance projects have higher requirements for monitoring data than existing data collection systems.



Strengthening Carbon Financing for Grassland Management in the People's Republic of China Volume 2: Potential Carbon Markets

<http://www.adb.org/publications/prc-strengthening-carbon-financing-grassland-management-potential-carbon-markets>

A considerable proportion of grasslands in the People's Republic of China (the PRC) are degraded to some degree. Restoration and sustainable management of grasslands in the PRC have a large greenhouse gas (GHG) mitigation potential. Government-funded programs are investing in restoring and improving the management of grasslands.

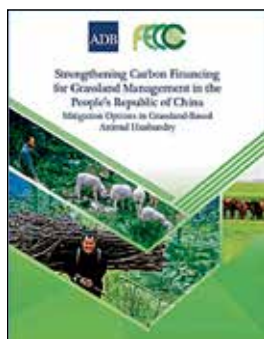
This report assesses the potential of carbon market mechanisms in achieving grassland policy objectives by complementing existing government investments. It reviews national policies on climate change mitigation, particularly carbon markets, and outlines opportunities and challenges in producing carbon offsets from grassland-based animal husbandry to benefit from existing and emerging carbon markets.

The Government of the PRC has announced an objective to reduce the carbon intensity, measured as GHG emissions per unit of gross domestic

product, by 40%–45% by 2020 compared with 2005 levels. The GHG mitigation policy does not list grassland carbon sequestration, and the listed measures to address livestock waste (e.g., biogas) are not widely relevant in grassland areas. However, the promotion of grassland carbon sequestration and carbon trading are explicitly mentioned in a number of central government policies. Both the Inner Mongolia Autonomous Region and Qinghai province have included support for trade in carbon offsets from grasslands in their current 5-year plans.

Carbon emissions trading markets are one of the PRC's main policy mechanisms to encourage reduction in GHG emissions. The central government's support for pilot carbon trading schemes in seven provinces and cities, which allow trade-in offsets, potentially provides an opportunity to link supply of carbon offsets from grasslands with demand for offsets from other sectors. With these schemes, three potential sources of future demand for grassland offsets in the PRC are international buyers in the voluntary market, domestic voluntary buyers motivated primarily by corporate social responsibility and business needs, and buyers meeting their compliance obligations in the evolving compliance carbon market in the PRC. Since grasslands offsets cannot be used overseas to meet international buyers' compliance needs, the future scale of this source of demand is expected to be significant. The main source of potential domestic demand is likely to be the compliance market in the PRC.

Except for biogas activities, grassland management and livestock management are new project types. Developing these project types will incur a range of costs and risks, which reduces incentives for private sector investment in early pilot projects. To date, most investment in development of grassland carbon offset projects have been made by international organizations, and examples of ongoing pilot activities are given in the report. Previous experience of the government's engagement with clean development mechanism and voluntary markets in the PRC suggests that public agencies can support the development of new project types. Public investment in developing new methodologies and implementing pilot project activities will prove the concept for grassland and livestock management in the sector.



Strengthening Carbon Financing for Grassland Management in the People's Republic of China Volume 3: Mitigation Option in Grassland-Based Animal Husbandry

<http://www.adb.org/publications/prc-strengthening-carbon-financing-grassland-management-mitigation-options-animal-husbandry>

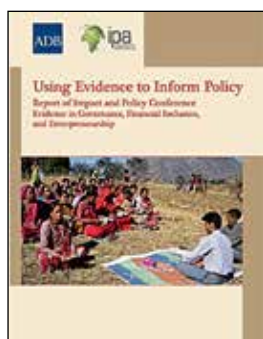
This report summarizes potential technical measures to increase carbon sequestration and reduce the intensity of greenhouse gas (GHG) emissions from grassland-based animal husbandry in the People's Republic of China (the PRC). A considerable proportion of the PRC's grasslands are degraded. Overgrazing is one of the main drivers of degradation and is primarily driven by households' short-term, income-generating strategies. Options for increasing forage supply in grassland areas are limited, and purchasing fodder is costly. Restoring degraded grasslands and increasing the efficiency of forage utilization are key strategies for addressing sustainable grassland management. Grassland restoration can sequester carbon, primarily in

grassland soils; and improving forage utilization efficiency can reduce GHG emissions per unit of livestock product output.

Measures to sequester soil carbon include prohibiting grazing on degraded grasslands; converting croplands to pasture or shrubs; planting grass, legumes, or shrubs on degraded grasslands; and applying fertilizer. These measures can sequester 1.5–4.7 tons of carbon dioxide per hectare per year for up to 50 years. To balance carbon sequestration and livestock production objectives, supportive changes in grazing and livestock management are required. Reducing grazing intensity, reducing the age of livestock raised through early offtake, and improving feed and livestock housing to fatten livestock in winter are measures that can increase the efficiency of forage utilization, improve livestock productivity, and thus potentially support improved grassland management.

Improving the productivity of individual animals and herds can also reduce the intensity of GHG emissions from livestock production. Relevant measures in the PRC's grasslands include culling less-productive animal, early offtake, improved breeds and breed selection, and use of improved feeds. In general, these measures should also increase the profitability of herder's livestock enterprises, although poor integration with livestock product markets may reduce the profitability of some options.

Measures to restore degraded grasslands that can sequester soil carbon are widely promoted by government-funded programs. These programs may be sequestering 175 million–240 million tons of carbon dioxide per year. The mitigation potential of improved livestock production is likely to be less than 10% of the soil carbon mitigation potential. However, because of their effects on forage utilization efficiency and livestock productivity, efforts to improve livestock management are crucial to supporting the adoption of improved grassland management practices and addressing potential trade-offs between carbon sequestration and income generation by herders. The main government-supported grassland management programs promote a limited number of management practices, and often provide subsidies that are insufficient to offset implementation and opportunity costs. Carbon finance could potentially complement existing investments by government and herders, with carbon revenues supporting the initial investment costs of improved practices, ongoing maintenance costs, opportunity costs, and the costs of community-based grassland and livestock management institutions.



Using Evidence to Inform Policy: Report of the Impact and Policy Conference: Evidence in Governance, Financial Inclusion, and Entrepreneurship

<http://www.adb.org/publications/using-evidence-inform-policy>

This report summarizes innovative evaluation studies presented at the Impact and Policy Conference: Evidence in Governance, Financial Inclusion, and Entrepreneurship held from 30 August to 1 September 2012, in Bangkok, Thailand. The conference was cohosted by the Asian Development Bank, the Innovations for Poverty Action, and the Abdul Latif Jameel Poverty

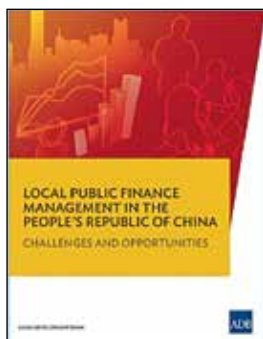
Action Lab to promote evidence-based policy making. The conference presentations touched on the following several broad themes that can help shape how researchers and policy makers move forward.

Small and medium-sized enterprise development. Small and medium-sized enterprises are widely believed to serve as engines for innovation, employment, and social mobility. Some promising interventions address the bottlenecks to their growth, such as incentives for loan officers and credit scoring in bolstering loans to small and medium-sized enterprises, training, and capital infused at the right time to help prepare entrepreneurs for the next step in growing their business.

Governance. The motivation for good governance runs through all aspects of inclusive growth: increasing citizen participation in elections and responsiveness of elected officials to citizen preferences, reducing leakages in spending on social services and programs, and managing conflict and reconstruction are critical to improving development outcomes.

Financial inclusion. Financial inclusion interventions aimed at enhancing the poor's access to and use of financial products, services, and tools. Savings accounts, microfinance, and mobile banking can help the poor smooth consumption, boost investment and savings, and manage shocks.

Rigorous evaluation of these programs tells us whether the interventions were successful, and often provides insight as to why they work, and for whom. By sharing the details of their studies' methodology, results, and implications for policymaking, researchers provide the framework for policy makers to use program assessment to improve policy, practice, and decision making.



Local Public Finance Management in the People's Republic of China: Challenges and Opportunities

<http://www.adb.org/publications/local-public-finance-management-peoples-republic-china-challenges-and-opportunities>

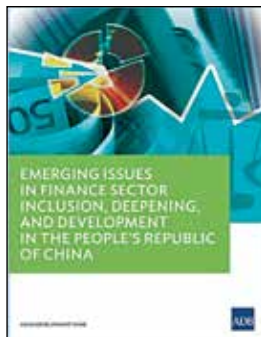
The People's Republic of China (PRC) is a unitary state with a unified and integrated budget system and a centralized tax system, but in the interest of efficiency, most of the public service delivery responsibilities are decentralized to subprovincial governments. Generally, the central government has legislative, policy making, and financing responsibility, while provincial and local governments enjoy significant budgetary discretion provided that they deliver on their growth and citizen satisfaction mandates. However, local own-source revenues are inadequate, and central transfers lack predictability and time consistency. To fulfill their mandates, local governments must strengthen their economic base through innovative means, which often creates a culture of competition between local governments. This culture has brought substantial prosperity and growth, but also lack of attention to macro fiscal risks, fiscal responsibility, environmental protection, food security, urban sprawl, and social inclusion. This technical assistance project, Strengthening Fiscal Policy and Public Finance Reform over the Medium term is concerned with addressing these challenges to sustain the PRC growth path.

To ensure adequate policy response to fiscal and economic challenges at the local level and to achieve the medium-term public finance reform objectives, the Asian Development Bank's (ADB) technical assistance project on strengthening fiscal policy and public finance reform implemented a three-pronged approach. First, a research program developed policy papers on budgeting and budget execution; local debt management, focusing on the current status of reforms and an agenda for future reform; and newer tax handles for local governments. These analyses were supplemented by lessons from international experiences. Second, these policy papers served as the basis of consultations, policy dialogue, training, and capacity development workshops for more than 100 provincial officials conducted in Shanghai and Beihai, Guangxi province. Finally, the report served as a source document for a discussion of the same issues with central government officials and other stakeholders in Beijing in June 2013. The final version of this report, presented here, incorporated the feedback received at the Beijing workshop.

This publication grew out of the ADB technical assistance project to ensure an adequate policy response to local public finance management and to achieve medium-term fiscal reforms in PRC. It analyzes the bottlenecks in local public finance management by focusing on local budgeting, debt management and taxation. Local budgeting, debt management, and taxation have important bearings on local public finance management. These three issues are closely interrelated, and those were highlighted as important challenges in public finance by the Third Plenary Session of the 18th Central Committee of the Chinese Communist Party in November 2013.

The publication suggests that the overall purpose of the local public finance reforms is to improve local accountability and transparency, strengthen local fiscal capacity, and institutionalize formal frameworks for local public debt management. Linking local budgeting with fiscal planning and medium-term priorities is key for accountability, while comprehensiveness in budgeting and its execution is vital for transparency. Strengthening local fiscal capacity is also necessary to balance spending powers with expenditure responsibility. To meet local investment needs with fiscal discipline, local borrowing needs to be formalized by institutionalizing regulatory frameworks.

This project studies confirm the success of recent reform initiatives in improving transparency of budgeting, regulated access to capital finance, and strengthening local finances. To maintain the momentum of these reforms, this publication provides suggestions for additional policy options in the three areas of local public financial management—local budgeting, local debt management, and local taxation, which may be considered by the policy makers in the short, intermediate, and long terms.



Emerging Issues in Finance Sector Inclusion, Deepening, and Development in the People's Republic of China

<http://www.adb.org/publications/emerging-issues-finance-sector-inclusion-deepening-and-development-peoples-republic-china>

The report includes a compendium of finance sector issues in the People's Republic of China (the PRC), presents an overview of key finance sector reforms by the government; and offers observations and suggestions that could help implement the PRC's finance sector reform agenda, with support from loans, investments, and technical assistance from the Asian Development Bank (ADB).

With so many potential areas for support and development, the greatest synergies are likely to be found in the areas in which the PRC and ADB have the same priorities. Ideally, ADB should continue to draw upon its experience in identifying and developing pilot programs that could be implemented in more than one province or market. Opportunities to deliver outcomes in support of the PRC's and ADB's strategic priorities could arise in the following areas:

Financial Inclusion

- (i) development of community banking models or “franchises” to support the creation of a sustainable multitiered financial system, and the provision of credit and financial services to underbanked communities and to micro, small, and medium-sized enterprises lacking access to finance;
- (ii) review of the supervisory and legal frameworks for microfinance institutions; and
- (iii) improvement of credit systems, as many financial institutions do not have sufficient information on client credit histories, and therefore cannot accurately assess credit risks. The authors suggest that ADB help develop localized cooperative credit-reference agencies to provide credit scores on individuals and entities in their communities.

Legal, Regulatory, and Supervisory Structures

- (i) support for the [People's Republic of] China Securities Regulatory Commission (CSRC), which regulates market conduct, by developing a universal licensing regime, as well as a sound disclosure regime, for collective investment products.
- (ii) establishment of a licensing regime for financial advisors and brokers who sell products, regardless of their distribution channels (for example, through banks' capital market divisions, insurance companies, or via the internet); and
- (iii) development of a regime based on the fair treatment of customers that would include a standardized disclosure risk measure for all retail financial products (e.g., a simple, standardized framework similar to the Netherlands GUISE measure); a dispute-resolution scheme; and timely, robust, and appropriate enforcement actions.

Pension Funds and Insurance

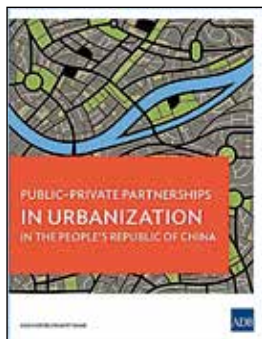
- (i) review of the various pension schemes in terms of their rules, contribution and benefit levels, administration, and funding situations. The authors of this report believe that future ADB work in this area should focus on the long-term goals of harmonizing, and then centralizing, the PRC's pension system.

Equity, Debt, and Capital Markets

- (i) the continued development of Asian bond markets in cooperation with the PRC;
- (ii) a focus of ADB support on municipal finance. This would include capacity building and governance processes, including long-term budgeting, service demand and forecasting, asset management, and infrastructure development and planning; and
- (iii) capacity building for the staff of the National Equities Exchange and Quotations board in the wake of its recent expansion to include nontechnological companies, to improve the supervision and monitoring of listing and trading activities, disclosure, selling and brokering practices, and market abuse concerns; and to develop a strong investigation and enforcement capability to maintain the integrity of this expanded bourse.

Green and Climate Change Finance

- (i) further support for the development of a national carbon-trading market by applying lessons learned from pilot schemes in the PRC;
- (ii) financing for small and medium-size enterprises in the energy field, as ADB support for energy efficiency could continue to focus on strengthening guarantees for the financing of energy service companies;
- (iii) support for the development of the PRC's green bond market; and
- (iv) assistance to the PRC in developing a national statistical database to collect, analyze, and report on environmental data, given that one of the challenges in the development of carbon trading is the lack of emissions estimates.



Public-Private Partnerships in Urbanization in the People's Republic of China

<http://www.adb.org/publications/public-private-partnerships-urbanization-peoples-republic-china-workshop-proceedings>

This report summarizes the proceedings of the Public-Private Partnerships (PPPs) in Urbanization workshop held in Beijing on 22-23 August 2013. The workshop was organized by the Ministry of Finance, the National Development and Reform Commission, the Asian Development Bank (ADB), the PPP Research Committee hosted by the Institute of Fiscal Sciences, and the Regional Knowledge Sharing Initiative hosted by ADB. About 200 participants from the central government, 35 local governments,

financiers, private service providers, academic and research institutions, and development partners joined the workshop. The workshop allowed those who were undertaking the planning, preparations, and implementation of PPPs to share their knowledge and best practice approach to PPPs.¹

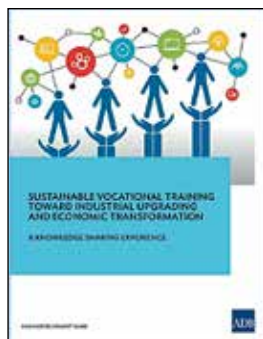
The workshop drew from the extensive use of PPPs in the People's Republic of China (the PRC) since the early 1990s. More than 1,000 PPP projects, valued over \$100 billion, provide services in transport and communication, energy, clean water, wastewater treatment, and a variety of social services. Case studies from this experience were presented by local governments and industry practitioners. The workshop participants reviewed these experiences and insights to show how “pathfinder” PPPs could be prepared to demonstrate new ways of using PPPs. They also examined innovative ways of financing PPPs.

There was consensus in the need to explore how PPPs can address the challenges arising from the rapid urbanization of the PRC. The participants recognized that the high demand for infrastructure, education, healthcare, social housing, and other public services is straining the fiscal capacity of local governments, and acknowledged that this demand must be met if development goals are to be achieved. Urban services offering high environmental benefits, such as public transport, clean energy, and waste management were also identified as needing substantial financing.

The discussion emphasized the broad scope of the PPP agenda. It was accepted that PPPs can do more than just mobilize additional financial resources and expertise to deliver more public services. Participants agreed that PPPs provide a performance-based management framework that can strengthen the quality of public services and reduce their cost.

Dialogue extended to the actions that would strengthen the PPP program and generate quick results. The Ministry of Finance and the National Development and Reform Commission endorsed the importance of strengthening the enabling environment for PPPs and building capacity on preparing, implementing, and managing PPPs. Government agencies were encouraged to tap into the knowledge resources of international financial institutions, such as ADB and the World Bank, and bilateral partners and other partners such as the Cities Development Initiative for Asia. The international financial institutions and other partners were in turn encouraged to promote PPPs in a pragmatic, proactive, and prudent manner. At the same time, the potential fiscal risk from PPPs was emphasized. It was recognized that fiscal agencies need to understand and recognize these risks and ensure that prevention and control mechanisms are in place.

¹ This was funded as a subproject of ADB technical assistance, ADB. 2012. *Technical Assistance to the People's Republic of China for the Facility for Policy Reform and Capacity Building III*. Manila.



Sustainable Vocational Training Toward Industrial Upgrading and Economic Transformation: A Knowledge-Sharing Experience

<http://www.adb.org/publications/sustainable-vocational-training-toward-industrial-upgrading-and-economic-transformation>

Developing relevant skills for industrial upgrading and economic transformation is a key challenge facing many growing and middle-income countries. The Asian Development Bank and the People's Republic of China (the PRC) conducted a knowledge sharing event on 2–6 December 2013 to bring together policy makers and practitioners to discuss technical and vocational education and training (TVET) for meeting national economic objectives. The focus of the knowledge-sharing event was to determine best practice and modes for supporting sustainable vocational training; define the roles of the government, private sector, enterprises, and vocational training schools; improve vocational training in a rapidly changing world; finance vocational training; and shape the policy environment for vocational training governance and management.

Rural and urban disparities compound the challenges that the PRC faces and may complicate education in general. Three key issues in education came out at the forum:

- (i) in general basic education, universal completion and not just universal enrollments—especially for the children of migrant workers—needs to be ensured;
- (ii) the quality of education (particularly in rural areas), teaching resources, and facilities should be improved; and
- (iii) the special education needs of migrant workers' children should be addressed.

The challenges brought about by the changing labor market create specific demands on TVET, in particular, the need for

- (i) elderly care due to the rapidly changing demographic profile of an aging population;
- (ii) sustainability, greening of the industry, and green jobs;
- (iii) developing pathways between the TVET and higher education subsectors;
- (iv) projects and initiatives that promote regional cooperation generally and in TVET; and
- (v) sharing and demonstration of good practices for the benefit of the region.

From these common themes, the forum identified key points relevant for TVET reform. These key points have been grouped under the following headings:

General

- (i) There is a mismatch between the demand for high-level skills and the oversupply of low-level skills.
- (ii) Education prepares people for higher levels of learning, but more importantly, it orients learners and workers toward the world of work.
- (iii) Improving the status of TVET is important, as going to university is still a family honor.

Policy

- (i) Competitiveness in the main industry may rely upon the competitiveness of the supply chain industries. Skills development—upstream and downstream—is valuable to competitiveness of an industry sector.
- (ii) A central coordinating body overseeing TVET is a similarity shared by country examples presented as good practice.
- (iii) Skills development policy integration is an important area where multiple agencies are involved.
- (iv) Making TVET work requires new incentives and structures.
- (v) Core principles for the reformed TVET system are that it will be performance-based—that is, the institutes will be accountable for their performance.

Access and Equity

- (i) A total of 750 million domestic migrant workers in the PRC remain unskilled. A big challenge is reaching out to them and ensuring the education of their children.
- (ii) The implications for TVET include ensuring:
 - a flexible system to respond to the learning needs for all, and
 - new and soft skills to enable people to gain employment and contribute to society.

Industry, Student, and Technical and Vocational Education and Training Engagement

- (i) Becoming closer to the industry and establishing an ongoing, effective two-way partnership in many areas such as labor market information, curriculum, standards, career orientation, internships, hiring, and equipment can produce additional outcomes for the TVET subsector.
- (ii) Three factors are important for maximizing human resources:
 - building a flexible education system,
 - developing and updating needed skills, and
 - enhancing employability.

Innovation

- (i) To simulate innovation, workable solutions suitable to the local context must be identified. Innovation is a core requirement for economic growth, and the importance of creative power and entrepreneurship in high-skill economies should not be underestimated.
- (ii) A TVET paradigm shift toward skills-based TVET must be fostered, and TVET teachers and/or trainers should be positioned as agents of change.

Public-Private Partnerships and Funding

- (i) There are a number of benefits and risks that need to be weighed when considering negotiating a PPP.
- (ii) Associated benefits can include improved quality and access to new skills while risks can include inadequate environments and a lack of competition in some markets.

- (iii) Challenges to implementing PPPs in education and training include:
 - (i) a traditional focus on infrastructure, (ii) government resistance to private sector and/or PPPs, (iii) procurement issues related to contracting, and (iv) the financial viability of the potential projects. Additionally, there is a lack of appropriate policy frameworks to support PPPs and a need for incentives that support innovation.
- (iv) There are many potential PPP models for TVET, and the context is important as to which model is taken. The country's governance, financial management, and administrative capacity must all be taken into consideration. The size and nature of the nongovernment sector and fiscal situation, among others, all play a role in determining the PPP model for a particular country.
- (v) Levies have the potential of providing a large amount of funding. However, levies do not on their own guarantee greater participation in training, and research suggests that levies alone do nothing to improve the quality of skills development. Combined with other TVET systemic mechanisms levies can have a magnifying effect on the quality, relevance, and employer demand for training.
- (vi) The evolution in funding models is also linked to the practice of systems improvement based on evaluations and research of the TVET system, which affects how funds are targeted.
- (vii) For smaller developing economies, supporting industry involvement in TVET can be difficult. There is divergence in the research as to whether small employers benefit from levy schemes.
- (viii) Incentives for training providers must be explicitly changed to respond to external labor market demands and improve system performance, becoming outward rather than inward-looking.

Teachers

- (i) Teacher quality is an important area. While there has been investment in facilities and equipment, teachers require more skills, especially in emerging occupations and for use and application of new technologies.
- (ii) Investing in leadership programs for schools and attracting and developing the best teachers will work to improve the overall skill levels of future workers entering the labor market.
- (iii) In a diversified industrial society where highly skilled human resources are required, in-house vocational training will play a major role.
- (iv) The challenge is keeping the mutual relationship with the industry going and maintaining qualified teaching staff and good instructions. It is also a challenge keeping the curriculum of the school up-to-date with industry needs and maintaining equipment.

Curriculum Content

- (i) The curriculum needs to be developed with the industry, based on competencies. It should be considered a "living" curriculum that changes as required, with a focus on employment.
- (ii) High value service industries increasingly need highly skilled workers who also have soft skills (e.g., skills for teamwork, communication, problem-solving, and management).

- (iii) One of the important concerns for skills acquisition is ensuring that workers have strong productivity skills and technology training.
- (iv) Employees have consistently identified the need to increase and improve soft skills (e.g., literacy, numeracy, critical thinking, and digital skills) so employees have more transferable skills. Strong employer partnerships also enable colleges to provide students with work placements and internships, which is a key approach to ensure graduates are job-ready.



The People's Republic of China: Knowledge Work on Shadow Banking—Trust Funds and Wealth Management Products

<http://www.adb.org/projects/documents/prc-knowledge-work-shadow-banking-trust-funds-and-wmps-staff-consultant-report>

Shadow banking in the People's Republic of China (the PRC), can be seen as diversification of a bank-dominated financial sector and shift toward more market-based intermediation. However, strong growth of shadow banking has raised concerns regarding leverage, maturity mismatches, underwriting standards, credit quality, and banks' exposure to risks through off-balance sheet activities.

Quantifying shadow banking in the PRC is complicated by lack of consensus about definitions, activities to include, and data availability and quality issues. This study focuses on the two segments that dominate shadow banking quantitatively and have raised the most concerns: trust funds and bank wealth-management products (WMPs), which together amounted to \$3.36 trillion (CNY20.4 trillion) or 35.8% of GDP at end-2013 according to industry estimates, up from \$848 billion (CNY5.6 trillion) in 2010.

The main drivers for their growth were investors' search for higher returns in the PRC's regulated interest rate environment and the regulatory permission of bank WMPs to fund trust plans since 2007. Various regulatory initiatives have since effectively limited the bank-trust cooperation. As a result, only 23.2% of bank WMPs were invested in trusts and 21.7% of trust assets were funded by WMPs at end-2013. However, banks also invest own funds in trusts, which is why about half of trust assets might still be financed by or through banks.

The government has taken the following series of incremental regulatory steps over time to protect the banking system from risk related to WMPs and trust funds, and put their development on a more sustainable path.

- (i) Leverage was reduced and risk capital buffers increased by net capital regulation that requires banks to provide capital against investment in trusts, consolidation of most off-balance-sheet WMPs onto banks' balance sheets for calculating risk-based capital requirements, coverage of the remaining WMPs by trust companies' capital, and dividend policy restriction for inadequately provisioned trust companies.
- (ii) Liquidity was enhanced by limiting the amount of nonstandardized debt instruments, including trust loans, funded by trust plans or WMPs.

- (iii) Transparency was improved by requiring banks to maintain separate accounts for each WMP with transparent documentation of assets funded by each WMP account, and prohibiting the use of funding pools by bank WMPs and trust plans for investment in nonstandardized debt instruments.

The government is expected to continue strengthening regulations to further increase transparency and mitigate risks. At the same time, it will accelerate financial sector liberalization, including interest rate liberalization and asset securitization, to reduce regulatory-arbitrage incentives of investing in WMPs and trust funds. The government will also ensure that economic growth does not decelerate too quickly to limit the stress on exposed borrowers and their creditors to a degree that can be managed on a case-by-case basis through bail-outs and defaults, some of which are allowed to increase investor awareness for risks.



Identification and Review of Greenhouse Gas Emissions Reduction Activities in Poverty Alleviation Projects

<http://www.adb.org/projects/documents/identification-and-review-ghg-emission-reduction-activities-poverty-alleviation-projects-tacr>

The report proposes the following recommendations for promoting environmental friendly poverty reduction:

Promote economic transformation by enhancing awareness on reducing carbon emissions and promoting green enterprise-based poverty reduction. Training programs on the techniques and processes on effectively reducing carbon emissions are outlined in this report. These would increase awareness on the advantages of low carbon emissions, and facilitate the implementation of the Outline for Development-Oriented Poverty Reduction for [the People's Republic of] China's Rural Areas 2011–2020.

Promote ecological compensation mechanisms in poverty reduction projects. Poverty reduction projects should incorporate ecological compensation mechanisms that are adapted to the local conditions and can demonstrate the role of government in regulating ecological compensation mechanisms. Compensation must be gradually increased, long-term policy and financial support mechanisms created, and environment and regulatory conditions for ecological compensation regularized. This would support the 14 nationally designated poverty areas in improving livelihoods, living standards, and sound ecological systems.

Strengthen training to improve awareness of green and low-carbon development and related project design. Training programs on emissions reduction, carbon sequestration, and carbon exchange must be tailored for staff from agriculture and forestry. These programs should be part of regular poverty reduction working meetings, field trips, and other training. The programs should cover new technologies, standards, and requirements for projects involving emissions reduction and increased carbon sequestration.

Incorporate poverty reduction and project emission reduction targets into monitoring and evaluation systems. Monitoring and evaluation index systems, their associated evaluation methodologies and applications in assessing emissions reduction and increased carbon sequestration must be incorporated in poverty reduction activities.

Develop a carbon exchange pilot activity within poverty reduction activities. The research team recommends initiating a carbon exchange pilot and demonstration within poverty reduction activities to explore a mechanism for greenhouse gas market exchange. This would require a developing a method for managing emission reduction and increased carbon sequestration projects, creating a multidisciplinary technical team, and selecting one or two projects to pilot the activity.

Balance mitigation and adaptation strategies and develop and promote adaptation technologies. Mitigation and adaptation are two equally important response strategies to climate change. However, adaptation should be the priority for developing countries. This requires developing ecological agriculture, strengthening agricultural infrastructure, increasing capacity for disaster prevention and reduction, adjusting agricultural structure and cropping systems, selectively breeding for disaster-resistant varieties, and promoting dryland farming and water saving technologies.



An Action Framework and Activities for Low-Carbon Campus Creation

<http://www.adb.org/projects/documents/action-framework-and-activities-low-carbon-campus-creation-tacr>

The paper recommends that the National Development Reform Commission (NDRC) incorporate low-carbon campus creation into wider planning for low-carbon cities and provinces, including through (i) development of 13th Five-Year Plan targets for low-carbon indicators and performance assessment criteria for universities and colleges; (ii) third party certification and validation of carbon emission reduction; (iii) inclusion of universities in the domestic carbon trading system; and (iv) creation of incentives and recognition for educational and campus authorities through awards linked to the People's Republic of China (the PRC) National Low Carbon Day.

Guidance and incentives for creating and maintaining low carbon campuses through the Ministry of Education could include adoption of carbon reduction targets in the performance assessment criteria for university leadership. Resources could be provided through (i) creation and operation of green campus construction funds or energy subsidies and an infrastructure funding platform. This could draw on experience from the United Kingdom Carbon Trust Higher Education Carbon Management Program and other international and domestic practices; and (ii) company contracted energy management to promote the smooth operation of low-carbon campus construction.

Carbon campus special funds could be linked to (i) a low-carbon university and college carbon data monitoring and reporting system using

indicators developed by the project; (ii) decision support and information dissemination, including peer expert review of periodic monitoring report and open provision of monitoring data and report findings; and (iii) offering courses to impart low carbon ideas to students and stimulate interest in low carbon knowledge. Specific actions to support these recommendations are:

- **Campus carbon emissions data.** Unify campus carbon emissions data content and formats and gradually promote electronic systems and automated data acquisition. Data must be open access, user friendly, and used to prepare timely statistical reports on carbon emissions and energy resource consumption.
- **Annual carbon audit report.** Use an annual carbon audit report for progress reporting on features and operating conditions of the audited equipment (system); the low carbon measures employed, emissions reduction achieved and costs; recommended budget and actions for the next annual carbon reduction plan.
- **ISO14000.** Encourage qualified universities and colleges to seek environmental management system certification.



Promoting Corporate Social Responsibility in the PRC Electronics and Information Industry

<http://www.adb.org/projects/documents/promoting-csr-prc-electronics-and-information-industry-tacr>

The paper provides the following recommendations for promoting corporate social responsibility (CSR) in the electronics and information industry in the People's Republic of China (the PRC):

Establish an industry corporate social responsibility coordination mechanism within the Ministry of Industry and Information Technology. CSR promotion within this industry requires that member enterprises use the *Guidance on Social Responsibility for the Electronics and Information Industry in China* (2012) and the associated CSR-Evaluation Indicator System, prepared under an Asian Development Bank technical assistance, as standard references. CSR promotion also requires strong coordination to ensure interdepartmental participation and support. It is proposed that a CSR coordination mechanism be established within the Ministry of Industry and Information Technology (MIIT).

Create industry corporate social responsibility-incentive policies. MIIT should announce CSR incentive policies such as the inclusion of CSR performance in the Electronic Information Industry Annual Top 100 Enterprises; and applications for industry development funds.

Support CSR training and pilot testing. Electronics and information sector industry associations can provide CSR training, assist enterprises in establishing a CSR management system, and offer guidance on CSR reporting. The report suggests that MIIT further strengthen CSR support and guidance to these associations. For example, these industry associations

and other related organizations can organize enterprises to conduct CSR awareness raising and basic knowledge training; provide guidance to interested enterprises, especially small and medium-sized enterprises, on the establishment of a CSR management system and pilot testing of the evaluation system prepared under the technical assistance; encourage and guide enterprises to produce a CSR report and disclose their environmental and social performance; collect and prepare CSR good practices and disseminate these among enterprises; cooperate with MIIT-affiliated university programs for Master of Business Administration (MBA), Entrepreneurial Management Business Administration (EMBA) and Master of Public Administration (MPA), including jointly promoting CSR case studies and integrating CSR education into management education and training. For this to happen, industry association personnel first need to equip themselves with the necessary CSR knowledge and technical capacity to guide enterprises.

Strengthen environmental and social information disclosure through enterprise corporate social responsibility reporting. MIIT should encourage industry enterprises to prepare and disseminate CSR reports to strengthen disclosure and public supervision of environmental and social information. The China Electronics Standardization Association can provide technical support to enterprises in preparing reports. MIIT can also support the bridging role of social organizations more generally by inviting domestic social organizations to participate in CSR awareness-raising, education, and open information provision by the industry; and engage in industry CSR communication, capacity building, and third-party supervision.



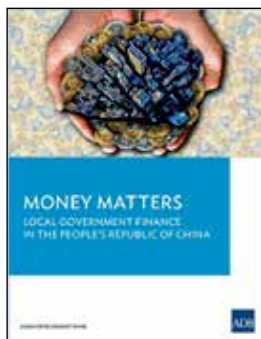
Study on Chongqing Urban-Rural Health Care Insurance Integration—Exploration and Innovation

<http://www.adb.org/projects/documents/chongqing-urban-rural-health-care-insurance-integration-exploration-innovation-tacr>

Chongqing city in the People's Republic of China (the PRC), set as pilot zone for the national healthcare insurance reform, has been in the lead in exploring responsive policy solutions toward the urban-rural integrated healthcare insurance management system. Chongqing's experiences will be similar to those of other municipalities and provinces in the PRC. In this sense, Chongqing could be a model for the advancement of the national health care reform. In developing and refining the health care insurance reform, the government should use an integrated basis cooperating system, provide funding, and examine options for administration and information. It should concentrate on institutional and operational resources and constructing an integrated information system for a coordinated administration. Without this integration, management of health care insurance systems will not modernize and the quality and coverage of urban-rural health care system will not improve.

These technical assistance policy recommendations were adopted by the Chongqing government in formulating the *Report for the Work of*

Chongqing Municipal Government (2014) and Relevant Social Security Reform Plans (2014). The technical assistance policy synopsis was submitted to the central government through the Ministry of Finance as contribution to the ongoing national reforms of the PRC.



Money Matters: Local Government Finance in the People's Republic of China

<http://www.adb.org/publications/money-matters-local-government-finance-peoples-republic-china>

This publication offers observations and suggestions on how to pursue public finance reform in the People's Republic of China (PRC), drawing from the Asian Development Bank's assistance and work. The publication also outlines practical actions that can be taken to improve budgeting, taxation, and the system of fiscal decentralization in the PRC. Special attention is given to the management of local government debt, the most pressing fiscal issue facing the PRC. The potential contribution of public-private partnerships is also introduced.

In November 2013, the Third Plenum of the 18th Central Committee of the Communist Party of China reinforced the importance of public finance reform. These decisions set out the next phase of public finance reform. They noted the persistent incompatibilities with a modern system, and called for reform of the budget and tax systems, and of intergovernmental fiscal relations. Implementation has already begun through revisions in the Budget Law to allow local government borrowing and consolidate government budget and improve their transparency, and through the approval of 'self-issue, self-pay' local government bonds.

The public finance system in the PRC has undergone substantial evolution over the last 3 decades. Major reforms in 1994 arrested a weakening revenue performance and underpinned revisions in intergovernmental fiscal relations and increases in government expenditure in priority areas. One recent initiative has included refinements in corporate and personal income taxes, and major changes in value-added tax (VAT).

The tax reforms of 1994 shifted revenue collection from a largely negotiated basis to a more formalized tax system, and split the tax base into central, shared, and local taxes. Revenue from the shared taxes—e.g., VAT, corporate and personal income taxes—was redistributed among local governments. Municipal and other local governments were limited to controlling minor taxes with narrow bases. The net effect was the shifting of revenue-raising powers from local governments to the central government. Local governments receive about half of total tax revenues.

However, local governments deliver most public services and account for about 85% of public spending. Although the central government provides large transfers to local governments, the local governments still face sizable funding difficulties. Substantial differences have also emerged in expenditure across and within provinces on a per capita basis, resulting in disparities in access to basic public services.

The reforms of 1994 turned around poor revenue performance. A new phase of reforms is now required to turn around the funding challenges faced by local governments. As local governments used a range of tools to meet their funding obligations, debt has accumulated rapidly. In 2006, local government direct debt was about 16.5% of gross domestic product (GDP) but by mid-2013, it had increased to 18.6% of GDP. In addition, local governments had guarantees and contingent liabilities equivalent to 12.0% of GDP in mid-2013. The extent of this gap is now seen as a major issue.

The suggested reforms in the publication would represent a major shift in revenue and expenditure across local governments. A gradual, sequenced approach is therefore suggested. Short-term actions can target quick wins, or provide stepping-stones to the completion of larger and more complex long-term actions.

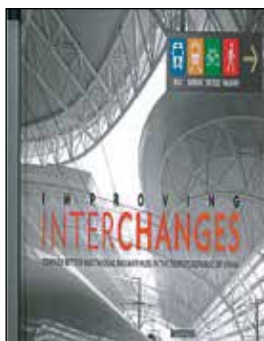
These actions build on the recognition that local government debt is a major issue that requires a broadbased response. If the response were, for example, limited to efforts to monitor and regulate the issuance of new debt, it would leave the underlying causes untouched. A broad-based response requires better debt management, adjustments in the revenue system, and changes in the system for allocating revenue among levels of government.

Expecting local governments to accept more fiscal responsibility because of concern about the magnitude of local government debt may appear counterintuitive when concerns in rising local government debts have spurred the reforms. But the absence of the financing instruments and revenue autonomy commonly available to local governments in other countries has been one of the underlying causes of the debt problem. The situation was compounded by the absence of hard budget constraints and an expectation that the central government would ultimately assume responsibility for local government finances.

The cushion provided by the central government needs to be removed for local governments to accept accountability for their actions and to make the transition to the use of modernized financing instruments. Such reforms must go hand in hand with a tightening of the checks and balances on local governments to avoid misuse of the new flexibility.

Some local governments are better positioned to make the transition to a modernized public finance system than others. Those that are well positioned can be provided access to better, more flexible mechanisms for financing their activities, such as by extending the pilot of local government bonds. Local governments whose fiscal position is weak may need to be subject to tighter fiscal controls and be put under fiscal adjustment paths. At the same time, the fiscally weaker provinces may need extra financial support or service delivery.

The practice of public finance reform in the PRC has been, as in many other policy areas, to start with pilot projects. Pilot projects in the opening of local government bond markets, and property tax and value-added tax reform are advanced. The reform of the fiscal decentralization system required to better match spending powers with expenditure responsibilities is relatively less advanced. More attention may have to be paid to improving fiscal decentralization so that it does not become a binding constraint preventing reforms in debt, budget, and revenue management from feeding through to better service delivery.



Improving Interchanges: Toward Better Multimodal Railway Hubs in the People's Republic of China

<http://www.adb.org/publications/improving-interchanges-prc>

An interchange hub is a gateway to cities, and is critical in developing a sustainable and efficient public transport system. This publication presents ideas for improving interchanges by enhancing the quality of the journey for passengers. It draws upon international best practice and explains how ease and speed of mode transfers, coupled with the availability of amenities and user facilities, can make a journey more enjoyable. The lessons and innovations presented may be used for designing the next generation of interchange hubs in the People's Republic of China (PRC).

Well-designed interchange hubs can create places that people enjoy and anticipate visiting. This includes functional and operational issues, as well as experiential factors such as the quality and comfort of the journey. Achieving high-quality results can mean that a landmark project is created, even making the hub a destination in its own right. Financial viability is a key consideration—and there is a balance to be reached between the quality and expense of the design.

The planning and design of interchange hubs is therefore critical, and this will involve multiple parties and agencies, including central and local governments, funding agencies, station planners, architects, and engineers.

The paper discusses key criteria for the design of efficient and effective interchange hubs. These criteria cover issues of strategic planning, hub organization and operational efficiency, and the experience of the user.



The Transport Research Laboratory Explores Cooperative Intelligent Transport Systems to Help Improve Road Safety in the People's Republic of China

The Transport Research Laboratory has been working with the Asian Development Bank in the People's Republic of China (the PRC) on a policy framework to develop and implement the Cooperative Intelligent Transport Systems (C-ITS) using connected vehicle technologies.

With the Transport Research Laboratory's leadership and ADB's initial support, it is possible to develop sustainable business models to provide C-ITS services in the following selected areas:

- (i) The established market for truck tracking, which can be developed further.
- (ii) Floating vehicle data collection (sometimes referred to as probe data); dynamic route guidance, and hazard warning can become self-financing. Road operators can be encouraged to make more use of floating vehicle data to enhance and implement dynamic traffic management.

- (iii) Automatic crash notification (also called E-call in Europe) is expected to provide safety benefits for cars and heavy trucks on a pilot basis.

An international literature review showed that several countries and regions are currently advancing rapidly in terms of readiness for, and deployment of, C-ITS and other building blocks for intelligent transport systems. It also revealed that there is currently no single deployment model that presents an opportunity for the PRC to learn from the different international approaches and indeed to contribute to them.

Experience in other countries indicates that safety improvements arising from the deployment of C-ITS in the PRC would also lead to other benefits. Reducing accidents also reduces traffic delays, which in turn brings benefits for the economy through reduced journey times and improved journey time reliability—and for the environment—less congestion reduces fuel consumption, emissions, and noise.



Research on Environmental Protection and Management in Rural Areas of Anhui Province

<http://www.adb.org/projects/documents/research-environmental-protection-and-management-rural-areas-anhui-tacr>

The research report is important to the Anhui government for formulating a provincial rural development strategy during the 12th Five-Year Plan period and demonstrating experiences to other provinces in the People's Republic of China (the PRC). Being located in a transitional area that carries on the PRC's industrial transfer from the coastal to the central region and disseminates advanced technologies and best experiences from the western region, Anhui is the mainstay of the national 12th Five-Year Plan implementation and plays an indispensable role for promoting the economic rise of the central region in the PRC.

The research report contains one major report and eleven subreports. It presents in-depth analysis on environmental problems encountered in rural areas nationwide.

The studies conducted field surveys (e.g., 24 villages and towns, over 500 rural households, and 900 questionnaires) and case studies; and analyzed practices in the different sectors, regions, and counties on rural environmental issues. It introduces advanced technologies and best international practices to the government, and recommends technical solutions and policy suggestions for innovation, as well as policy reforms to protect Anhui's rural environment.

The report presents a series of long-term, systematic, and feasible technical solutions and policy suggestions for rural environmental protection and treatment in Anhui province. Actual situations of rural ecological environment and the leading factors that affect rural ecological environment, which cover macro visions and micro solutions ranging from laws to policies, from system to management, from urban to rural areas,

from industry to agriculture, and from civil society to technology have been taken into account.

Some key policy recommendations were adopted by the Anhui government in drafting and formulating provincial policies and government's documents, including the new-mode urbanization construction plan, revised plan for improving village construction, and relevant documents and policy decisions on piloting integrated rural reforms and promoting the demonstration of rural construction pilot projects.

The technical assistance policy recommendations provide valuable decision making references to the Anhui government in assessing current situations, development trends and hazards of rural environmental protection; improving the laws, regulations, and policies relevant to rural environmental protection; selecting technical solutions and formulating policies to tackle rural environmental problems; and promoting investment in rural environmental protection. The report can be used as a reference for local governments and central governmental agencies to promote rural environmental protection in the PRC. It can also serve various agencies including research institutes for relevant studies.



Enhancing Real Sector Cooperation and Integration with Good Practices of the Greater Mekong Subregion

<http://www.adb.org/projects/documents/fprcb3-enhancing-real-sector-cooperation-and-integration-good-practices-gms-tacr>

The report reviews and evaluates the achievements and successful experience of the Greater Mekong Subregion in carrying out real sector cooperation. The report provides the following recommendations for further advancing real sector cooperation:

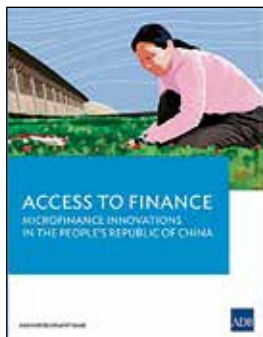
Promote integration and docking of connectivity cooperation frameworks of various mechanisms in Asia and the Pacific. Several regional and subregional cooperation organizations have formulated connectivity cooperation frameworks with infrastructure development as priority. These frameworks have similarities in targets, mechanisms, key areas, or participating members, which lays a foundation for the development of cross-regional infrastructure. In this regard, the Asian Development Bank (ADB) could play an active coordinating role. For example, ADB may consider establishing an online connectivity cooperation information platform in Asia and the Pacific.

Consider setting up a connectivity development fund in Asia and the Pacific. Over the years, the World Bank, ADB, and other financial institutions have been promoting infrastructure development in Asia and the Pacific. However, the fund gap is considerable, and the challenge is fully mobilizing social resources; raising funds; and establishing a systematic, rational, and efficient investment and financing mechanism. The establishment of the connectivity development fund could provide

more financial support to promote connectivity cooperation in Asia and the Pacific region.

Promote energy cooperation in Asia and the Pacific through energy bonds. The practice of ADB in recent years have proven that issuing energy bonds to raise funds is effective. These bonds will be used to provide direct financial support to energy-related projects. Compared with energy bonds issued by enterprises, the energy bonds issued by regional or international financial institutions have the advantage of high financing value, multiple distribution channels and low market risk, and should be promoted actively in the Asia and Pacific region.

Strengthen development of supply chains and logistics networks in the Asia and Pacific Region. Efficient and convenient regional logistics system is significant to the in-depth development of real sector cooperation in the Asia and Pacific region. Therefore, to create a favorable external environment for real sector cooperation in the region, barriers hindering the development of logistics must be reduced. In addition to improved logistics-related infrastructure, a comprehensive logistics information exchange platform in the region should be established. The platform will timely collect and release information related to logistics companies, import and export custom brokers companies, and professional service companies, and provide comprehensive information services and guidance for enterprises.



Access to Finance: Microfinance Innovations in the People's Republic of China

<http://www.adb.org/publications/access-finance-microfinance-innovations-peoples-republic-china>

The People's Republic of China (the PRC) has adopted a more market-oriented approach in promoting rural microfinance, pursuing bottom-up innovations such as group lending, various forms of guarantees, new financial products based on purchase orders and insurance policies, and better incentives for agriculture funding from financial institutions. As a response to PRC request, this study was conducted to examine the policy choices in rural finance using both top-down and bottom-up approaches. The study provides valuable lessons learned from several pilot microlending programs conducted in selected provinces in the PRC. It then analyzes outstanding issues in the country's rural and microfinance markets that need to be addressed more vigorously, with important implications for further reforms in rural finance in the PRC, and in the less developed countries of Asia and the world. The lessons include the following:

Innovations in rural finance require the removal of the interest rate ceiling. The PRC began liberalizing interest rates in 1996. The lending rate ceiling was not removed until the early 21st century. Currently, a de facto lending rate ceiling at four times the base rate, remains for lending in the PRC. The gradual lifting of the lending rate ceiling, given the higher risk and high transaction costs for microlending, has enabled city and rural

commercial banks to penetrate the micro and small enterprise (MSE) lending markets in the urban and rural areas.

Market competition is important in pushing formal financial institutions to provide financial services to micro and small enterprises.

Commercial banks are unlikely to move into MSE finance unless they come under increasing pressure from market competition. In the PRC, the relatively small city and rural commercial banks have moved into MSE financial services as competition from larger banks has grown. The high funding costs of small banks have also been an adverse factor in their MSE lending.

The development of poverty-oriented microfinance NGOs needs scale and continuous support.

Microfinance nongovernment organizations (NGOs) for poverty reduction have waxed and waned in the PRC in the last 2 decades. The rapid growth of [the People's Republic of] China Foundation for Poverty Alleviation (CFPA) Microfinance amid a declining microfinance NGO sector indicated that its two-tiered governance structure, expanding scale of operations, and continuous fund support from donors, national governments, and financial institutions are important for the sustainability of poverty-oriented microfinance NGOs. County-level, small-scale microfinance institution (MFI) NGOs cannot survive on their own.

Nongovernment organizations on microfinance institutions that helped introduce the Grameen model of microfinance in the PRC should receive more support.

Wholesale funds from banks and specialized funds should be made available to well-performing MFI NGOs as these institutions provide competition in poor rural areas. Poor and low-income farmers in the PRC can benefit from their services.

Exogenously imposed community development funds, which suffer from elite control, are hardly viable.

Village development mutual aid funds in the PRC have expanded rapidly, with funding and technical support from donors and national governments. However, many exogenously imposed community development funds have suffered from elite control in the villages, leading to low rates of interest charged, high operating costs, and poor targeting. It is difficult for these community development funds to survive beyond a project period of 3–5 years. Endogenous community funds, derived from farmer cooperation in farm production and marketing, should be promoted, with government support in the form of registration cost and tax concessions.



Access to Finance: Developing the Microinsurance Market in Mongolia

<http://www.adb.org/publications/access-finance-developing-microinsurance-market-mongolia>

Mongolia experienced a challenging transition from socialist economy to market economy from 1990 onwards. Its commercial insurance market is still at its infancy, with gross written premiums in 2013, amounting to only 0.54% of gross domestic production. This study was undertaken to support microinsurance development in Mongolia. It provides an overview of the development of Mongolia's insurance market in general and microinsurance segment in particular, and identifies gaps in the insurance regulatory framework that need to be bridged to expand microinsurance coverage to more households.

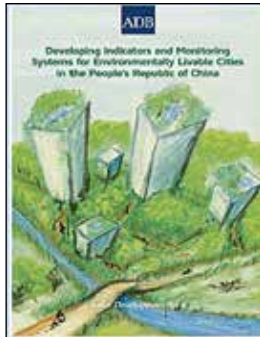
Many of the recommendations focus on the need to expand regulatory options for innovative and cost-effective distribution mechanisms. This is a key priority that will result in the immediate opening of the insurance and microinsurance market. Particularly, allowing all currently regulated financial institutions such as banks, microfinance institutions, and nonbanking financial institutions to act both as insurance agents and brokers will have an immediate impact.

Focusing initial microinsurance efforts to the urban population makes sense given the challenges in reaching the rural population. Existing community groups such as cooperatives, associations, teachers, or borrowers would seem to be the easiest market to reach. As insurers and the Financial Regulatory Commission (FRC) are still learning from existing microinsurance projects, pilots in areas with higher population concentrations and more developed distribution channels will allow faster learning. These lessons can then be extrapolated to expand projects into more challenging segments.

A potential direction for the FRC to consider in expanding the microinsurance market would be a simple definition of microinsurance products allowable under both the existing "ordinary" and "long term" insurance classifications. It would permit both life and nonlife insurers to offer composite microinsurance products that qualify under the benefit definition and limits. As Mongolia currently has only one life insurance company, it will expand the microinsurance market in a controlled manner while allowing the nascent life insurance industry to develop. The initiative would be innovative within the worldwide microinsurance community, and provide leadership for other countries.

In summary, the development of microinsurance in Mongolia needs to be considered within the context of the overall insurance market and regulatory environment development. It is difficult to develop the microinsurance market without a viable life insurance segment or a strong nonlife retail insurance focus. While certain regulatory achievements have already been made, there is an urgent need to improve the overall regulation and technical capacity of the insurance industry before the microinsurance segment can be sustainably developed.

Good Practice Series



Developing Indicators and Monitoring Systems for Environmentally Livable Cities in the People's Republic of China

<http://www.adb.org/publications/developing-indicators-and-monitoring-systems-environmentally-livable-cities-people-s>

The study explores the concept of environmental livability for the urban centers of the People's Republic of China (the PRC). The study produced the environmental livability index, a practical tool that can demonstrate the present, past, and future dimensions of a livable city; and the practical mechanism of its measurement, which was successfully tested. The testing software techniques created multidimensional city-specific assessments, allowing the promotion of urban livability agenda among policy makers, urban managers, and the comparison and ranking of cities based on prioritized environmental investments and their evaluation. The conducted testing also demonstrated its potential for informing the public on the government initiatives, the multidimensional progress achieved, and getting the support of the public for the urban livability agenda. The study is an important step in developing both a methodology and a monitoring system for environmentally sustainable economic development.

The study was developed in response to a growing understanding by the Government of the PRC that rapid urbanization is creating a raft of environmental, administrative, and livability problems that, if not monitored, cannot be checked and, if not checked, will significantly worsen over time. These problems include the depletion of natural resources, environmental pollution, poor urban infrastructure, growing urban ecological footprints, poor urban environmental governance, and growing inequities between different parts of the country.

The Environmental Livability Index (ELI) proposed in this book is a comprehensive index of urban environmental sustainability that, when used with associated monitoring software, provides policy makers with evidence on which to base policy making for environmentally sustainable development. It is a pioneering and practical tool that can be used to demonstrate the present, past, and future dimensions of a livable city. It enables the promotion of an environmental agenda among policy makers, urban managers, and the public; strengthened understanding of present and future gaps; and creation of a scientific methodology for prioritizing environmental investments and evaluating the impact of long-term environmental investments. Overall, the techniques of the proposed ELI can be used to compare or rank cities and incentivize local governments to improve their environmental performance, enable trend analysis that can provide policy makers with a base for assessing policy impact, enhance problem identification and fuel the analysis needed

to underpin future policy development, and enable measurement of government efforts to improve environmental livability and indicate the influence of natural conditions on environmental livability.

The proposed ELI, including the monitoring software, was tested in a sample of medium-sized and large cities in the PRC. It was found to be methodologically sound and an appropriate system for monitoring environmental livability and prioritizing investment strategies to improve urban environmental livability.

For the ELI to be widely applied, the following are needed: training of city environmental planning bureaus and supporting agencies, improvements to the PRC's monitoring systems, improvements to the data-gathering systems and data quality used in small and medium-sized cities, integration of climate change indicators into the ELI system, and institutionalization of the system at all levels of government.



Lanzhou's Bus Rapid Transit System Brings Quick Relief to Busy City (Knowledge Showcase)

<http://www.adb.org/publications/lanzhous-bus-rapid-transit-system-brings-quick-relief-busy-city>

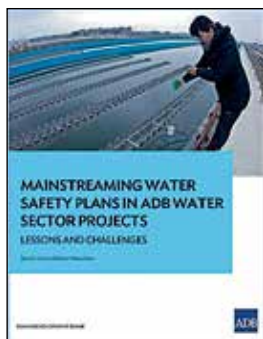
As the capital and largest city of Gansu Province in the People's Republic of China (the PRC), Lanzhou is a highly urbanized city that serves as a transport hub between the eastern and western parts of the PRC. It has three distinct development zones on the south side of the Yellow River—Xigu, Qilihe, Chengguan—and one on the north side, Anning. Economic activity and population are heavily concentrated in these four urban zones, which occupy only 8.5% of the city's land area but account for 63% of its population—roughly 3.6 million.

The busy city center area has been experiencing significant congestion and pollution. Thus, in 2009, the municipal government designed an urban master plan to decongest the city. This involved the development of a second city center in the Anning district.

The city's expansion plan evolved from urban road network expansion into a sustainable urban transport project, with a bus rapid transit (BRT) system at the center, complemented by support for the Clean Development Mechanism, nonmotorized transport, tree preservation, and traffic and parking management.

The Lanzhou BRT has quickly demonstrated its worth. Officially opened on 28 December 2012, it is one of the three high-capacity BRT systems in Asia, and is the first BRT in the world with split stations, enabling buses running in the same direction to stop on both sides of the platform, easing congestion. In January 2013, it carried 110,000 passengers a day. This had risen to 290,000 by September 2013.

The sustainable transport system has helped reduce emissions. Nine months after opening, the BRT was able to reduce carbon dioxide emissions by an estimated 11,804 tons. The BRT spurred greater local development, as new mixed-use buildings are being built along the route and increased commuters along the way.



Mainstreaming Water Safety Plans in ADB Water Sector Projects: Lessons and Challenges

<http://www.adb.org/publications/mainstreaming-water-safety-plans-adb-water-sector-projects-lessons-and-challenges>

Water resource and supply management in the Asia and Pacific region is transitioning its focus from access to water resource by increasing water service coverage, to access to safe drinking water. This increasingly requires a strong policy framework, an appropriate allocation of financial and human resources, and an institutional setting with clear roles and responsibilities for all national, provincial, and city stakeholders.

The Water Safety Plan (WSP) pilot demonstration activity in Wanzhou allows the Asian Development Bank (ADB) to demonstrate better technical due diligence in applying current international good practice to public health-related aspects of water supply planning. Although the financial benefit was not quantitatively assessed, the additional cost of developing an initial WSP was small. The intended benefits of WSP implementation include improved productive time, reduced healthcare costs, and increased credibility with commercial and industrial users of water—which were realized by both the Chongqing municipal government and Wanzhou district government.

The pilot demonstration activity also identified some lessons, and more importantly, issues and challenges. Some issues are more specific to ADB projects, while other challenges are associated with WSP itself. Several nongovernment organizations and the World Health Organization offer various WSP capacity building programs that could prove valuable insight for WSP-specific challenges. However, more experience should be accumulated to address issues related to challenges experienced in the context of ADB's assistance.

The Wanzhou case confirmed that the WSP will be one of the useful tools for ADB to scale up its role in water supply in the region, aligning with the ADB's Water Operation Plan 2011–2020. The increasing number of ADB-financed water sector projects should play a strong supportive role, working with counterpart agencies in the development and implementation of WSP.



Implementing HIV Prevention in the Context of Road Construction: A Case Study from Guangxi Zhuang Autonomous Region in the People's Republic of China

<http://www.adb.org/publications/implementing-hiv-prevention-road-construction-guangxi-zhuang-autonomous-region-prc>

This case study report is based on work undertaken under an Asian Development Bank technical assistance project, HIV in the Transport Sector in Yunnan and Guangxi. The report aims to help road construction companies deal with the seriousness of HIV/AIDS risks faced by construction workers.

The need for HIV prevention activities associated with road construction was reinforced by initial research and discovery in August 2008 where sex workers in the city of Baise tested positive for HIV. All of the sex workers tested had, among their clients, construction managers and laborers working on a new expressway connecting Baise with Longlin, located in a mountainous area in Guangxi Zhuang Autonomous Region (Guangxi) near the border with Yunnan Province in the People's Republic of China (PRC).

Over 2 years, the project developed and refined a 15-step framework for HIV prevention in the context of road construction. These steps are based on recognized good practices that have been successfully tested internationally and within the PRC, including the previous ADB-supported Baolong Healthy and Safe Action Project, 2005–2008. These practices reflect the importance of focusing on individuals, with measures to create a supportive and enabling environment for safe behavior, and to reduce the potential for stigma and discrimination against people living with HIV.

The approach used awareness-building and educational activities, which were complemented by the provision of services, including supplying condoms and facilitating access to voluntary counseling and testing. Other features of the approach include securing support from key decision makers; using a variety of methods for HIV/AIDS education, ranging from broad awareness raising to interpersonal communication among peers; regularly reinforcing key messages; and promoting the uptake of health services. Construction companies were highly engaged and involved in the project, and undertook work beyond their contractual responsibilities.

This case study report is presented as a promising approach, and one that is grounded in internationally proven practices and integrated into the transport context that could be sustainable. Shortcomings in the implementation of the practices could be identified in future projects.

A major strength of the framework outlined in this case study is the scope it provides for companies to adapt it to their own contexts and circumstances, while retaining the core elements of an effective response to HIV/AIDS. Readers are likewise encouraged to consider this approach according to their own context and experiences.

East Asia Department 2014 Knowledge Management Initiatives

This annual publication showcases the results of knowledge management initiatives of the East Asia Department of the Asian Development Bank in 2014. It is a compendium of abstracts from 50 strategic knowledge products and services completed in 2014 and provides URLs to select full reports.

About the Asian Development Bank

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to the majority of the world's poor. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

