



Technical Assistance Report

Project Number: 43003-01
Policy and Advisory Technical Assistance (PATA)
July 2009

People's Republic of China: Rural Pension Reform and Development

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 30 June 2009)

Currency Unit	–	yuan (CNY)
CNY1.00	=	\$0.146
\$1.00	=	CNY6.83

ABBREVIATIONS

ADB	–	Asian Development Bank
EA	–	executing agency
PRC	–	People’s Republic of China
TA	–	technical assistance

TECHNICAL ASSISTANCE CLASSIFICATION

Type	–	Policy and advisory technical assistance (PATA)
Targeting	–	General intervention
Classification		
Sector (subsector)	–	Finance (finance sector development)
Themes (subthemes)	–	Economic growth (Promoting economic efficiency and enabling markets), capacity development (institutional development, organizational development)
Location impact	–	(Rural) high impact

NOTE

In this report, “\$” refers to US dollars.

Vice-President	C. Lawrence Greenwood, Jr., Operations 2
Director General	K. Gerhaeusser, East Asia Department (EARD)
Director	N. Chakwin, Financial Sector, Public Management, and Regional Cooperation, EARD
Team leader	Y. Qian, Principal Economist (Financial Sector), EARD

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

I. INTRODUCTION

1. The Government of the People's Republic of China (PRC) requested the Asian Development Bank (ADB) during the 2008 country programming mission for technical assistance (TA) for Rural Pension Reform and Development. A fact-finding mission for this TA visited Beijing on 5–8 May 2009. Following the discussions, an understanding was reached on the objectives, scope, terms of reference, cost estimates, financing plan, and implementation arrangements of the TA. The design and monitoring framework is in Appendix 1.¹

II. ISSUES

2. The pension system in the PRC traditionally falls into two almost entirely unrelated parts: (i) a system for urban enterprise workers, and (ii) a system for civil servants. Reforms of the urban enterprise pension system started in the mid-1980s as part of the overall reform of state-owned enterprises. As a result of this reform initiative, a multi-pillared system with social pooling at the provincial level is being established. The urban pension system is currently being expanded to integrate part of the pension systems for civil servants and migrant workers.

3. Despite the need for urgent reform in the pension system for the rural population, reform has been lagging behind that of the pension system for urban residents. This has been partly due to the urgency for the pension system for urban residents, and partly due to lack of a clear consensus on the direction, strategies, and modalities needed for rural pension reform. The traditional argument that family support and land use rights are the best form of old age livelihood protection for rural residents has gradually been losing ground because of dramatic and dynamic shifts in demography. The number of children per family is declining and the ageing of the population in rural areas has been increasing. Moreover, over the last 20 years, a silent socioeconomic revolution has been taking place. Almost one-third of the rural workforce has ceased to be farmers and these workers have become wage laborers in local industries. The marked increase in migration to towns and cities has also further blurred the rural–urban distinction. In addition, the trend of opening up of land ownership to private enterprise will also shake the foundation of rural areas' informal social protection mechanism that relied on land.

4. Factors making the reform of rural pensions more urgent are (i) the current priorities of the Government, and (ii) the significant negative impact of the ongoing global financial crisis on the country's economy. The Government has focused its efforts on the reduction of the traditional rural–urban divide, and thus a rural pension system is seen as an important part of the national social security system that will help unite the country and bridge the division between the urban and rural areas. Meanwhile, the global financial crisis has led to the loss of millions of jobs, especially among migrant workers from the rural areas. The rural pension system has become particularly important to provide basic welfare safeguards for these workers. Policy makers also believe that the pension system, particularly for the rural population, is a good area of focus for the Government's stimulus package that was created in response to the financial crisis. The Government's long-term strategy until 2020 calls for 100% participation in urban and rural pension systems nationwide.

5. Since the 1990s, a number of rural pension pilot schemes have been tested in rural areas, including those mirroring multi-pillared urban pension schemes and those based on fully funded individual accounts. However, due to the lack of fiscal support from the Government and funding support from township and village enterprises, most pilots could only offer low-level benefits. This made the pilot schemes less attractive for farmers to participate in, and thus, unsustainable. Since 2003, some local governments have started to support rural pensions with

¹ The TA first appeared in the business opportunities section of ADB's website on 1 July 2009.

fiscal subsidies, resulting in a new scheme of rural pension that combines "subsistence pension," which is government-funded, and individual account. This scheme is seen as more beneficial than the schemes which comprise social pooling plus individual account or the individual-account-only schemes.² International experience also indicates that the Government's fiscal resources have to play a bigger role in rural pension systems.

6. The Government has decided to pilot test the rural pension scheme that is based on a combination of subsistence pension supported by government funding and individual account. The pilot testing will be conducted in 2009 in 200 counties nationwide before the scheme is replicated in the rest of the counties. The Government hopes that many issues will be further studied and discussed during the pilot test. These issues include (i) the sustainability of the system's funding mechanism, (ii) eligibility criteria and benefit levels for both subsistence pensions and individual accounts, (iii) a benefit adjustment mechanism to allow transferability from other pension schemes and portability across regions, (iv) the relationship with other social welfare programs, and (v) fiscal responsibilities at each level of government.³

7. There are challenges in the administrative aspect of the pension system's implementation. The Social Insurance Administration⁴ has completed a survey of administrative systems at various levels of government, and the survey showed mixed results. Some counties do not yet have adequately staffed and budgeted rural Social Insurance Administration branches. The information system for rural pension operations is almost nonexistent. A possible strategy to tackle the issue of weak institutional capability is to expand the mandates of urban and township social insurance administrations and the information system to cover rural pension operations. This requires substantial updates on operational procedures and investments in capacity building and basic administrative and information technology infrastructure.

8. It is important that the rural pension system is consistent with the PRC's overall social security reform objectives. It also needs to be an integral part of the overall pension system to ensure portability and transferability. In addition, policy analysis work must address the lack of an adequate policy, legal, and regulatory framework; the lack of an adequate administrative structure; and the poor capacity to implement an appropriate rural pension system. The demand for pension support resulting from the dynamic shifts in the demographic structure in the PRC should also be determined. Furthermore, it is necessary to establish a database to monitor the operation of the rural pension scheme nationwide, and strengthen the Government's capability to monitor and guide the development of the rural pension system.

9. One of the key thrusts of ADB assistance under the 2008 country partnership strategy is to support inclusive growth and balanced development by focusing operations on poorer provinces and by promoting integrated rural and urban development.⁵ The corresponding finance sector operation under this thrust is the building of an inclusive, market-oriented rural finance system and the provision of support to social safety nets and pension systems in response to the demographic shift in the PRC and the need to build a harmonious society. ADB has been a key partner of the Government since the 1990s in supporting social security reforms and in building an enabling policy and regulatory environment. It has worked with government ministries, social security administrations both at central and local government level, financial

² Theoretically, it is more effective since rural residents generally have no employer and their low incomes make them less able to pay contributions to a social pool.

³ The preliminary design of the scheme has the following features: (i) rural pensions are managed at the county level; (ii) central, provincial, and local governments will share the burden of fiscal support; (iii) the benefit level will be set at CNY50–CNY60 per month; (iv) eligibility criteria for pensions include that a person is over 60 years old and that, if he or she has children, the children should also participate in the rural pension system.

⁴ The Social Insurance Administration is the operational arm of the Ministry of Human Resources and Social Security and oversees the operations of pensions, medical insurance, and three other social security schemes nationwide.

⁵ ADB. 2008. *Country Partnership Strategy (2008–2010): People's Republic of China*. Manila.

market regulators, legislators, as well as social security funds on a wide array of different issues concerning urban and rural pension and medical insurance reforms. In addition, it has been actively working with the Ministry of Civil Affairs on social assistance, in particular rural *dibao* (also known as the subsistence-level social welfare system, which helped catalyze the decision in 2007 to establish rural *dibao* nationwide).⁶ ADB is also currently working with government agencies on medical financial assistance. It has also worked extensively with government agencies and financial market participants on rural finance market development issues.

10. Rural pension reform is a challenging area and it presents a unique opportunity for ADB to assist in building the rural pension system, not only as an important link for the social safety nets but also as a vital element in the rural financial infrastructure.

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

11. The impact of the TA will be the establishment of a well-functioning rural pension system to provide basic old-age income protection for the rural population. Its outcome will be an improved policy and regulatory framework and strengthened financing mechanisms for the rural pension system.

B. Methodology and Key Activities

12. The key activities of the TA are (i) the provision of support to the implementation of the 200 county pilots by providing guidance at the policy, operational, management, as well as technical levels; and (ii) the extraction of lessons in the areas of policy reform and in the formulation of operational procedures and technical parameters. The preliminary design and monitoring framework of the TA is presented in Appendix 2.⁷

13. Extensive field surveys of existing rural pension pilot programs will be conducted.⁸ The data from these surveys will need to cover the demographic features and income levels of local populations, and the economic development level of each locality. An assessment of the quality of the data will be needed for monitoring purposes. Moreover, targeted workshops and seminars will be organized for different stakeholders at various stages of project implementation. In the initial stage, workshops will be held with the executing agency (EA) to discuss the feasibility and practicability of the TA implementation plan. When field studies of typical regions and areas have been completed, workshops will be organized to discuss lessons and to identify directions for the next steps. Seminars will also be held for government officials and specialists to gather their comments on draft reports. Knowledge products from main and sub-reports geared towards higher-level policy and decision makers are envisaged under the TA.⁹

14. The TA outputs will include one main report and three sub-reports.

- (i) **Main report: Sustainability analysis of the rural pension system nationwide.**
The topics of the main report will include (a) an overview of the historical

⁶ ADB TA helped catalyze the decision in 2007 to establish rural *dibao* nationwide. ADB. 2006. *Technical Assistance to the People's Republic of China for the Facility for Reform Support and Capacity Building*. Manila (TA 4790-PRC).

⁷ The TA will also assess all relevant lessons from earlier pension reform programs, including many assisted by ADB in its developing member countries.

⁸ Past experience shows surveys based on questionnaires are not effective.

⁹ The potential topics to be covered by knowledge products include (i) how to provide adequate incentives to enhance willingness of rural residents to participate in the rural pension system; and (ii) how to share the financial burden among central, provincial, and local governments to ensure efficiency and minimize moral hazard, etc.

development and current situation of, and problems concerning, the rural pension system in the PRC; (b) a description of the current policy, legal, regulatory, and administrative frameworks of the PRC's pension system; (c) a discussion of the elements that will affect the revenue and expenditure of a rural pension fund; and (d) a discussion of the policy conditions that are needed for the development of a sustainable and effective rural pension system. The main report will also need to provide recommendations leading to policy, legal, regulatory, and administrative reforms. It will also provide an outlook for rural pension development in the coming two decades, based on which it will project the sustainability of the system, the financial obligations at each level of the government, and potential impacts of the rural pension system on the urban pension system.

- (ii) **Sub-report 1: Projection of, and quantitative analysis on, the sustainability of the rural pension system nationwide.** The sub-report presents the quantitative analysis for the rural pension system nationwide. It will have two parts. Part 1 will develop a projection model for the aggregated revenue and expenditure of the rural pension system nationwide based on relevant policy assumptions and parameters. It will also project rural pension demand and the required funding support from fiscal resources for the next 20 years, and assess the sustainability of the rural pension system. Part 2 will use actuarial tools to look at a typical rural pension participant in detail, and project if his or her individual account could be self-balanced.
- (iii) **Sub-report 2: Projection of, and quantitative analysis on, the sustainability of the pension system in typical rural areas in western and central PRC.** The sub-report will conduct case studies of the rural pension schemes in sample areas (one in central and one in western PRC), and build a projection model for each of these areas using a mix of quantitative and qualitative methodologies. It will then project funds demand and the financial supportability of the system over the next 20 years. The quantitative model will need to identify key bottlenecks with regard to the operation of rural pension funds in the central and western areas of the PRC. Based on the analysis of these bottlenecks, the report will offer recommendations to overcome identified difficulties to ensure the balanced and sustainable growth of the rural pension system.
- (iv) **Sub-report 3: Database design for monitoring the operation of rural pensions.** The sub-report will lead to the establishment of a set of indicators for the rural pension information system, reflecting, among other factors, coverage, individual accounts revenue and expenditure flows and outstanding amount, investment portfolio, and investment returns. It will also help design the database for monitoring the operation of the rural pension system, including the structure of the database, recommended software, and recommended data collection and reporting procedures.

C. Cost and Financing

15. The TA is estimated to cost \$700,000 equivalent. The Government has requested ADB to finance \$500,000 equivalent. The TA will be financed on a grant basis by ADB's TA funding program. Detailed cost estimates are in Appendix 2.

D. Implementation Arrangements

16. The proposed EA is the Ministry of Human Resources and Social Security. An interdepartmental working group will be set up within the ministry, comprising the International Cooperation Department, Rural Pension Department, Social Insurance Administration, and Information Center. Other ministries and agencies that will be regularly consulted during project implementation include the Ministry of Finance and the National Development and Reform Commission. The EA will provide the necessary office space, counterpart staff, transportation, and other services to the consultants and will arrange meeting appointments for the consultants with relevant agencies and organizations.

17. The TA will engage one international consultant and four national consultants for a total of 25 person-months, with the national rural pension policy specialist acting as the team leader. Outline terms of reference for the consultants are in Appendix 3. The consultants will be selected and engaged by ADB on an individual basis in accordance with ADB's *Guidelines on the Use of Consultants* (2007, as amended from time to time). The proceeds of the TA will be disbursed in line with the *Technical Assistance Disbursement Handbook*.¹⁰ For equipment, training seminars, and conferences, an advance payment facility could be used.

18. The TA is expected to begin in October 2009 and end in December 2010. The first phase, which will involve implementation planning and the identification of pilot locations in the central and western regions, will be completed in 3 months. The second phase will involve the conduct of field studies, surveys, and workshops for reviewing preliminary findings. It will be completed in another 3 months. The third phase, which will be the preparation of draft final reports, will take a further 3 months. The fourth and final phase, during which the final workshop will be conducted and the TA final reports completed, will take another 3 months. The remaining 3 months is allocated for consulting services contract completion.

19. In addition to the main outputs, the consultants will submit to both ADB and the EA (i) an inception report 2 weeks after the commencement of their services, (ii) interim progress reports at appropriate stages during TA implementation, (iii) a draft final report before the conclusion of the contract, and (iv) a final report 2 weeks after receiving comments from the EA and ADB. All reports will be submitted in English and Chinese. Workshops will be organized periodically for dissemination of consultants' findings and discussion of policy recommendations.

20. Major project activities will be regularly monitored and reported on by the EA and ADB administration missions. Consultants' reports will be presented at workshops and seminars organized for the validation of findings. Reports will be made available on ADB websites in English and Chinese, if appropriate, and published whenever warranted. The findings of this TA will also be presented at a regional workshop sponsored by ADB in November 2009.¹¹

IV. THE PRESIDENT'S DECISION

21. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$500,000 on a grant basis to the Government of the People's Republic of China for Rural Pension Reform and Development, and hereby reports this action to the Board.

¹⁰ ADB. 2008. *Technical Assistance Disbursement Handbook*. Manila.

¹¹ ADB. 2008. *Technical Assistance for Enhancing Social Protection Initiatives in Developing Member Countries*. Manila (TA 6480-REG).

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p>Impact A well-functioning rural pension system is established to provide basic old age income protection for the rural population.</p>	<p>Participation in the rural pension system reaches 100% in 2020 in accordance with the Government's goal.</p>	<p>Country and sector reports</p>	<p>Assumption The system design is well thought out, and system implementation is effective.</p> <p>Risk Governments at different levels lack financing resources.</p>
<p>Outcome Improved policy and regulatory framework and strengthened financing mechanisms for the rural pension system.</p>	<p>A sustainable rural pension scheme on the basis of affordable fiscal appropriation and a reasonable level of funded individual account is established by 2017.</p> <p>Successful pilot rural pension schemes are replicated nationwide by 2015.</p> <p>Institutions for rural pension system administration are established and strengthened by 2012.</p>	<p>Sector and TA administration reports</p>	<p>Assumptions Governments and rural communities are willing to work together in identifying issues on rural pension development.</p> <p>An adequate policy, legal, and regulatory framework and the administrative structure and capacity for a rural pension system exist.</p> <p>Risk Competing demands for fiscal resources and for rural residents' savings may lower compliance rate for rural pension contributions.</p>
<p>Outputs 1. Main report: Sustainability analysis of the rural pension system nationwide. 2. Sub-report 1: Projection of, and quantitative analysis on, the sustainability of the rural pension system nationwide.</p>	<p>The main report and three sub-reports are completed by Q2 2010.</p> <p>The rural pension database design is completed by Q2 2010.</p>	<p>Government endorsement of the main report and three sub-reports</p>	<p>Assumptions Reliable and timely information from pilot programs are used for analysis.</p> <p>The design of rural pension schemes encourages compliance.</p>

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p>3. Sub-report 2: Projection of, and quantitative analysis on, the sustainability of the pension system in typical rural areas in western and central PRC.</p> <p>4. Sub-report 3: Database design for monitoring the operation of rural pensions.</p> <p>5. Policy-related knowledge products geared towards higher-level policy and decision makers.</p>	<p>Knowledge products with policy relevance are available.</p>		<p>Risks</p> <p>The willingness and capacity of local governments in providing long-term fiscal support are not at the required levels.</p> <p>The willingness of local rural pension administrators to allow portability and transferability when rural resident moves to other rural localities or to urban centers are not at the required levels.</p>
<p>Activities with Milestones</p> <p>1.1 The first phase, which will involve implementation planning and determination of pilot locations in the central and western regions, will be completed in 3 months.</p> <p>1.2 The second phase, which will involve the conduct of field studies, surveys, and workshops for reviewing preliminary findings, will be completed in another 3 months.</p> <p>1.3 The third phase, which will be preparation of draft main reports, will take another 3 months.</p> <p>1.4 The fourth and final phase, during which the final workshop will be conducted and the TA final reports completed, will take another 3 months.</p> <p>1.5 The remaining 3 months is allocated for consulting services contract completion.</p> <p>2.1 The key milestones for output 2 will be the same as output 1.</p> <p>2.2 Output 2 will prepare sub-report 1 covering the overall actuarial modeling results for the rural pension system.</p> <p>3.1 The key milestones for output 3 will be the same as output 1.</p> <p>3.2 Output 3 will prepare sub-report 2, focusing on actuarial features of individual accounts under the rural pension system.</p> <p>4.1 The key milestones for output 3 will be the same as output 1.</p> <p>4.2 Output 4 will prepare sub-report 3, covering issues on the rural pension information system.</p> <p>5.1 Knowledge products in the form of policy and technical notes targeting policy makers.</p> <p>5.2 Workshops and seminars.</p>			<p>Inputs</p> <p>ADB \$500,000 (TASF—Others)</p> <p>Government(s) \$200,000 (staff time and resources)</p>

PRC = People's Republic of China, Q = quarter, TA = technical assistance, TASF—Others = TA Special Fund for non-Asian Development Fund eligible countries.

Source: Asian Development Bank.

COST ESTIMATES AND FINANCING PLAN

(\$'000)

Item	Total Cost
A. Asian Development Bank (ADB) Financing^a	
1. Consultants	
a. Remuneration and Per Diem	
i. International Consultants	90.0
ii. National Consultants	125.0
b. International and Local Travel	25.0
c. Reports and Communications	10.0
2. Equipment ^b	5.0
3. Training, Seminars, and Conference	
a. Facilitators (Interpreters and Translators)	10.0
b. Domestic Workshop	40.0
c. Overseas Training ^c	50.0
4. Miscellaneous Administration and Support Costs	5.0
5. Surveys	50.0
6. Resource Persons	30.0
7. Publications	10.0
8. Contingencies	50.0
Subtotal (A)	500.0
B. Counterpart Financing	
1. Office Accommodation and Transport	100.0
2. Remuneration and Per Diem of Counterpart Staff	50.0
3. Contingencies	50.0
Subtotal (B)	200.0
Total	700.0

^a Financed by Asian Development Bank's technical assistance funding program (TASF—Others).

^b Equipment to be purchased includes projectors, scanners, and data storage devices. Upon completion of the TA, equipment will be transferred to the Executing Agency and the Implementing Agency.

^c A delegation of four or five officials from key departments of Ministry of Human Resources and Social Security involved in rural pension reform will visit one or two countries with successful rural pension schemes in operation to study experiences of policy making and operations.

ADB = Asian Development Bank, TASF = Technical Assistance Special Fund.

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

1. The international consultant will primarily be responsible for introducing international experiences and best practices, providing advisory services on key technical issues, and disseminating lessons and providing recommendations to policy makers. National consultants are responsible for all technical aspects of the implementation of the technical assistance (TA), including the conduct of training.

A. International Rural Pension Development Specialist (3 person-months)

2. The consultant should possess good knowledge and sufficient experience in areas related to rural pension development, both in the People's Republic of China (PRC) and other countries. Knowledge of the Chinese language is an advantage. Specifically, the consultant will

- (i) introduce, using a background report which he or she will draft, various experiences in rural pension reform and development in other countries to PRC policy makers to allow them to quickly grasp key success factors and be mindful of potential area of failure;
- (ii) provide necessary background materials related to rural pension reform programs in other countries and introduce to policy makers and national consultants how to best handle issues such as sustainability, coverage, and incentives for participation;
- (iii) recommend better options for streamlining the administrative structure for the rural pension program;
- (iv) identify potential missing areas that the executing agency and consulting team need to address to ensure the success of the rural pension reform program;
- (v) introduce areas for consideration in actuarial modeling, specifically applied for rural pension systems, based on international experiences to allow national actuarial consultants to quickly focus on key issues and solutions;
- (vi) advise and participate, together with the national consultants, in designing and implementing the survey;
- (vii) prepare policy notes and relevant sections of the main report, and advise national consultants during their preparation of sub-reports;
- (viii) participate in the drafting of the main report;
- (ix) assist the executing agency and national consultants in identifying key issues to be covered in workshops and seminars, preparing background materials, and recommending resource persons; and
- (x) delivering sessions during training workshops regarding international experiences.

B. National Consultants (22 person-months)

3. National consultants with in-depth country and sector knowledge and solid background in rural pension issues will be recruited. The national consultants are also expected to assume key responsibilities in leading the whole consulting team and in conducting survey and training activities for local social security administrations. Knowledge of the English language is required.

1. Pension Policy Specialist and Team Leader (4 person-months)

4. The consultant will assume the role of the team leader and be responsible for the overall management of the TA, the timely delivery of good-quality interim and final reports, the identification and management of resource persons in various technical tasks, and the

organization of workshops and training activities. The consultant should be experienced in project management, and particularly in projects that were assisted by international organizations. He or she should also have a solid background in rural social security theory and practices, and be familiar with the latest urban and rural pension reform issues. In addition, the consultant will

- (i) review past and current rural pension reform programs and identify main issues that need to be addressed in the current round of pilot programs;
- (ii) together with the international rural pension development specialist, identify elements that will affect the revenue and expenditure of the rural pension program at the county level, as well as policy conditions needed for the development of a sustainable and effective rural pension system;
- (iii) together with other national consultants, prepare a plan for the rural pension development program until 2020 to achieve 100% coverage, with proper consideration for the sustainability of the system, fiscal prudence at each level of government, and incentives for participation by rural residents;
- (iv) recommend options for streamlining the administrative structure for the rural pension program;
- (v) design a questionnaire and organize surveys of rural households for actuarial modeling use and evaluate their level of interest of participation in the rural pension system;
- (vi) ensure that surveys and studies are designed to maximize the collection of quantitative and qualitative gender-disaggregated data;
- (vii) liaise with government statistics bureaus and other sources of public information at various levels of the government to gather data that are necessary for actuarial modeling and rural pension system monitoring;
- (viii) coordinate with various government agencies and other stakeholders for consultations and consensus building;
- (ix) prepare policy notes and relevant sections of the main report, and advise the national consultants during their preparation of sub-reports; and
- (x) deliver relevant sessions in training workshops.

2. Rural Pension Actuarial Specialist (9 person-months)

5. The consultant will assume overall responsibility in the actuarial analysis of the rural pension system, including the subsistence pension supported by government funding and individual account. The consultant should be a competent actuarial scientist and be experienced in rural social security policy and quantitative analysis, and actuarial modeling for pension systems. Specifically, the consultant will

- (i) perform data needs and availability analysis for actuarial modeling, and advise on potential data resources;
- (ii) design actuary-related survey questionnaires and methodology and participate in survey-related activities;
- (iii) gather, formulate, tabulate, and transform the needed data;
- (iv) design, estimate, and calibrate the actuarial models for rural pensions, focusing on the portion of subsistence pension supported by government funding;
- (v) use the actuarial models to conduct various actuarial analyses over an array of policy options and parameters and recommend a set of plausible options;
- (vi) assist in the drafting of the main report;
- (vii) draft sub-report 1, and project the rural pension demands and required funding, and the fiscal implications of the rural pension systems on various levels of the government; assess the sustainability of the rural pension system; and

- (viii) deliver sessions during training workshops on actuarial modeling issues.

3. Rural Individual Account Actuarial Specialist (5 person-months)

6. The consultant will work together with the rural pension actuarial specialist to support the overall actuarial analysis while focusing on the actuarial aspects of the individual account. The consultant should be a competent actuarial scientist and be experienced in rural social security policy and quantitative analysis, and actuarial modeling for pension systems. Specifically, the consultant will

- (i) perform data needs and availability analysis for actuarial modeling of individual accounts, and advise on potential data resources;
- (ii) design actuary-related survey questionnaires and methodology for aspects of individual accounts and participate in survey-related activities;
- (iii) gather, formulate, tabulate, and transform the needed data;
- (iv) design, estimate, and calibrate the actuarial models for rural pensions, focusing on all aspects related to individual accounts;
- (v) use the actuarial models to conduct various actuarial analyses over an array of parameters and options, and recommend a set of plausible options to ensure sustainability of, and incentive compatibility in, the rural pension system;
- (vi) assist in the drafting of the main report;
- (vii) draft sub-report 2 report that should examine in detail a typical rural pension participant, and project whether or not his or her individual account could be self-balanced; and
- (viii) deliver sessions during training workshops on actuarial modeling issues.

4. Information System Specialist (4 person-months)

7. The consultant will develop a database at the ministry level for appropriate rural pension program monitoring and policy analysis, while covering issues related to establishing a nationwide information system for rural pensions comprising subsystems at various levels of government. The consultant should be a competent information system scientist and be experienced in social security information system development and quantitative analysis, and software and database development. Specifically, the consultant will

- (i) evaluate the capabilities of existing information systems at central and local government level and their adequacy for monitoring, and supervise rural pension program implementation;
- (ii) identify data flows that are available and needed at various levels of government;
- (iii) establish a set of indicators for the rural pension information system, reflecting coverage, individual accounts revenue and expenditure flows and outstanding amount, investment portfolio, and investment returns, among other factors;
- (iv) ensure that the rural pension database system is designed to maximize the collection and reporting of gender-disaggregated data and information;
- (v) design a database structure with recommended software, and recommend data collection and reporting procedures;
- (vi) assist in the drafting of the main report;
- (vii) draft sub-report 3 report, which should offer detailed recommendations leading to the establishment of the appropriate information system for rural pension programs; and
- (viii) deliver sessions during training workshops on actuarial modeling issues.