

**ASIAN DEVELOPMENT BANK**

**TAR: STU 38583**

**TECHNICAL ASSISTANCE**

**FOR**

**LONG-TERM SCENARIOS**

**FOR ASIAN GROWTH AND TRADE, 2005–2020**

**December 2004**

## ABBREVIATIONS

ADB	–	Asian Development Bank
DMC	–	developing member country
ERD	–	Economics and Research Department
ERMF	–	Macroeconomics and Finance Research Division
PRC	–	People's Republic of China
TA	–	technical assistance
TASU	–	technical assistance supervising unit

## TECHNICAL ASSISTANCE CLASSIFICATION

<b>Targeting Classification</b>	–	General intervention
<b>Sector</b>	–	Industry and trade
<b>Subsector</b>	–	Trade
<b>Themes</b>	–	Sustainable economic growth, regional cooperation
<b>Subtheme</b>	–	Promoting economic efficiency, enabling markets

## NOTE

In this report, "\$" refers to US dollars.

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## I. INTRODUCTION

1. With strong impetus from the People's Republic of China (PRC) and India, developing Asia's economy is changing very rapidly. Intra-Asian trade is growing almost twice as fast as global trade and now represents almost half of total trade for the regional economies. This dynamic economic environment presents unprecedented opportunities for regional cooperation, but policymakers need better information about emergent trends to identify these opportunities and realize their potential for sustaining equitable growth. As the primary regional institution supporting regional economic cooperation, the Asian Development Bank (ADB) must strengthen its research capacity to support forward-looking strategies for more effective multilateralism. This regional technical assistance<sup>1</sup> (TA) is intended to develop long-term regional projection tools, implement them for scenario analyses, and disseminate the results to public and private stakeholders across the region. This activity will set an essential precedent for ADB to inform regional stakeholders and encourage regional policy dialogue based on the study's empirical results. The TA framework is in Appendix 1.

## II. ISSUES

2. Over the past two decades, intraregional trade, supported by rapidly expanding regional trade arrangements and foreign direct investment flows to the region, has become a major driver for economic growth in developing Asia. The private sector has mostly been at the forefront in expanding the potential of intraregional trade for economic growth, partly through vertical specialization of production processes.

3. More recently, the region's development agenda has increasingly moved to wider regional economic integration issues. Robust income growth in the region, the need to sustain strong productivity increases, as well as slow progress in global trade negotiations, are some main factors behind this trend to regional economic integration. Finally, the rapid development of the PRC economy, both as an export competitor and at the same time an immense export market opportunity for other countries in the region, has played a pivotal role in this process.

4. Realizing the opportunities at hand, policymakers have increasingly provided added impetus to the integration process by contemplating a number of regional and bilateral trade agreements, including with Japan, to take effect over the next two decades. Strong growth in regional trade supported by regional and bilateral free trade agreements will undoubtedly play a central role in the development of the Asian region over the medium and long term. Robust regional income and trade growth will in turn have a substantial impact on regional foreign direct investment flows, including for infrastructure development, and on global commodity prices. For policymakers in Asian developing countries, obtaining a clear assessment of the potential for and impact of intraregional trade expansion in the development of the region over the long term is important. Such assessment will assist them in defining their strategic policy priorities over the long term, and promote the achievement of multilateral development goal number 8, calling for an open, rule-based trading system.

5. For ADB, a good strategic understanding of the context of its operations is crucial for defining its future role. In pursuit of its strategic mission to reduce poverty and improve living conditions in developing Asia, and responding to this development challenge, ADB's long-term strategic framework for 2000–2015 identifies support for regional cooperation and integration as a main strategic crosscutting issue. Such support needs good prior understanding of the

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<sup>1</sup> The TA first appeared in the *ADB Business Opportunities* (Internet edition) on 6 October 2004.

potential of and constraints to regional cooperation and integration, and the corresponding issues involved. Promoting the role of the private sector is a second main crosscutting theme of the strategic framework, and increasingly such promotion requires a wider regionally integrated approach.

### III. THE TECHNICAL ASSISTANCE

#### A. Purpose and Output

6. To facilitate the process of regional cooperation and trade integration in Asia, the TA will aim to make available to public and private stakeholders, as well as ADB, more accurate information on the potential for and impact of intraregional trade expansion in the development of the region. To achieve this purpose, the TA will deliver three key outputs: (i) a newly calibrated global computable general equilibrium model with Asian regional focus; (ii) an assessment of regional trade scenarios to 2020, including simulations of a variety of bilateral and regional trade agreements; and (iii) three research papers focusing on issues of regional significance in the area of trade.

7. The overall research program, which will result in a general report on regional trade scenarios, will comprise a number of subprograms. First, baseline trade and growth projections for the region up to 2020 will be established. Second, against this baseline, a detailed quantitative assessment of various regional and bilateral trade agreements over the 2020 projection horizon will be undertaken. The results of this assessment will be evaluated against the findings of previous studies focusing on global trade liberalization. Cross-country comparisons will be conducted. To the extent possible, regional groupings corresponding to ADB operations will also be considered, to enable the results to be useful to the regional departments. Third, analyses of three key regional trade-related issues of particular relevance will be prepared and policy conclusions drawn. The issues will be selected on the basis of recent and ongoing analyses carried out in the Economics and Research Department (ERD) indicating their importance in the regional context over the long term, in conjunction with a peer review group of academics and policymakers who will advise on the final design of these in-depth studies. Tentatively, the following are earmarked for more in-depth analysis: (i) regional integration and trade in agricultural products, because of its strong correlation with poverty reduction, importance in the Doha Round of World Trade Organization trade negotiations, and its impact on the potentially declining food security in Asia brought by expanding populations and economic growth; (ii) growth, intraregional trade, and commodity prices, because of recent increasing trends, which could impact on Asia's growth prospects; and (iii) regional infrastructure development and trade, which could help ADB target its assistance to its developing member countries. The draft outline of the project report is in Appendix 2.

8. The TA outputs are expected to contribute to enhancing policy dialogue on regional cooperation and economic integration among ADB's developing member countries by:

- (i) providing policymakers with a clear assessment of the impact and potential benefits and costs of different regional and bilateral free trade agreements;
- (ii) providing policymakers and trade negotiators with quantitative information on the impact of trade agreements;
- (iii) providing a quantitative assessment of the sector impact of free trade agreements and allowing policymakers to prioritize sector policies;
- (iv) providing an assessment of the potential benefits of greater regional and subregional integration for agricultural specialization and trade; and

- (v) providing an assessment of the benefits of regional and subregional infrastructure investment for intraregional trade and investment, allowing for prioritization of such investments.

9. The TA will also assist ADB in defining its strategic priorities and role in the area of regional cooperation and integration by providing an assessment of ADB's regional operational environment up to 2020. This would help ADB prioritize operations in support of regional cooperation and integration.

## **B. Methodology and Key Activities**

10. The research will quantitatively develop a number of scenarios for Asian growth and trade until 2020 based on a global computable general equilibrium model. The model takes into account interdependencies between markets of different goods and productive factors in different regions. By substituting the alternative development of exogenous variables, such as demography, institutions, trade barriers, and technology, simulations of alternative economic development in a consistent macroeconomic framework will be undertaken. Rather than predicting the future economic conditions with accuracy, the quantitative assessment allows the exploration of the impacts of different policy and growth scenarios on trade and growth patterns, and gauges the relative importance of various driving forces and key uncertainties that might influence outcomes.

11. While a number of studies have already been undertaken using global computable general equilibrium models, previous research has generally focused on the impact of global trade liberalization based on commitments made under the World Trade Organization. This research, meanwhile, will focus on the impact of changing intraregional trade flows within Asia. Trade flow projections between some of developing Asia's main growth poles, namely PRC, India, Japan, Republic of Korea, and member countries of the Association of Southeast Asian Nations will be at the core of the research project. Consideration will also be given to expansion of these mainstream growth poles across the region, and the implications for more equitable regional development. The data will be calibrated based on a combination of official national statistics and internationally standardized trade data. As part of the TA, the model implementation and data requirements will be fully documented to allow for regular model and data updates.

12. The TA intends to partner closely with the ADB Institute, the Inter-American Development Bank, the Organisation for Economic Co-operation and Development, and the World Bank (Development Prospects Group) to learn from each other's experiences, avoid overlap, and maximize complementarities. For instance, in the past few years, trade between developing Asia and Latin America has been growing rapidly in both directions, and indications are that over the projection horizon, foreign direct investment between the two regions will surge. Toward the end of the TA, a high-level international conference on Asian economic integration and interregional trade is planned. The conference is to be cosponsored by the concerned research partners. Preliminary work on the model to be used in the analysis has also been initiated in collaboration with the World Bank.

13. The following major activities are the milestones for the TA:

- (i) Using the Global Trade Analysis Project (GTAP) database, develop and implement a new regional projection model.

- (ii) Evaluate baseline scenarios for the evolution of regional trade during 2005–2020, including the effects of a variety of possible regional trade agreements.
- (iii) Disseminate the study results in seminars at three Asian capitals, through partnerships with local counterpart economists who will assess the national implications of the projected regional trends.
- (iv) Produce three illustrative case studies with the new methodology, tentatively on topics such as regional integration and trade in agricultural products, intraregional trade and commodity prices, and regional infrastructure development and trade.
- (v) Organize, at the conclusion of implementation, a high-level regional conference to discuss the baseline scenario results and evaluate alternative topics for more intensive regional research.
- (vi) Organize a high-level international conference to discuss regional trends in a global context, promote standards for more empirically grounded policy dialogue, and evaluate alternative topics for more intensive regional research.

### **C. Cost and Financing**

14. The total cost of the TA is estimated at \$300,000 (Appendix 3). The TA will be financed on a grant basis by ADB's TA funding program.

### **D. Implementation Arrangements**

15. ADB will be the Executing Agency of the TA. ERD, with the Macroeconomics and Finance Research Division (ERMF) as the coordinating unit, will implement the TA. The TA is expected to commence in December 2004 and be completed by December 2006. Developing the models will be a collaborative exercise involving ERMF economists, an international consultant, and selected national experts in the regional economies. This approach will ensure sustained capacity in ERMF and continuity of the investment in modeling work.

16. Implementation will be handled by a TA secretariat, consisting of a TA supervising unit officer, an economics officer, and an administrative assistant. The main responsibilities of the secretariat are to (i) facilitate the engagement of international and domestic consultants required to conduct the study, (ii) plan and manage all seminars and conferences related to the study, and (iii) help produce and disseminate the TA results.

17. For TA implementation, one international consultant on modeling (90 person-days) and four domestic trade consultants (2.5 person-months each) will be engaged. Outline terms of reference for the consultants are provided in Appendix 4. The consultants will be engaged by ADB in accordance with *Guidelines on the Use of Consultants by Asian Development Bank and its Borrowers* and other arrangements satisfactory to ADB for the engagement of domestic consultants.

18. Three dissemination seminars are tentatively scheduled for May-June 2005. These will be 1–2 day seminars, participated in by ERMF staff and the international consultant. Possible venues are Bangkok, Beijing, and New Delhi. High-level regional and international conferences

(one each) are also being planned, possibly at ADB headquarters. The study results will be circulated to the relevant departments for their information and comments.

#### **IV. THE PRESIDENT'S DECISION**

19. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$300,000 on a grant basis for Long-Term Scenarios for Asian Growth and Trade, 2005–2020, and hereby reports this action to the Board.

### TECHNICAL ASSISTANCE FRAMEWORK

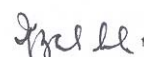
<b>Design Summary</b>	<b>Performance Indicators/Targets</b>	<b>Monitoring Mechanisms</b>	<b>Assumptions and Risks</b>
<p><b>Goal</b> Facilitate regional cooperation and trade integration in Asia.</p>	<p>Expansion of intraregional trade and growth</p> <p>Fast-tracking of existing bilateral and regional trade agreements</p>	<p>Data from Direction of Trade Statistics of the International Monetary Fund</p> <p>Number of bilateral and regional trade agreements</p> <p>Number of bilateral and regional trade agreements implemented ahead of schedule</p>	
<p><b>Purpose</b> Improve the availability of more accurate information on the potential for and impact of intraregional trade expansion in the development of the region to public and private stakeholders, as well as ADB.</p>	<p>Increased understanding of policymakers of regional cooperation and trade integration issues</p>	<p>TA performance and completion reports</p>	<p><b>Assumption (A):</b> Multilateral agreements under the World Trade Organization would not render bilateral and regional trade agreements redundant.</p>
<p><b>Outputs</b> A newly calibrated global computable general equilibrium model with Asian regional focus</p> <p>An assessment of regional trade scenarios to 2020, including simulations of a variety of bilateral and regional trade agreements</p> <p>Three research papers focusing on issues of regional significance in the area of trade</p>	<p>Adequacy of quantitative tools for policy simulation and projection exercises</p> <p>Detailed presentation of the assessment of regional trade scenarios to 2020</p> <p>Case studies of relevance to DMC policymakers and the Asian Development Bank</p>	<p>Usability of the new model by June 2005</p> <p>Interest in the study's reports as indicated by hits and downloads from the Economics and Research Department web page</p> <p>Peer-reviewed publication in leading development journals</p>	<p>(A): Continued interest by policymakers and other stakeholders in the expansion of intraregional trade.</p>
<p><b>Activities</b> Series of three</p>	<p>Dissemination seminars</p>	<p>Adequate media coverage</p>	<p><b>Risk (R):</b> Since the Technical</p>

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<b>Design Summary</b>	<b>Performance Indicators/Targets</b>	<b>Monitoring Mechanisms</b>	<b>Assumptions and Risks</b>
<p>dissemination seminars</p> <p>Two research conferences, one regional and one global</p>	<p>in 2005</p> <p>Regional conference in 2005</p> <p>International conference in 2006</p>	<p>and feedback, particularly in the relevant DMCs</p> <p>Number of high-level participants in the conferences</p>	<p>Assistance Supervising Unit (TASU) requests government nominations for participants to seminars and conferences, TASU cannot ensure that the targeted policymakers will participate</p>
<p><b>Inputs</b></p> <p>Staff inputs</p> <p>Consultant inputs</p> <p>Global Trade Analysis Project (GTAP) international trade database; general algebraic modeling system (GAMS), a computable general equilibrium (CGE) computer program; supplemental data on national economies and selected policy variables; baseline assumptions on external economic conditions</p>	<p>36 person-months of staff time</p> <p>90 person-days of international consulting; 10 person-months of domestic consulting</p>	<p>TA performance report</p>	<p>(A): Adequate allocation of staff time</p> <p>(A): Acceptable performance by consultants vis-à-vis their terms of reference</p> <p>(A): Minimal data errors in the simulation exercises</p>



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## **DRAFT OUTLINE OF THE FINAL REPORT**

- I. Introduction
- II. Baseline Trade and Growth Projections, 2005-2020
- III. Simulations of Bilateral and Regional Trade Agreements
- IV. Regional Integration and Trade in Agricultural Products
- V. Growth, Intraregional Trade, and Commodity Prices
- VI. Regional Infrastructure Development and Trade
- VII. Policy Recommendations

**COST ESTIMATES AND FINANCING PLAN**  
(\$'000)

<b>Item</b>	<b>Total Cost</b>
<b>Asian Development Bank Financing<sup>a</sup></b>	
1. Consultants	
a. Remuneration and Per Diem	
i. International Consultants	62.4
ii. Domestic Consultants	40.0
b. International and Local Travel	32.6
2. Training, Seminars, and Conferences	75.0
3. Miscellaneous Administration and Support Costs	65.0
4. Contingencies	25.0
<b>Total</b>	<b>300.0</b>

<sup>a</sup> Financed by the Asian Development Bank's technical assistance funding program.  
Source: Asian Development Bank estimates.

## OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

### A. One International Consultant (90 person-days)

1. The consultant should be a computable general equilibrium modeler of international reputation, with established experience in trade and developing countries, especially in the Asian region. Under the direct supervision of and in collaboration with the technical assistance supervising unit (TASU) officer, the consultant will undertake the following.

- (i) Develop a prototype global projection model calibrated to the Global Trade Analysis Project international database and incorporate national data for leading Asian economies. The model should be based on the most recent data available, and be benchmarked to baseline growth scenarios for the period 2005-2020.
- (ii) Prepare complete documentation of the model specification and baseline scenarios.
- (iii) Work with the TASU officer to develop scenarios for regional trade integration and growth, conduct detailed counterfactual analysis, and report the results for internal review and possible dissemination.
- (iv) Assist the TASU secretariat in organizing three dissemination seminars and two research conferences.
- (v) Work with the TASU secretariat to establish modeling capacity as an ongoing resource for policy support in the Asian Development Bank (ADB).

### B. Three Domestic Consultants (7.5 person-months)

2. The consultants should be known trade experts in their respective countries. Under the direct supervision of and in collaboration with the TASU officer, the consultants will

- (i) support the development and implementation of the ADB trade model by providing up-to-date economic data on their own and possibly neighboring countries;
- (ii) evaluate the national implications of the resulting regional projections by preparing 10–15 page (5,000–7,500 words) policy briefs; and
- (iii) help with the dissemination phase by presenting their evaluations during the dissemination seminars.

### C. One Domestic Consultant (2.5 person-months)

3. The consultant should be an economic modeling expert, with established experience in agricultural trade in developing countries. Under the direct supervision of and in collaboration with the TASU officer, the consultant will

- (i) develop probable scenarios of agricultural trade liberalization; and
- (ii) analyze the impacts of regional integration on trade in agricultural products using the global trade model.