

ASIAN DEVELOPMENT BANK

TAR: IND 37095

TECHNICAL ASSISTANCE

(Financed by the Government of the United Kingdom)

TO

INDIA

FOR THE

AGRIBUSINESS AND COMMERCIAL AGRICULTURE ASSESSMENT

October 2003

CURRENCY EQUIVALENTS

(as of 25 September 2003)

Currency Unit	–	rupee/s (Re/Rs)
Re1.00	=	\$0.0219
\$1.00	=	Rs45.70

ABBREVIATIONS

ADB	–	Asian Development Bank
DAC	–	Department of Agriculture and Cooperation
ICT	–	information and communication technology
NGO	–	nongovernment organization
TA	–	technical assistance

NOTES

- (i) The fiscal year (FY) of the Government and its agencies ends on 31 March.
- (ii) In this report, "\$" refers to US dollars.

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I. INTRODUCTION

1. India's Tenth Five-Year Plan, 2002–2007, identifies imperatives for invigorating rural India by removing restrictions on agri-trading, agro-industry, and agricultural exports, and through public and private sector investment in agricultural marketing infrastructure and facilities, to support market-oriented farming systems. The Government of India (the Government) seeks assistance from the Asian Development Bank (ADB) for economically viable projects in agribusiness, with a particular focus on improved storage and greater value added in the processing and marketing chains in order to improve efficiency and reduce post-harvest losses.¹ Agribusiness includes all activities in the production, manufacturing, distribution, wholesale and retail sales of agricultural commodities. Given the diversity of commodities and marketing and processing channels in agribusiness, areas must be identified that have the highest potential for economically and financially viable ADB assistance. The Government requested ADB for advisory technical assistance (TA) to assess the agribusiness and commercial agriculture needs. A reconnaissance mission visited India on 26 May to 3 June 2003. A fact-finding mission on 28 July to 8 August 2003 reached an understanding with the Government on the objective, scope, cost estimates, financing plan, and implementation arrangements for the TA. These were defined through a consultative process including central Government, state governments, external funding agencies, private sector, nongovernment organizations (NGOs), and local stakeholders. The TA is included in ADB's 2003 program for India.² The TA framework is attached as Appendix 1.

II. ISSUES

2. Agriculture contributed 24.2% to India's gross domestic product in 2001–2002 and provides livelihood support to about two-thirds of the country's population. About 75% of India's poor live in rural areas, and 80% of them depend largely on agriculture for their livelihoods. The sector provides employment to 56.7% of the country's workforce and supports the rural economy through backward and forward linkages. India is one of the world's largest producers of farm commodities, and the second largest producer of fruits and vegetables. Agriculture accounts for about 14.7% of the country's total export earnings. India also has one of the world's largest agricultural research systems, and a relatively well-developed base for research and development, and extension.

3. In the past four decades, India has become self-sufficient in food grains and now has a surplus. Food grain production increased from 89.4 million metric tons (t) in 1964–1965 to 211.3 million t in 2001–2002, with the dissemination and adoption of green revolution technology. Factors contributing to this success include (i) increase in net sown area; (ii) expansion of irrigation facilities; (iii) land reforms, especially consolidation of holdings; (iv) development and introduction of high-yielding seeds, fertilizers, improved implements and farm machines, and technology for pest management; (v) price policy based on minimum support price and procurement operations; and (vi) infrastructure for storage. However, India also presents a stark contrast between a large food grain surplus on the one hand and widespread rural poverty and malnutrition on the other. Regional disparities have been accentuated, with agricultural and rural development lagging outside the states that have benefited from the green revolution.

4. The National Horticulture Board estimates domestic fruit production at about 46 million t (almost 10% of global production) and vegetable production at almost 90 million t (about 15% of

¹ ADB. 2003. *Country Strategy and Program (2003-2006): India*. Manila. Expansion of ADB operations to agriculture is one of the most important features of the new country strategy, to mainstream poverty reduction.

² The TA first appeared in *ADB Business Opportunities* (Internet edition) on 8 May 2003.

global production). Production of fruit and vegetables has been growing at compounded annual rates of 5% and 6%, respectively, over the past decade. Although India is the world's second largest producer of fruit and vegetables, only 2–4% of this production is commercially processed,³ in contrast to 83% in Malaysia, 78% in the Philippines, and 30% in Thailand. Wastage is estimated to be as high as 25%. Value addition is constrained by the long value chain, with too many intermediaries making scale efficiencies difficult. Agriculture could be diversified and the food processing industry developed, which would give a strong boost to rural incomes and have major multiplier effects on employment and equitable income growth throughout the economy. The Government appreciates that a strong and dynamic food processing industry can play a vital role in diversification and commercialization of agriculture, ensure value addition to agricultural produce, generate employment, enhance income of farmers, and create surplus for export of processed products.

5. The Tenth Five-Year Plan suggests that the equity, efficiency, and sustainability of the recent policy approach to agriculture needs to be reconsidered, in particular the strategy to secure increased production through subsidies on inputs (such as power, irrigation, and fertilizer) rather than through building new capital assets. Deteriorating state finances have resulted in subsidies crowding out public agricultural investment in roads and irrigation, and expenditure on technological upgrading. Lack of resources has also eroded expenditure on maintenance of roads and canals. These problems are particularly acute in the poorer states. In recognition of the Tenth Five-Year Plan's priorities for public sector investment, the Government has identified agribusiness development as a strategic priority. In India, agribusiness could have a significant role in rural and economic development, and agro-enterprises could be a major source of rural nonfarm employment and income.

6. The major constraints to agribusiness and commercial agriculture development at the national level are well-documented.⁴ These include (i) agriculture not being market-driven; (ii) distorted incentive structures; (iii) a multiplicity of laws, regulations, and taxes; (iv) inadequate backward and forward linkages; (v) poor infrastructure, especially for marketing; (vi) the poor state of markets and the way they transact; (vii) inadequate outreach of services and credit to farmers; (viii) lack of modernization in storage techniques and transportation methods; and (ix) inadequate information on and linkage with standards and requirements for exports. Value added in the sector is low, with estimates of 7–22%. Outreach of credit and services to farmers is insufficient, marketing infrastructure remains poor, and transaction costs are high. A range of policy and physical constraints need to be addressed to encourage private sector growth in line with opportunities presented by growing incomes in India and the country increasingly opening up to world trade.

7. The Government has established a number of agencies and initiated several schemes to develop agribusiness for domestic and export markets. Initiatives have also been taken to modernize and rationalize legislation related to the commercialization of agriculture; but the multiplicity of laws, regulations, and taxes remains an impediment. Inefficiencies in the agricultural marketing system (for food grains and other produce) have been assessed and the Government has started implementing some of the recommendations. Recommendations relate to a wide range of issues, including (i) promoting direct marketing, (ii) improving credit flow to the agriculture sector, (iii) improving credit delivery supported by a system of negotiable

³ Statistical estimates of processing relate to the organized (formal) sector.

⁴ For example, (i) Federation of Indian Chambers of Commerce and Industry. 2002. *Indian Agriculture Unbound: Making Indian Agriculture Globally Competitive*. New Delhi; (ii) Industrial Development Bank of India. 2001. *Value Addition in Indian Agriculture*. Mumbai; and (iii) Export-Import Bank of India. 2001. *Agro and Processed Foods: A Sector Study*. Mumbai.

warehouse receipts, (iv) enabling forward and futures trading, (v) promoting the use of information technology in agricultural marketing, and (vi) improving extension services.⁵ Agriculture being a state subject, state governments also have institutions and plans to support development of agro-industry. NGOs are working with rural communities to establish agro-based microenterprises. The organized private sector is also active in this area; multinational corporations are developing innovative marketing networks in rural areas through the use of information and communication technologies. However, these initiatives are, as yet, fragmented.

8. Financial support for agribusiness development can be leveraged by linkage with the banking sector's interest in supporting viable projects that allow them to meet their targets for priority sector lending. Banks have taken initiatives such as entering into public-private partnerships for contract farming (in northern states) and working with NGOs to mobilize communities and develop forward and backward linkages for commercialization of agriculture (in southern states). Banks with a widespread network of branches can play a major role in the development process. Opportunities for improved market information and access also exist, building on India's well-developed infrastructure and skill-base in information and communication technologies. Another "driver" is the need to be globally competitive, with opportunities presented by world trade agreements. Making full use of these opportunities requires addressing a number of constraints at different levels, and taking a more holistic approach to value addition in agriculture.

III. THE TECHNICAL ASSISTANCE

A. Purpose and Output

9. The purpose of the TA is to assess and prioritize opportunities for agribusiness investment and growth with strong private sector focus. This will contribute to the longer-term goal of raising rural incomes and reducing poverty by raising the productivity of land and water resources in a sustainable manner through diversified agricultural production and enhanced employment and value addition in the marketing system. The TA will synthesize information and analyses of the agribusiness sector, undertake new field studies in selected states, consult widely with farmers and public and private sector stakeholders concerned, and identify priority investments and complementary policy and institutional reforms. Thus, the TA will assist the efficient preparation, in 2004, of ADB's proposed initial agribusiness loan.⁶ The TA will produce a comprehensive synthesis document that identifies opportunities, constraints, and strategies; prioritizes approaches for development of commercial agriculture and agribusiness in India; and identifies complementary policy and institutional reforms needed.

10. The primary outputs of this TA will be (i) an assessment of the policy, legal, and regulatory environment for agribusiness, including constraints to private sector activity; (ii) an analysis of economic efficiency of the value chain; (iii) an inventory of past and ongoing interventions and survey of lessons learned; (iv) an assessment of potential social and poverty impacts (including a case study on contract farming); (v) an assessment of needs and opportunities for agribusiness development; (vi) an agribusiness development road map and strategy, including investment priorities and approaches for agribusiness development for four target investment states, and a reform agenda to support these priorities; and (vii) a national seminar to disseminate and validate the findings of the TA.

⁵ Government of India, Ministry of Agriculture, Department of Agriculture and Cooperation. 2002. *Report of Inter-Ministerial Task Force on Agricultural Marketing Reforms*. New Delhi.

⁶ Project preparatory TA proposed for 2004 will build on the outputs of this TA and prepare a feasibility study based on the investment priorities identified.

B. Methodology and Key Activities

11. The TA will make an assessment at the national and state levels. States to be covered have been selected to provide a geographic spread, as well as an overview of different levels of development of agribusiness and commercialization of agriculture. The TA will review examples of agribusiness initiatives in up to six states, to draw lessons for future design of investment projects. These will be documented as case studies as part of the TA outputs. Focus group discussions and consultations in these states, and their participation in the national seminar at the end of the TA will also give the states an opportunity to learn from the experience of the TA team. The states identified for this purpose are Andhra Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu, and Uttaranchal. In addition, the TA will study in detail four selected states, to prepare an agribusiness development roadmap and strategy, and identify investment priorities. The states targeted for potential investments are (i) Chhattisgarh, a focal state for ADB assistance, where planned ADB assistance for development of irrigation and rural roads will support and have synergy with diversification of agriculture; (ii) Jammu and Kashmir, given high priority by the Government, and with apparent comparative advantage for certain horticulture crops; (iii) Punjab, which has been at the forefront of the green revolution, now trying to shift from agriculture to agribusiness, with need for crop diversification in part driven by soil degradation and depleting water resources from the rapid rotation of rice and wheat crops; and (iv) Sikkim, a new focal state for ADB assistance, as part of the Government's priorities to support development of the northeastern states. The selection of states and specific initiatives to be reviewed will be finalized by the national counterpart team, in consultation with ADB, in the context of finalizing the consultants' work plan at TA inception.

12. The TA will (i) review available information from secondary sources, including relevant international experience; (ii) develop case studies, based on both primary and secondary information to be collected through field visits to the target states, on specific ongoing initiatives (including contract farming and the use of information and communication technologies in commercialization of agriculture); and (iii) use a consultative process of focus group discussions and stakeholder workshops to identify constraints and opportunities, and to define and prioritize investment needs and a supporting reform agenda.

C. Cost and Financing

13. The TA is estimated to cost \$750,000 equivalent, comprising \$220,000 in foreign exchange and \$530,000 equivalent in local currency. An amount of \$600,000 equivalent, comprising the entire foreign exchange cost and \$380,000 equivalent of the local currency cost, will be financed on a grant basis by the Government of the United Kingdom, and administered by ADB. The Government and state governments will contribute the balance of the local currency cost of \$150,000 equivalent through the provision of counterpart staff, office space, administrative services, and data. Details of the cost estimates and financing plan are given in Appendix 2.

D. Implementation Arrangements

14. The Department of Agriculture and Cooperation (DAC) of the Ministry of Agriculture will be the Executing Agency for this TA. DAC is responsible for formulating and implementing national policies and programs aimed at achieving rapid agricultural growth through optimum use of the country's resources. DAC will nominate a TA manager to lead the counterpart team and working group, and a TA coordinator, who will work closely with the consultants' team, facilitate their interactions with other government agencies (central and state), facilitate access

to data and information from DAC and other government departments and organizations, and assist in arranging field visits.⁷ One person each will be nominated as a focal point for the TA from (i) key organizations such as Agricultural and Processed Foods Export Development Authority, Export-Import Bank of India, Ministry of Food Processing Industry, National Horticulture Board, Small Farmers' Agribusiness Consortium; and (ii) each of the states to be covered by the TA. The focal points will comprise the national counterpart team. In addition, nominees of each of the three national chambers of commerce and industry will represent the private sector in the team.⁸ A subset of this team, including the private sector representatives, will comprise the counterpart working group. The roles of the counterpart team and working group are elaborated in Appendix 3.

15. The TA will be implemented over 5 months, commencing in November 2003, with completion expected by April 2004. A total of 34 person-months of consulting services will be required: 9 person-months of international consulting, comprising an agribusiness development specialist and an agricultural economist, and 25 person-months of national consulting, comprising specialists in agribusiness, marketing, agricultural technology, horticulture, agro-processing, credit, information and communications technology, and social development. ADB will recruit an international consulting firm in association with domestic consultants, in accordance with its *Guidelines on the Use of Consultants* and other arrangements satisfactory to ADB on the engagement of domestic consultants. The consultants will be selected using the simplified technical proposal procedure, and advance action will be taken to recruit the consultants. Outline terms of reference are provided in Appendix 3. Equipment to be procured under the TA will be handed over to DAC upon TA completion.

16. The following outputs will be produced: (i) an inception report, at the end of the second week of the TA, giving the detailed work plan based on the final selection of states; (ii) a midterm report and sector profile, at the end of 2 months; (iii) a national seminar, to present and validate the TA outcomes, at the end of 4 months; and (iv) a final report, incorporating feedback and comments, upon completion of the TA. Tripartite review meetings will be held on completion of the inception and midterm reports, and in conjunction with the national seminar.

17. Active involvement of stakeholders, including farmers and small-scale entrepreneurs, will be sought by organizing focus group discussions and stakeholder workshops at the state and central levels. The private sector will be proactively engaged in the assessment, through the counterpart team, the focus group discussions, and the development of case studies that are largely based on private sector initiatives. The workshops, and a concluding national seminar, will disseminate results and obtain feedback from stakeholders in the public and private sectors.

IV. THE PRESIDENT'S DECISION

18. The President, acting under the authority delegated by the Board, has approved ADB administering technical assistance not exceeding the equivalent of \$600,000 to the Government of India to be financed on a grant basis by the Government of the United Kingdom for the Agribusiness and Commercial Agriculture Assessment, and hereby reports this action to the Board.

⁷ DAC programs cover a range of activities, from ensuring timely and adequate supply of inputs and services to agriculture marketing. DAC is organized in 22 divisions and other organizational units, with offices all over the country providing for coordination at the state level. Given its broad functions and capacity, DAC was identified as the appropriate executing agency for this overall assessment.

⁸ The Associated Chambers of Commerce and Industry of India, Confederation of Indian Industry, and Federation of Indian Chambers of Commerce and Industry.

TECHNICAL ASSISTANCE FRAMEWORK

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
Goal To raise rural incomes and reduce poverty through diversified agricultural production and enhanced value added in the marketing system.	Value addition in agriculture raised (above 20% by 2010). Post-harvest losses for fruits and vegetables reduced (below 20% by 2010). Agricultural investment-to-gross domestic product ratio raised (above 3% by 2010).	Government statistical publications.	An enabling policy, legal, and regulatory environment established for private agribusiness activity. Adequate investments made in agricultural marketing and other supporting infrastructure.
Purpose Assess and prioritize opportunities for agribusiness investment and growth with strong private sector focus.	Investment options for agribusiness development prioritized by subsector and/or commodity, geographic location, and approach. Complementary policy and institutional reforms identified. Infrastructure needs inventoried and assessed.	Asian Development Bank (ADB) progress reviews and communications with consultants. Technical assistance (TA) reports.	Competent consultants recruited. Consultant team able to work together effectively. Counterpart staff and other in-kind support provided in a timely manner.
Outputs 1. Inception report - initial assessment of agribusiness situation. 2. Midterm report - review of national policies and programs	Detailed work plan and final selection of states submitted by end of second week. By end of second month: <ul style="list-style-type: none"> assessment of policy, legal, and regulatory environment for agribusiness and private sector activity, analysis of economic efficiency of the value chain, inventory of past and ongoing interventions and survey of lessons learned, and assessment of potential social and poverty impacts (including case study on contract farming). 	Regular meetings between counterpart team, and consultants' team. National counterpart meetings. Other consultation meetings as needed. National seminar at end of fourth month. ADB progress reviews and communications with consultants.	Timely inputs from key central and state organizations.

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
3. Final report - opportunities and priorities for agribusiness investment and growth.	By end of fifth month: (i) Assessment of needs and opportunities for agribusiness development, based on (a) review of national programs, (b) case studies on ongoing initiatives at state level, and (c) consultations at national seminar. (ii) An agribusiness development roadmap and strategy, and investment priorities for agribusiness development for 4 target investment states.	Same as for outputs 1 and 2.	Timely inputs from key central and state organizations.
Activities 1. Finalize selection of states in consultation with counterparts and ADB. 2. Review and synthesize existing information and analyses of the agribusiness sector. 3. Undertake field visits to selected states. 4. Consult widely with farmers and concerned public and private stakeholders. 5. Prepare case studies. 6. Identify opportunities and constraints. 7. Prepare development roadmap and strategy, including a reform agenda.	Inputs Fielding of 9 person-months international and 25 person-months national consultants for 5 months. Establishment of counterpart team. Focus group discussions, workshops and national seminar with active involvement of relevant groups and private sector interests. Costs involved: • United Kingdom financing \$600,000 • Counterpart \$150,000 • Total \$750,000	ADB progress reviews and communications with consultants. Communications with government counterparts. TA review missions and tripartite review meetings for the TA.	Timely fielding of consultants and provision of counterpart support. Effective working relationships established with counterparts. Effective cooperation and timely access to necessary information from government and other agencies Effective consultations with stakeholders State governments committed to promoting agribusiness development and willing to cooperate with consultant team

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Foreign Exchange	Local Currency	Total Cost
A. United Kingdom Financing			
1. Consultants			
a. Remuneration and Per Diem			
i. International Consultants	165.0	0.0	165.0
ii. National Consultants	0.0	130.0	130.0
b. International and Domestic Travel	20.0	60.0	80.0
c. Reports and Communications	0.0	20.0	20.0
2. Focus Group Discussions, Consultation Workshops, and National Seminar			
a. Facilitators	0.0	5.0	5.0
b. Other Costs	0.0	45.0	45.0
3. Equipment ^a	0.0	15.0	15.0
4. Miscellaneous Administration and Support Costs	0.0	25.0	25.0
5. Vehicle Hire	0.0	20.0	20.0
6. Representative for Contract Negotiations	5.0	0.0	5.0
7. Contingencies	30.0	60.0	90.0
Subtotal (A)	220.0	380.0	600.0
B. Government Financing			
1. Office Accommodation, Facilities and Transport	0.0	50.0	50.0
2. Remuneration and Per Diem of Counterpart Staff	0.0	80.0	80.0
3. Others ^b	0.0	20.0	20.0
Subtotal (B)	0.0	150.0	150.0
Total	220.0	530.0	750.0

^a Four desktop computers, two printers and software/accessories.

^b Including reports, publications and other facilities.

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

1. The technical assistance (TA) will require the services of about 9 person-months of international consultancy in agribusiness development, and agricultural economics and policy analysis, and about 25 person-months of national consultants in agribusiness marketing, agricultural technology, horticulture, agro-processing, financial sector (including credit), information and communication technology (ICT), and social development.

2. All specialists will

- (i) participate in a series of TA start-up meetings in Delhi to (a) review schedules, logistical support and expected outputs with the Executing Agency; (b) obtain relevant information and documentation from key organizations in the agribusiness sector; and (c) establish coordination arrangements with the national counterpart team and working group;
- (ii) participate in field visits to selected states and sites for preparing the assessments and case studies;
- (iii) participate in, and provide technical inputs to, focus group discussions and consultation workshops, as required by the team leader and their specific tasks; and
- (iv) contribute to the preparation of all TA outputs, including the national seminar, as required by the team leader.

A. Agribusiness Development Specialist and Team Leader (International, 4.5 person-months)

3. The team leader will have extensive international experience in formulating agribusiness development strategies and investment plans, and will be responsible for managing all aspects of TA implementation. Specifically, the team leader will

- (i) be responsible for liaison with the Executing Agency and the Asian Development Bank (ADB) on all TA matters;
- (ii) be the lead facilitator for the consultative workshops and the national seminar;
- (iii) supervise other consultants in the implementation of their terms of reference;
- (iv) be responsible for preparing, with inputs from team members, all TA reports, including the inception, midterm, and final reports.
- (v) review past and ongoing interventions and existing sector studies, particularly those dealing with agricultural diversification and agro-processing, small and medium-size enterprises, agribusiness, and horticulture development, to determine their performance, reasons for success or failure, and lessons learned; and
- (vi) assess the agribusiness sector in India throughout the value chain, to identify crops and commodities, states and geographical areas, and strategies and approaches with the greatest potential for growth and development.

B. Agricultural Economist and Policy Analyst (International, 4.5 person-months)

4. The agricultural economist will have extensive international experience in agricultural policy analysis and agribusiness development, and will have primary responsibility for assessing the policy and institutional environment as it affects agribusiness development, as well as

analyzing the economic costs and benefits of alternative development, and formulating a policy and regulatory reform agenda. Specifically, the agricultural economist will

- (i) assess the performance and efficiency of the value chain for agribusiness, from input distribution and production to processing, grading, handling, and final sale (either domestically or for export), quantifying the economic and financial costs of the inefficiencies;
- (ii) in consultation with public and private stakeholders, review the Government's development strategies, policies, and legal, and regulatory framework pertaining to agribusiness and horticulture; determine how they affect agribusiness; identify impediments and relevant reform issues, including an assessment of the prospects of advancing specific reforms;
- (iii) assess the agribusiness sector, including key producing states and innovative development approaches, to identify the commodities, geographic areas, and approaches with the greatest potential for investment and growth;
- (iv) based on the assessment with the team leader, other specialists, and the counterpart team, identify the priority subsectors and states for agribusiness development led by the private sector, and identify public sector investment priorities and a supporting reform agenda; and
- (v) based on a review of studies and analyses, and discussions with leading organizations analyzing agricultural policy issues, propose specific policy areas for further detailed study and analysis.

C. Agribusiness Specialist and Deputy Team Leader (National, 5 person-months)

5. The deputy team leader will have extensive and broad-based experience in domestic agribusiness. In addition to assisting the team leader in all aspects of TA implementation, the deputy team leader will focus primarily on the marketing aspects of the agribusiness development strategy and investment priorities. Specifically, the deputy team leader will

- (i) identify key quality issues in high potential crops and commodities and recommend assistance to overcome these constraints;
- (ii) assess the status of postharvest and marketing systems and infrastructure, and recommend improvements; and
- (iii) examine internationally accepted quality control programs such as the International Standard Organization, hazard analysis and critical control points, and others, and recommend measures to enable the agriculture and agribusiness sectors to qualify for certification under these programs.

D. Marketing Specialist (National, 2 person-months)

6. The marketing specialist will have a background in the marketing of domestic agribusiness products, including in international markets, and will provide technical input on the marketing aspects of the development strategy and investment priorities. Specifically, the specialist will

- (i) examine the supply-and-demand situation and trends for key crops and commodities in the domestic market while taking into consideration competition from imports;

- (ii) examine the market structure for the key crops and commodities in the international market to identify major foreign competitors, and evaluate current and future demand for exports;
- (iii) determine the need for commodity marketing studies and assess the needs for key value chain elements for selected commodities; and
- (iv) assess, together with the ICT specialist, the effectiveness of market information and market intelligence systems and facilities and recommend measures for improvement.

E. Agricultural Technology Specialist (National, 3 person-months)

7. The agricultural technology specialist will have a background in agricultural technology transfer through the entire value chain, and will take primary responsibility for developing strategies for upgrading the technical capacity of the domestic agribusiness industry. Specifically, the specialist will

- (i) identify the key constraints on adoption of new technology by farmers, processors, and marketers, and the responsiveness of each group to new technology;
- (ii) assess the adequacy of the agricultural research and extension system for agribusiness development, and recommend improvements and new approaches, including the scope for private sector participation;
- (iii) assess the inputs for key crops and commodities, including seeds, fertilizers, pesticides, and recommend improved approaches and technologies; and
- (iv) determine the type and extent of support that could be provided to current initiatives aimed at facilitating agricultural technology transfer.

F. Horticulture Specialist (National, 4 person-months)

8. The horticulture specialist will be familiar with horticultural crop development in all the major agro-climatic zones of the country, and will assume primary responsibility for preparing a roadmap and strategy for developing the horticultural industry. Specifically, the specialist will

- (i) review horticulture industry development strategies and programs in the focal states and in other developing countries, and distill lessons learned;
- (ii) assess production, harvest, postharvest, and marketing systems for horticultural crops; identify the primary constraints; and recommend solutions;
- (iii) assess the inputs for horticulture crops, including seeds, fertilizers, pesticides, and, together with the agricultural technology specialist, recommend improved approaches and technologies;
- (iv) appraise the horticulture commodity processing and marketing industries and systems and recommend improved approaches and technology; and
- (v) evaluate current and prospective international markets for horticultural products and recommend strategies to gain access to these markets.

G. Agro-Processing Specialist (National, 4 person-months)

9. The agro-processing specialist will have extensive practical experience in the domestic agro-processing industry, and will assess the constraints on and develop a roadmap and strategy for modernizing the industry. Specifically, the specialist will

- (i) identify the main policy, regulatory, legal, institutional, infrastructure, and technical constraints to increasing value added in agriculture, including barriers to entry of the private sector;
- (ii) assess the technical adequacy of the agro-processing industry and, together with the agricultural technology specialist, recommend interventions to improve and modernize the industry, keeping in view labor and employment implications;
- (iii) determine the need to strengthen and provide management support to the private agro-processing industry;
- (iv) determine the need for quality control equipment in the agro-processing industry, and training in its use; and
- (v) determine the type and extent of support that could be provided to ongoing initiatives aimed at developing the agro-processing industry.

H. Financial Sector Specialist (National, 2 person-months)

10. The financial sector specialist will have an in-depth understanding of and extensive experience in the financial sector, especially banking and credit, in India. The specialist will also be able to network in the area to gain necessary insights for the study, and coordinate with the proposed TA for preparing the Rural Finance Sector Restructuring and Development Project. Specifically, the specialist will

- (i) review formal and informal sources of credit for agribusiness development, along with the terms and conditions of such credit, and interest rates;
- (ii) examine the options for various groups, including small-scale farmers and enterprises, to access credit for agribusiness development, such as timely availability, conditions for collateral, flexibility;
- (iii) review the financial markets and assess their ability to meet the requirements for agribusiness activities;
- (iv) identify the factors limiting the availability and accessibility of credit and the financial markets, including policy and regulatory factors; and
- (v) provide suggestions to improve the availability and accessibility of credit for agribusiness and commercial agriculture development.

I. Information and Communication Technology Specialist (National, 2 person-months)

11. The specialist will have knowledge of ICT and electronic business applications in rural India, and will assess the role that ICT has, and can have, in the value chain for agribusiness. Specifically, the specialist will

- (i) assess and document the experience of ICT initiatives, including (but not limited to) “e-chaupals” being established in states like Madhya Pradesh, and “Jagriti” in Punjab, and the role of nongovernment organizations (NGOs) and the private sector in these;
- (ii) with the social development and marketing specialists, assess the benefits accruing to farmers from these initiatives, through provision of agricultural marketing and technology information;
- (iii) assess the potential for expanding such systems to support agribusiness and commercial agriculture development, through more accessible provision of information (marketing, technology) and services (information, credit) to farmers; and

- (iv) identify potential investments in ICT in the target states, as part of the overall assessment and prioritization under the TA.

J. Social Development Specialist (National, 3 person-months)

12. The social development specialist will have a relevant academic background and rich working experience in social and poverty issues in agribusiness in India. The specialist will work closely with all the team members to ensure that the social and poverty dimensions of the agribusiness value chain are adequately captured. The specialist will also be able to network and discuss issues effectively with stakeholders, including NGOs and farmers' groups. Specifically, the specialist will

- (i) prepare an overview from existing studies of poverty and social impacts of agribusiness development in India, especially in respect of the sectors and states under focus in the TA;
- (ii) examine poverty and social dimensions of specific interventions and institutions, such as contract farming, agri-clinics, food parks, and agri-export zones, through stakeholder consultations and analysis of success stories; in this context, prepare a case study of the experience with contract farming;
- (iii) examine the role and scope for farmers' participation, especially small-scale and marginal farmers, and the scope for NGO involvement to enhance social impact;
- (iv) assess the extent to which NGOs and farmers' organizations have helped to develop agribusiness, and their functioning and effectiveness; and
- (v) based on the analyses, prepare an inventory of approaches, enabling conditions, and interventions that could enhance the poverty and social impact of interventions for agribusiness and commercial agriculture development.

K. National Counterpart Team and Working Group

13. The counterpart team and working group will include representatives of the Associated Chambers of Commerce and Industry, the Confederation of Indian Industry, and the Federation of Indian Chambers of Commerce and Industry. They will work closely with the consultants' team in the implementation of the TA. The counterpart team and the working group will be led by the TA manager to be nominated by the Executing Agency. The main tasks of the counterpart team, comprising focal points of the key government (central and state) agencies involved, and nongovernment and private sector representatives will be to

- (i) facilitate the consultants' access to documents, reports, and other relevant information;
- (ii) assist the consultants in finalizing the selection of the target states and specific initiatives to be reviewed;
- (iii) arrange for and participate in meetings with key stakeholders in their respective organizations;
- (iv) facilitate arrangements for field visits by the consultants, and participate in the field visits as needed;
- (v) proactively contribute to preparing the assessments, strategies and roadmaps;
- (vi) assist in organizing, and participate in, the national seminar; and
- (vii) review the TA outputs and provide timely feedback to the consultants.

In addition, the working group (a subset of the counterpart team) will meet weekly with the consultants to review progress and resolve any problems that may arise.