



Technical Assistance Report

Project Number: 37091-02
Project Preparatory Technical Assistance (PPTA)
December 2008

India: Preparing the Agribusiness Infrastructure Development Investment Program (Phase 2)

CURRENCY EQUIVALENTS

(as of 1 November 2008)

Currency Unit	–	Indian rupee/s (Re/Rs)
Re 1.00	=	\$.0202
\$1.00	=	Rs 49.4500

ABBREVIATIONS

ABC	–	agribusiness centers
ADB	–	Asian Development Bank
AIDP	–	agribusiness infrastructure development project
APMC	–	Agriculture Produce Marketing Committee
BTOR	–	back-to-office report
CDI	–	Cluster Development Initiative
COBP	–	country operations business plan
DFID	–	Department for International Development
DPR	–	detailed project report
EIRR	–	economic internal rate of return
FIRR	–	financial internal rate of return
GDP	–	gross domestic product
IL&FS	–	Infrastructure Leasing and Financial Services Limited
MFF	–	multitranches financing facility
MOA	–	Ministry of Agriculture
NHM	–	National Horticulture Mission
O&M	–	operation and maintenance
OFC	–	on-farm centers
PCC	–	perishable cargo centers
PPP	–	public-private partnerships
PPTA	–	project preparatory technical assistance
SHG	–	self help group
TA	–	technical assistance
TASF	–	technical assistance special fund

TECHNICAL ASSISTANCE CLASSIFICATION

Type	–	Project Preparatory (PPTA)
Targeting Classification	–	General intervention
Sector	–	Agriculture and Natural Resources
Subsector	–	Agriculture Production, Agro-processing, and Agribusiness
Theme{s}	–	Sustainable economic growth, Private Sector Development, Gender and Development
Subtheme{s}	–	Developing rural areas, public-private partnership, and gender equity in opportunities

NOTE

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

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I. INTRODUCTION

1. The Asian Development Bank (ADB) has included in its country operation business plan (COBP) 2008-2010 for India¹ a loan for agribusiness infrastructure development for Bihar and Maharashtra as a component of ADB's 2008 lending program and subsequently as 2009 lending program². To support the preparation of the project, a project preparatory technical assistance (TA) was implemented from July 2007 to May 2008³. In July 2008, during the loan fact finding mission, it became evident that, while broad concepts and approaches of the Project were developed by the completed PPTA, there was a need to operationalize them and to firm up the proposed Project, by preparing detailed project reports for specific sub-projects and by engaging with the potential private sector investors to ensure a smooth implementation of the project. To respond to this need, additional TA would be necessary. A concept paper was prepared and endorsed for ADB funding. During the loan fact finding mission, the impact, outcome, outputs, implementation arrangements, cost, financing arrangements, and terms of reference of the TA were finalized⁴. The design and monitoring framework is in Appendix 1.

II. ISSUES

2. While the contribution of agriculture in the GDP of India has declined from 56% in 1950 to 17% in the year 2007, there has not been any significant shift in the occupational structure and therefore around 58% of the work force continues to depend on agriculture for its livelihood. Therefore agriculture's importance in terms of the economic health, and the socio-political fabric of the country remains well beyond its contribution to the national output. Performance of the rural non-farm sector, now larger than the agricultural sector, is also strongly correlated with the performance of agriculture. About 61% of agriculture produce is transacted in markets characterized by long marketing chains, regulated markets and inefficient commercial retail chain systems (i.e. traditional value chains). Furthermore, farmer access to markets is hampered by poor roads, rudimentary market infrastructure, and excessive regulation. Agro-processing industry contributes less than 5% of GDP. The horticulture sector contributes around 28% of the agricultural GDP from about 13% of the area under cultivation and provides 37% of the total exports of agricultural commodities, offering a wide range of choices to the farmers for crop diversification. While food products account for almost 53% of private consumption expenditure and their demand rises consistently at almost 8% per annum, the consumer basket is continuously undergoing change in favor of perishables, such as fresh fruits and vegetables, and processed healthy products. The present marketing and processing systems, characterized by long and fragmented supply chains, high wastages, and low share of producers in price realizations, are inadequately equipped to meet the growing needs of consumers for quantity, quality and safety.

3. The most important constraints in establishing the required value chain linkages are in the area of agricultural marketing and processing. Farmers fail to link (i) among themselves through effective producer organizations for joint decisions in investment, production and marketing, (ii) with enterprises, (iii) to markets because of the limited access to relevant market information and intelligence, and inadequate market and support infrastructure, such as roads, and (iv) to research and extension providers to address their specific technology and knowledge needs.

¹ ADB. 2007. India: Country Operational Business Plan, 2008-2010. Manila.

² During the 2008 India Country Programming Mission with the BTOR of the Mission approved by the Vice President on 21 July 2008.

³ Component Technical Assistance No. 9 under TA 4814-IND: Project Processing and Capacity Development (TA cluster).

⁴ The TA first appeared in the business opportunities section of ADB's website on 4 November 2008.

Enterprises have weak linkages with (i) farmers since contract farming and vertical integration arrangements are almost non-existent, (ii) consumers because of the virtual absence of organized retail chains, (iii) service providers (research, extension, finance) because of lack of confidence, and (iv) international markets because of the absence of proper certification, quality assurance systems and inadequate marketing and support infrastructure. The capacity of individuals, groups, and service providers to understand and practice modern value chain principles and management remains low and as a result agribusiness development, in spite of the country's enormous potential, has been lackadaisical.

4. Greater crop diversification and value addition in agriculture has the potential to significantly reduce poverty and improve the quality of life through substantial employment opportunities in rural India (see Appendix 2). Agribusiness development through its linkages to crop production, industry, and services has the potential to reverse the declining growth trend in agriculture with broad multiplier effects elsewhere in the economy. At the farm level, market-driven agribusiness growth will contribute to the production of high-value crops, which are more remunerative and labor intensive than staple crops, and thus could generate significant income and employment growth for the rural poor. Increased agro-processing and value addition, particularly if it is undertaken within or near producing areas, would also significantly increase off-farm employment opportunities. The growing demand for higher quality produce and processed foods as incomes rise, urbanization increases, and modern retail chains develop suggest that investments in developing organized modern supply chains will also have high financial returns. In addition, India has a comparative advantage in a number of agricultural commodities that could be exploited to penetrate export markets if quality assurance of produce and competitive value chains can be developed. However, to develop modern value chains for high value agriculture, large investments are required in modern methods of sorting, grading, post-harvest management and development of cold chains. Such investment in turn requires that new players, including private sector players, are able to enter existing markets and set up new marketing channels. Thus, in order to harness the potential of the emerging consumer demand, a professionally managed competitive alternate marketing structure that provides multiple choices to farmers for sale of produce along with a comprehensive solution to meet the needs of the stakeholders is necessary. Such a system entails also efficient management skills, which can only be infused by inviting private sector participation in the sector.

5. Encouraging market-driven agribusiness and the formation of modern agricultural value chains has been a strategic priority in Government development plans for quite some time. Indeed the agriculture sector is the core of the 11th Five-Year Plan (2008-2012), where diversification and augmenting and modernizing rural infrastructure (including cold chains and marketing outlets, as well as basic transportation and communications infrastructure) are considered as major elements in the strategy for accelerating agricultural growth and development of rural areas. To support the shift from staple to high-value crops, the Government is willing to introduce supportive policy framework and infrastructure network, including a much greater focus on supply chain arrangements, improved physical connectivity between producing areas and markets, and a legal framework and stronger incentives for private participation in agricultural marketing. The Government in 2005 launched the broad-based National Horticulture Mission (NHM) under the Ministry of Agriculture (MOA) to promote agricultural diversification and increase value addition on a national scale. Subsequent agribusiness development initiatives include programs rolled out in 2007 to modernize agricultural terminal markets and to establish 'mega food parks' through public-private partnerships (PPPs) to enhance incentives for private sector participation and establish stronger linkages with production areas.

6. Against this background, the Agribusiness Infrastructure Development Project for Bihar and Maharashtra is in the ADB's 2009 lending program for India under the modality of Multitranchise Financing Facility (MFF)⁵. The first TA has prepared a Project to improve physical and institutional linkages between various stakeholders along the agricultural value chain mainly through the implementation of the following 4, distinct but complimentary and linked components: (i) Agribusiness Market Infrastructure; (ii) Support Infrastructure; (iii) Market Intelligence; and (iv) Capacity Building and Value Chain Linkages. More specifically, the Project will address the integration of the value chain and key constraints to agribusiness development by establishing (i) on-farm centers (OFC) in production areas to provide basic infrastructure including mechanical harvesting and post harvest treatment equipment, storage, grading, sorting, packaging, and primary processing; (ii) agribusiness centers (ABC); providing competitive trading facilities; marketing intelligence; storage including pre-cooling and cold store facilities; sorting, grading and agro-processing facilities; and (iii) perishable cargo centers (PCC) at airports and railways, promoting "end to end" value chain linkage and providing cold chain facilities linked to the value chain. The Project envisages that every proposed marketing infrastructure is to be linked to the provision of basic infrastructure, such as roads, power and water supply, to improve physical connectivity through-out the value chain. The Project also proposes (i) market intelligence activities, aimed at improving stakeholder knowledge and awareness of factors affecting price determination and price information at different markets; and (ii) promotion of value chain linkages, through producers' group formation and contract farming, aimed at fostering partnerships and forward and backward linkages between different stakeholders along the chain. See Appendix 3 for the Project's graphic representation. Overall, the project will adopt a demand-driven approach, aimed at the private sector-led development of end-to-end integrated chains which will link production areas to export and domestic retail markets. The project was designed incorporating lessons learned from the implementation of other agribusiness development programs in the region.

7. The first TA (footnote 3) has prepared the abovementioned proposal with its concepts and approaches, including Project components and activities. During the initial phase of project processing, there was consensus among Government of India and ADB on the framework of the Project design as it contains concepts that are good and appropriate in terms of what is required for the sector and they are in tune with what the government is planning. The proposed approach, components and activities, were agreeable with the Government of India, the state Governments of Bihar and Maharashtra⁶ and MOA. However, to reduce the time gap between project approval and implementation⁷, the need to operationalize the project concepts and to firm up the proposed Project, by preparing detailed project reports (DPRs)⁸ for the end-to-end value chains, became apparent. To address this need, the proposed TA will prepare the DPRs for 2 end-to-end value chains per state, with one value chain including approximately up to 50 OFCs, up to 3 ABCs, and up to 2 PCCs (one at airport and one at railway, as appropriate). The 4 value chains developed in the DPRs would constitute the investments to be funded under the first tranche of the MFF, once the loan is approved. Preparation of investments in respect of the second and subsequent tranches will be completed under the first and subsequent tranches.

⁵ The loan modality however will be finalized during PPTA.

⁶ The State of Bihar has adopted the same approach and concepts in the State Road Map for the Agriculture Sector and Allied Sectors. The State of Maharashtra has expressly requested ADB to help the agribusiness sector through the development of a few end-to-end value chains in the ground as a show case to the sector stakeholders of the benefits of efficient modern agricultural value chains.

⁷ This is a serious problem encountered by many ADB-assisted infrastructure projects in India.

⁸ Detailed project report is a complete document for investment decision-making, approval, planning, implementing whereas feasibility study report is a base document for investment decision-making.

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

8. The overall impact of the TA (and the Project) will be increased private sector investment in and enhanced integration of small farmers, including female farmers, into agricultural value chains for high value crops in Bihar and Maharashtra. This will be achieved through the development of 4 end-to-end modern value chains that will demonstrate that (i) private sector management results in higher price realization for the farmer and profit for the private investor, in addition to improved governance; and (ii) private sector investment in organized value chains can result into high financial returns. The TA's outcome will include (i) 4 DPRs for 2 end-to-end value chains per state; (ii) a detailed project design that the Government of India and ADB will have agreed upon to be financed by the first tranche of the MFF under AIDP; and (iii) list of potential private sector investors that will be mobilized as soon as the loan is approved.

B. Methodology and Key Activities

9. The TA will be implemented in three phases. The first phase (2 months) will involve a detailed assessment of the market demand and supply for different agricultural value chains to identify specific location and product-specific infrastructure and facilities gaps for 4 value chains, 2 per state. The assessment will include (i) design, engineering, and preparation of master plans of the various structures planned as components of each value chain; (ii) ways of linking various components of each value chain; (iii) social, legal and institutional aspects of the various project components; (iv) detailed project costs for each value chain, along with proposed means of finance, and assessment of bankability of projects, along with risk mitigation mechanism; and (v) preparation of safeguards documents as per ADB's requirements (environment, indigenous people, involuntary resettlement). Close attention will be paid to identifying market failures that need to be addressed through public investment, private sector participation, and public-private partnerships. Based on the first phase, the second phase (2 months) will involve formulation of the 4 DPRs for end-to-end agricultural value chains, including (i) detailed design and costing of logistics for each value chain; (ii) project structuring for determining various PPP options, including ownership structure, project construction, O&M etc.; and (iii) assessment on social and political acceptability of project structures by pre-testing it with communities of farmers, traders and other sector stakeholders. The third phase (2 months) will finalize the bid and contract documents for the various infrastructures along the identified value chains and the pool of potential private players/investors to elicit responsive bids. The project will not be limited to specific crops among the high value crops, though the TA will identify the crops with highest domestic market demand and export potential. The creation of high-value production clusters by region will be considered to facilitate marketing and processing of value-added products. The TA will also identify areas where the capacity of the public and private sector needs strengthening to support services for agribusiness development. Stakeholder workshops will be conducted in each state to disseminate and validate the detailed design. A final tripartite review meeting will confirm the Project design at the end of phase 2 and a detailed final report will be presented within 0.5 months incorporating the feedback received.

10. For the project to establish effective agribusiness systems by the private sector, with support from the Government, a new way of thinking and strategies for overcoming significant coordination failures are needed. This will require the creation of appropriate institutional mechanisms. The project will be designed to provide maximum benefit to small-scale agribusinesses. However, this will be possible only by improving the performance of the entire

value chain. The methodology of the TA will be to link with the government initiatives of terminal market and mega food park sites in order to identify infrastructure gaps at lower levels in the value chain. In this way, ADB's assistance would therefore complement and have maximum synergy with the Government's sector development initiatives.

C. Cost and Financing

11. The total cost of the TA is estimated at \$1,250,000 equivalent. ADB will finance \$1,000,000 on a grant basis under ADB's TA funding program. The Government will finance the remaining cost of \$250,000 equivalent primarily in kind, including office space, counterpart staff, local transport, and other minor administrative expenses. The TA cost estimates and financing plan are presented in Appendix 4. The Government has been informed that approval of the TA does not commit ADB to finance any ensuing project.

D. Implementation Arrangements

12. The Executing Agencies (EA) for the TA will be the relevant agriculture development agencies of Bihar and Maharashtra, i.e. the Department of Agriculture and the Department of Co-operation & Agricultural Marketing respectively. The EAs will (i) identify suitable counterpart staff to liaise with the team of consultants during the TA implementation period, and (ii) provide a suitable office space to the consultants in Patna and Maharashtra.

13. The TA will be implemented over a period of 6 months commencing in January 2009 and will conclude no later than June 2009. Consultants' inputs will amount to 31 person-months (pm), 29 national and 2 international, for 2 dedicated teams for each state, consisting mainly of the following specialists: agricultural supply chain (6 pm, national), Infrastructure specialists (agricultural, logistics and industrial infrastructure, 6 pm, national, and 1 pm, international), cold chain expert (1 pm, national, and 1 pm, international), master planner (2 pm), project finance/PPP (4 pm), Legal/PPP contracts expert (3 pm), environmentalist (2 pm) and social development (3 pm). The TA will finance the services of consultants who will be engaged through a firm by ADB in accordance with its *Guidelines on the Use of Consultants*. It is recommended to use quality-based selection (QBS) because (i) the assignment is technically complex requiring highly specialized experts on undertaking project development from a conceptual stage, structuring it for PPP approach, and taking responsibility up to the successful identification of private sector partners for implementation; (ii) the assignment is institutionally complex requiring experts on policy and strategic issues with the concerned State Governments for development and implementation of modern agri-business supply chains through PPP approach, including food parks, agri-business centers and the necessary linking infrastructure along the value chain; and (iii) ADB is new in the agribusiness sector in India and the outcome of this TA is key in finalizing a Project acceptable to the Government of India. The terms of reference for consulting services are in Appendix 5. Disbursements under the TA will be done in accordance with the ADB's Technical Assistance Disbursement Handbook (January 2008, as amended from time to time).

IV. THE PRESIDENT'S DECISION

14. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$ 1,000,000 on a grant basis to the Government of India for preparing the Agribusiness Infrastructure Development Investment Program (Phase 2), and hereby reports this action to the Board.

DESIGN AND MONITORING FRAMEWORK¹

Design Summary	Performance Targets/Indicators	Data Sources / Reporting Mechanisms	Assumptions / Risks
Impact			
<p>Increased private sector investment in and enhanced integration of small farmers, including female farmers, into agricultural value chains for high value crops of Bihar and Maharashtra.</p>	<ul style="list-style-type: none"> • Increased production of high-value agricultural commodities (annual increase of at least 5% by year 3 of the Project and in succeeding years) • Increased value addition in agricultural production (% of processed commodities increases to 20% within 7 years) • Increased private sector involvement in agricultural marketing (at least 50% of agricultural produce is marketed outside the 'mandi' system within 7 years) • Improved business practices adopted by participating stakeholders in selected horticultural value chains in Project area • At least 100 private market places established in project states with farmers' participation and with improved efficiency / profitability. 	<ul style="list-style-type: none"> • Government and market statistics • Progress reports/BTORs/ from ADB loan review missions • ADB impact evaluation reports • Evaluation and research reports from other aid agencies (e.g., World Bank and DFID) 	<p>Assumptions</p> <ul style="list-style-type: none"> • The private sector is willing to invest in the development of agriculture value chains • The enabling environment (e.g., amendments to APMC Acts) remains in place <p>Risks</p> <ul style="list-style-type: none"> • Small farmers are unwilling or unable to diversify to high-value crops and integrate into agriculture value chains • External factors (e.g., climate) negatively impact on rural growth
<p>Outcome^a</p> <p>Project design that the Government and ADB will have agreed upon for a project to be financed by ADB</p>	<p>Agreement reached on the proposed loan investments,, implementation arrangements and financing</p>	<ul style="list-style-type: none"> • TA reports and recommendations • Government endorsement 	<p>Assumptions</p> <ul style="list-style-type: none"> • Agreement on project components and approaches reached between stakeholders, between public and private sector, and between Government and ADB

¹ The design and monitoring framework (including outputs and key activities with milestones) will be further developed during TA implementation and subsequent loan processing.

Design Summary	Performance Targets/Indicators	Data Sources / Reporting Mechanisms	Assumptions / Risks
Outputs (of the PPTA)			
<p>1. Detailed Projects Reports for 4 agricultural value chains of high value crops in the 2 states of Bihar and Maharashtra</p>	<ul style="list-style-type: none"> • Inception report submitted to Government/ADB by 15 January 2009 • Interim report submitted to Government/ADB by 15 May 2009 • Final Report submitted to Government/ADB by 15 June 2009 • assessment of the market demand/supply for different agricultural value chains to identify specific location and product-specific infrastructure and facilities gaps that can add value to the product through processing at different levels, increase efficiency, preserve quality and/or reduce wastage/spoilage • identification of the project components for each of the selected value chains • technical feasibility reports (component sizing and costing) 	<ul style="list-style-type: none"> • TA reports • Focus groups with key stakeholders • Aide Memoire of ADB review missions 	<p>Assumptions</p> <ul style="list-style-type: none"> • Stakeholder participation and ownership are effective • All sector stakeholders actively participate in data collection, analysis, and planning <p>Risks</p> <ul style="list-style-type: none"> • Resistance from existing chain players like commission agents, wholesalers and others
<p>2. Economic and Financial Documents for the proposed investments</p>	<ul style="list-style-type: none"> • Detailed Project costing and financing plan; • Assessment of financial feasibility (FIRR/EIRR including financing options), • Procurement Options and Plan; • Ownership structure of the infrastructure along the value chain; 		
<p>3. Public-Private Partnership models for the proposed investments</p>	<ul style="list-style-type: none"> • Project structuring for Public Private Partnership (PPP): determine PPP options (bundling and/or 		

Design Summary	Performance Targets/Indicators	Data Sources / Reporting Mechanisms	Assumptions / Risks
	<p>unbundling of project components, project construction, O&M, project financing etc.); examine what is permissible within the legal and institutional context; examine what will be acceptable politically/socially;</p> <ul style="list-style-type: none"> • Identified pool of potential private players/investors to elicit responsive bids; • Bid and contract documents for the various infrastructures along the identified value chains; 		
<p>4. Safeguards Documents for the proposed investments</p>	<ul style="list-style-type: none"> • Environmental assessments and climate proofing of the Project activities • Poverty and social assessment for Project activities • Social safeguards (including impact on indigenous people) and poverty reductions documents • Land requirements and purchase methods, if required; • Categorization of the project activities impact on environment, resettlement, and indigenous people 		
<p>Activities with Milestones</p> <p>1. By ADB</p> <p>1.1 Recruit consultants in coordination with Government by end of January 2009.</p> <p>1.2 Monitor and supervise TA activities throughout TA implementation until July 2009.</p> <p>1.3 Guide the TA activities through regular review missions. 3 times (February, May and July 2009)</p> <p>1.4 Hold tripartite meeting involving the Government, ADB, and the TA consultants to discuss the inception, interim and final reports in July 2009.</p> <p>2 By Consultants</p> <p>2.1 Submit inception report within 2 weeks of TA commencement</p>			<p>Inputs</p> <ul style="list-style-type: none"> • ADB will provide (i) TA inception and review missions; (ii) ongoing support from ADB headquarters and the India Resident Mission; (iii) \$1,000,000 TASF

Design Summary	Performance Targets/Indicators	Data Sources / Reporting Mechanisms	Assumptions / Risks
<p>2.2 Assess the market demand/supply for different agricultural value chains to identify specific location and product-specific infrastructure and facilities gaps that can add value to the agricultural products</p> <p>2.3 Identify the project components for each of the selected value chains</p> <p>2.4 Develop technical feasibility reports (component sizing and costing)</p> <p>2.5 Develop social and environmental reports</p> <p>2.6 Identify pool of potential private players/investors to elicit responsive bids</p> <p>2.7 Prepare project structuring for Public Private Partnership</p> <p>2.8 Submit interim report at the end of 3.5 months</p> <p>2.9 Examine a range of feasibility studies, and make recommendations on the proposed final design</p> <p>2.10 Draft bid and contract documents for the various infrastructures along the identified value chains</p> <p>2.11 Collect any additional social, environmental, technical, and economic information required by new design guidance and ADB policies</p> <p>2.12 Recommend implementation arrangements for the ensuing project</p> <p>2.13 Submit a draft final report at the end of 5 months</p> <p>2.14 Submit a final report at the end of 6 months that incorporates feedback and comments from the sector stakeholders, Government of India, State Governments, and ADB</p> <p>3 By State Governments</p> <p>3.1 Provide office space</p> <p>3.2 Provide reports and information to the consultants at various stages</p> <p>4 By Central Government</p> <p>4.1 Ministry of Agriculture to provide overall guidance</p> <p>5 By Stakeholders</p> <p>5.1 Join focus groups discussions and workshops at various stages</p> <p>5.2 Participate in the preparation process of detailed project reports</p>			<ul style="list-style-type: none"> • Consultants inputs comprising 2 different teams of national (28 person month) and international (2 person month) consultants • Government of Bihar and Maharashtra will provide in-kind contributions estimated at \$250,000 equivalent comprising provision of office space, and information and reports. • Public and private stakeholders will contribute by participating in TA focus group meetings and consultations

APMC = Agriculture Produce Marketing Committee, EIRR = economic internal rate of return, FIRR = financial internal rate of return, O&M = operation and maintenance, PPP= public private partnerships, TASF = technical assistance fund.

INITIAL POVERTY AND SOCIAL ANALYSIS

Country and Project Title:	India: Preparing the Agribusiness Infrastructure Development Investment Program (Phase 2)		
Lending or Financing Modality:	Multitranches Financing Facility	Department and Division:	SARD/SANS

I. POVERTY ISSUES

A. Linkages to the National Poverty Reduction Strategy and Country Partnership Strategy

Agriculture growth has fallen from an average of 3.5% in 1982–1997 to only around 2% in 1998–2005. This has adversely affected the rural economy, and the overall level of poverty and social development in the country as the sector employs 56.7% of the country's workforce and provides livelihood to two-thirds of the population. The rural-urban divide has worsened, and it is estimated that per capita household expenditure in rural India is now less than half that in urban areas. With nearly three-quarters of the country's poor (or nearly 220 million people) living in rural areas, agriculture and rural development are critical to poverty reduction and inclusive development. Two-thirds of India's people derive their livelihood from agriculture, which is dominated by a large number of small farmers: of the nearly 120 million individual farm holdings comprising 170 million hectares (ha), roughly 60% are less than 1 ha while another 20% are only 1–2 ha in size.

India's 11th five year plan (2007-2012) prioritizes reducing regional and rural-urban disparity, and chronic poverty, particularly in rural areas, through inclusive and equitable growth, with a strong focus on accelerating the growth rate in underdeveloped regions. The proposed Agribusiness Infrastructure Development Project (AIDP) (the Project) is consistent with the Government development plans and ADB's strategy, by recognizing that greater crop diversification and value addition in agriculture has the potential to significantly reduce poverty and improve the quality of life in rural India. The AIDP is in line with the 11th Five Year Plan (2008-2012) as it addresses the three main constraints to agriculture growth: (i) out-of-date technologies; (ii) lack of public investment in basic infrastructure; and (iii) limited diversification.

Given the high inefficiencies and extremely high post harvest losses, there is a large untapped potential in the agribusiness industry, which if developed will have strong multiplier effects on employment, equitable income growth throughout the economy, reduced vulnerability, household food security, higher farm and non farm incomes, that can lead to poverty reduction. Diversification of Indian agriculture and increased efficiencies in the value chain will contribute to the goal of reducing poverty by raising the productivity of land and water resources in a sustainable manner and augmenting the accrued economies. Private sector participation in such activities can reduce the burden on central and state finances, and ensure greater efficiency.

B. Targeting Classification

1. Select the targeting classification of the project:

General Intervention (GI) Individual or Household (TI-H); Geographic (TI-G); Non-Income MDGs (TI-M1, M2, etc.)

2. Explain the basis for the targeting classification:

C. Poverty Analysis

3. If GI, is there any opportunity for pro-poor design (e.g., social inclusion subcomponents, cross subsidy, pro-poor governance, and pro-poor growth)?

Bihar is the third most populous state in India accounting for one seventh of India's population below poverty line. It is a state known nation wide as a BIMARU (Sick) state due to high rate of persistent poverty, complete and dynamic social structure, and weak and corrupt governance as well as inferior infrastructure. Bihar has the lowest per capita income among the major states of India: Bihar's per capita income, which was about 60% of the average for India during the early 1960s, declined to about 40 per cent in 1993-94 and further to 34 per cent in 1997-98. Occupational structure reveals the dependence of majority of work force on agriculture. Agricultural sector accounts for over 80% of the state's workforce, yet contributes only 40% to the state's GDP. The state endowed with rich natural resources and depending heavily on agriculture has more agricultural laborers (13,417,744) than cultivators (8,193,621) according to the 2001 census. And the minimum agricultural wage in the state is just Rs. 81. The rural poor typically own less land and it has been estimated that 75% of the rural poor in Bihar were landless or near-landless in 1999-2000. Despite concerted and regular efforts of the National as well as State Governments aimed at poverty reduction, there is still a huge gap which has to be addressed. This is evident that the per capita income of Bihar

continues to be the lowest in the country standing at Rs. 6,610 as of December 2007.

Maharashtra, on the contrary, has the image of being a fairly developed agro-industrial state, with a per capita income of Rs 28,204, well above the nation's per capita income of Rs 20,989. As per Net State Domestic Product (NSDP) Maharashtra stood second only to Haryana among all major states in 2003-04. It is among the richest states in terms of contribution to the national economy. The state boasts of an enterprising farming community growing among other things sugarcane, Alphonso mangoes and grapes. Despite these advantages, incidence of poverty in the state has continued to remain close to the national average. Official estimates of people below the poverty line at 25 per cent for the state in 1999-2000 is just a little lower than the all-India average of 26 per cent. Maharashtra has some of the poorest and most underdeveloped regions in the country. The imbalanced growth in the state is essentially due to disproportionate growth in secondary and tertiary sectors vis-à-vis agriculture; 60 percent of people are dependent on agriculture for a living, but the share of agricultural output in state revenue has decreased from 42 percent in 1960, to 17 percent in recent years. The largest numbers of workers in Maharashtra are in the agricultural sector. Around 58 percent of all farm households in the state are reported to be in debt. There are large tracts under cotton, but production is so un-remunerative that a large number of farmers' suicides have been reported in recent years in this area.

By developing modern agricultural value chains, the project will contribute to poverty reduction by (i) more equitable distribution of income, (ii) growth of small and marginal farmers with greater access to markets and opportunities for value addition to their products, (iii) increased remittances to rural households, (iv) increased household food security, and (v) expanded opportunities for skill enhancement and specialization in agricultural operations. Targeted initiatives to develop agribusiness will motivate poor farmers to shift from the cultivation of low returns traditional crops to high-value crops. This would increase returns to the farmers, as well as agricultural wages.

II. SOCIAL DEVELOPMENT ISSUES

A. Initial Social Analysis

Based on existing information:

1. Who are the potential primary beneficiaries of the project? How do the poor and the socially excluded benefit from the project?

The interventions under the proposed components of the project are aimed at all-round development of the agribusiness sector in the selected states, which would initiate the process of transformation of the rural economy by reducing the direct dependence of rural households on agriculture for employment. The project seeks to benefit the supply side actors (small farmers, enterprises and labor) as well as the consumers. While the supply side participants benefit in terms of better incomes, capacity development, access to new technology etc., the consumers benefit through better product quality, variety and availability.

The expected outcome of the project is an increasingly competitive agribusiness sector established through the adoption of agribusiness practices in the horticulture sector leading to higher value addition and higher incomes to the farmers, farm workers, processors and entrepreneurs, including women. By developing modern agricultural value chains, the project will assist small and marginal farmers to associate and enter national and global markets. Furthermore, with the proposed interventions, the small farmers will be able to improve the quality of their produce and productivity, reduce losses and take more informed decisions regarding what to produce, how to produce, when and where to sell and at what price. The project will therefore help small farmers to function more as businesspersons rather than as exploited growers. The enterprises linked with agriculture, particularly small and medium enterprises, will benefit from economies of scale through better cooperation and coordination with other participants in the value chain, and also improve their productivity and quality by gaining access to new technology and marketing opportunities. The workers will be able to upgrade their skills (and therefore incomes), and will have more employment opportunities with the development of the entire value chain.

2. What are the potential needs of beneficiaries in relation to the proposed project?

Limited access to capital, small landholdings, inadequate marketable volumes, and limited bargaining power constrain the ability of small farmers to cultivate higher-value crops. The formation of producers' companies will improve the participation of the poorest farmers as viable units in the agribusiness value chain. By promoting producer companies, farmers' associations, cooperatives or self-help groups, farmers, including small, marginal and women farmers, collectively will in fact be encouraged to take-up primary processing and marketing activities at the farm level. As a result, farmers would earn better returns without the involvement of intermediaries such as commission agents and wholesalers. The Project interventions are expected to lead to higher returns for the farmers, including small, marginal and women farmers.

3. What are the potential constraints in accessing the proposed benefits and services, and how will the project address them?

Small farmers' production is supply-driven because of the lack of integration between producing and consuming areas. As a

result, small and marginal farmers have difficulties in choosing the most profitable cropping patterns and are especially vulnerable to falling commodity prices because of their inability to switch rapidly to alternatives. The project will contribute to capacity development of the beneficiaries across the value chain, to access and use information to their benefit. This would also open up new avenues for cooperation / linkages among the various players along the value chain. The capacity development will enable better planning and management of inputs, outputs and logistics.

B. Consultation and Participation

1. Indicate the potential initial stakeholders.
2. What type of consultation and participation is required during the PPTA or project processing (e.g., workshops, community mobilization, involvement of nongovernment organizations and community-based organizations, etc.)?

During the first TA, Project components were identified on the basis of sector stakeholders' priorities at State level consultations. Public consultations and field surveys were carried out. Crucial stakeholders for the design of the project included public, private and cooperative sectors at the central and state levels, as well as farmers, entrepreneurs, trade organizations, and financial institutions at the state and local levels. Non-governmental organizations (NGOs) also play supportive roles and as such will be consulted as well. As part of public and stakeholder consultation for preparation of Initial Environment Examination, meetings and discussions were held with national and local government officials in both states and discussions were held with local people. Interviews were also carried out with selected communities during the field visits.

During the implementation of the TA (second phase), mainly the private sector stakeholders will be consulted for the preparation of the detailed projects reports of the identified value chains. A general Stakeholders' consultations to increase ownership of project by local rural communities will also be carried out.

3. What level of participation is envisaged for project design?
 Information sharing Consultation Collaborative decision making Empowerment
4. Will a consultation and participation plan be prepared? Yes No Please explain.

The implementation of the TA will require a participatory approach due to diverse interests of the stakeholders. The participation strategy will be developed under the TA.

C. Gender and Development

1. What are the key gender issues in the sector and/or sub-sector that are likely to be relevant to this project or program?

Due to the unequal access of women to productive resources and the prevailing gender discrimination within traditional households, women bear a disproportionately higher burden of poverty. Agriculture continues to be the most significant area of women's work participation, whether as workers on household farms owned or tenanted by their families, or as wage workers. Women constitute 30% of the enumerated work force, with 90% of them working in rural areas as wage labor or working on own farms. Their role as domestic agricultural workers is often not reflected in the national statistics: only 9.4% female workers, as opposed to 17.8% male workers, are recorded as cultivators, which imply a lower status for women within the socially recognized hierarchy of agricultural tasks undertaken. In 1999-2000, 748 of every 1,000 women were employed in agriculture and related activities, making it significant from the gender perspective.

Women are known to work in all capacities, in growing food, post-harvest operations, marketing, animal husbandry and related activities. It is estimated that sometimes women's work could be longer than men's work by as much as 43%. Women tend to perform the more unskilled and menial tasks in agriculture and are likely to be paid less, notwithstanding the significant time they devote to agriculture. Their wages tend to be only about 71% of those of men. Allied to this is the fact that women seldom have title to land in their own names and they are unable to make autonomous decisions regarding property or their households, even when they become heads of households on being widowed or in the absence of male family members who may have emigrated.

2. Does the proposed project or program have the potential to promote gender equality and/or women's empowerment by improving women's access to and use of opportunities, services, resources, assets, and participation in decision making?
 Yes No Please explain.

Increasing feminization of horticulture, evidenced by the first TA analysis, is likely to further increase women's work participation rates in high-value crops and value addition. In addition, women's traditional role in agriculture is at the post-harvest stage, and any expansion in agribusiness activities would create more opportunities mainly for women. Recognizing the potential for female entrepreneurship, the project design includes a set of activities on women in agribusiness, which would promote individual and group-based entrepreneurship through established self-help groups (SHG) of female farmers involved in horticulture operations. The activities will aim to have female farmers take on new chain activities, by enhancing their technical knowledge and chain management skills.

Based on a systematic gender analysis of the role women in modern agriculture value chains, a comprehensive Gender Action Plan will be developed during the TA implementation, with the following key elements:

- Facilitation of the emergence of women as agribusiness entrepreneurs;
- Capacity building through women agribusiness entrepreneurship development programs, based on sound business principles;
- Focus on group-based entrepreneurship, considering dominance of small and medium farmers/entrepreneurs/home based food processors;
- Development of chain management skills;
- Training and capacity building to enhance skills in farming, crop and financial management should target 30% to 50% of women;
- Women-specific training camps should be organized. Each value chain should be equipped with a mobile van for training women which have limited mobility.
- To better target women, training modules should be designed in collaboration with local groups of stakeholders, women's groups, NGOs, and SHGs.

3. Could the proposed project have an adverse impact on women and/or girls or widen gender inequality?

Yes No

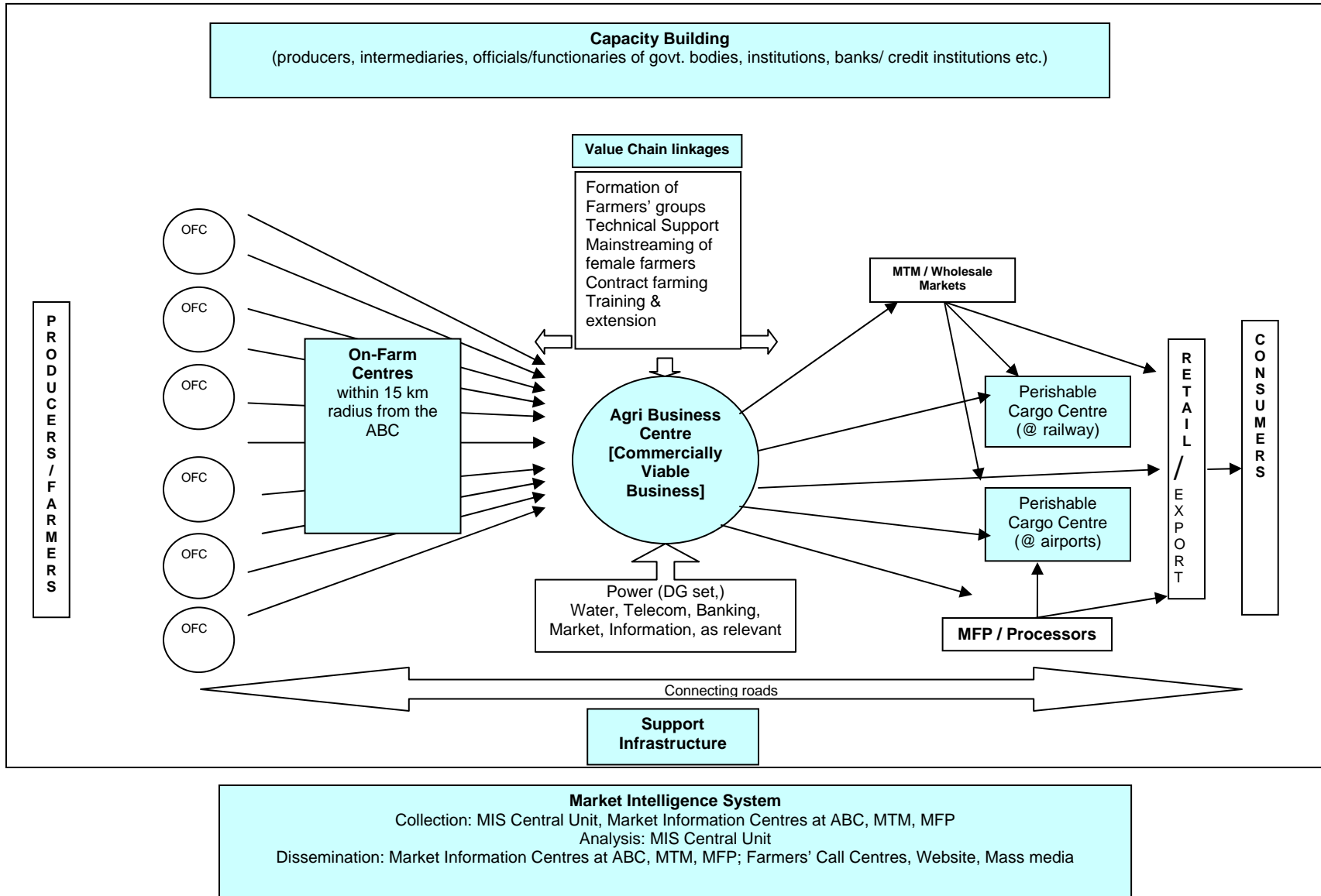
No adverse issues for women are anticipated.

III. SOCIAL SAFEGUARD ISSUES AND OTHER SOCIAL RISKS

Issue	Nature of Social Issue	Significant/Limited/ No Impact/Not Known	Plan or Other Action Required
Involuntary Resettlement	The envisioned interventions would not likely entail adverse social and resettlement impacts. However, during the implementation of the PPTA, the adequate IR safeguard assessment and completion of necessary resettlement planning document will be carried out as needed.	Limited or no impacts	<input type="checkbox"/> Full Plan <input type="checkbox"/> Short Plan <input type="checkbox"/> Resettlement Framework <input type="checkbox"/> No Action <input checked="" type="checkbox"/> Uncertain
Indigenous Peoples	The project will benefit the entire local population groups and will not differentiate among groups, including indigenous people and scheduled tribes. However, during the implementation of the PPTA, the adequate assessment of potential impacts, positive and negative, on these populations will be carried out and appropriately addressed in the project design.	Limited or no impacts	<input type="checkbox"/> Plan <input checked="" type="checkbox"/> Other Action <input type="checkbox"/> Indigenous Peoples Framework <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain

<p>Labor</p> <p><input checked="" type="checkbox"/> Employment Opportunities <input type="checkbox"/> Labor Retrenchment <input checked="" type="checkbox"/> Core Labor Standards</p>	<p>The proposed project will have a positive impact on labor by creating new employment opportunities, for small and marginal farmers, including women, and unemployed rural youth to the agriculture sector¹. However, the project is not envisaged to have a major impact on the labor market.</p> <p>Core labor standards will be included in contractors' contract clauses.</p>	<p>Limited impacts</p>	<p><input type="checkbox"/> Plan <input checked="" type="checkbox"/> Other Action <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain</p>
<p>Affordability</p>	<p>The Project does not envisage adverse impacts.</p>	<p>Limited or no impacts</p>	<p><input type="checkbox"/> Action <input checked="" type="checkbox"/> No Action <input type="checkbox"/> Uncertain</p>
<p>Other Risks and/or Vulnerabilities</p> <p><input type="checkbox"/> HIV/AIDS <input type="checkbox"/> Human Trafficking <input type="checkbox"/> Others (conflict, political instability, etc.)</p>	<p>The Project does not envisage adverse impacts.</p>	<p>Limited or no impacts</p>	<p><input type="checkbox"/> Plan <input type="checkbox"/> Other Action <input checked="" type="checkbox"/> No Action <input type="checkbox"/> Uncertain</p>
<p>IV. PPTA OR DUE DILIGENCE RESOURCE REQUIREMENT</p>			
<p>1. Do the terms of reference (TOR) for the PPTA (or other due diligence) include poverty, social and gender analysis and the relevant specialist(s)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, please explain why.</p> <p>2. Are resources (consultants, survey budget, and workshop) allocated for conducting poverty, social and/or gender analysis, and consultation and participation during the PPTA or due diligence? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, please explain why.</p>			

¹ There is a low risk that wages below the minimum wage and at exploitative conditions of casual employment may persist in the wake of expanding agribusiness activities and may not assure a "fair share" of the benefits of increased earnings by farmers and enterprises and access to facilities created by the project.



OFC = on-farm centers, MTM = modern terminal markets, MFP = Mega Food Parks.

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Total Cost
A. Asian Development Bank Financing^a	
1. Consultants	
a. Remuneration and Per Diem	
i. International Consultants	150.00
ii. National Consultants	500.00
b. International and Local Travel	
o International Travel	20.00
o Local Travel ^b	30.00
c. Reports and Communications	25.00
2. Training, Seminars, and Conferences	
a. Facilitators	10.00
b. Training Program	15.00
3. Surveys	80.00
4. Miscellaneous Administration and Support Costs	70.00
5. Contingencies	100.00
Subtotal (A)	1,000.00
B. Government of India Financing	
1. Office Accommodation and Transport	120.00
2. Remuneration and Per Diem of Counterpart Staff	100.00
3. Administrative Support	30.00
Subtotal (B)	250.00
Total	1,250.00

^a Financed by the Asian Development Bank's technical assistance funding program.

^b Includes vehicle rental and operation and local airfare

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE (TORs) FOR CONSULTANTS

1. The team of consultants will address the preparatory work that is needed to take the proposed project from a concept stage (as per Final Report of the completed TA) to a bankable stage, including the identification of the private sector partners which will bid for the sub-projects once the loan is approved, for 4 end-to-end value chains, 2 in Bihar and 2 in Maharashtra. A national strategic advisor will lead the team of consultants, which will consist of two international and nine domestic consultants. A summary is provided in Table A4.

Table A4: Summary of Consulting Services

Consultant Level and Position	Person-Months	
	International	Domestic
Team leader/Strategic Advisor and Institutional Expert		2
Agribusiness supply chain experts		6
Infrastructure Specialists (agricultural, logistics, and industrial infrastructure)	1	6
Master Planner		2
Cold Chain Specialist	1	1
Project Finance Expert/PPP specialist		4
Legal / PPP Contracts expert		3
Social Development Specialist		3
Environmental Specialist		2
Total	2	29

Source: Asian Development Bank estimates.

2. The deliverables of the TA will comprise of the following: (i) assessment of the market demand/supply for different agricultural value chains to identify specific location and product-specific infrastructure and facilities gaps; (ii) identification of the project components and activities for each of the selected value chains; and (iii) the DPRs for 4 end-to-end agricultural value chains, 2 per state. Preliminary discussions concluded that a feasible end-to-end value chain would include up to 50 OFCs, 3 ABCs and 2 PCCs (one at airport and one at railway, as appropriate). Value chains would be multi-crops, with the flexibility to include other agri-products, as required, for better financial sustainability. The DPRs will include per each value chain the following:

- Options analysis followed by detailed feasibility studies, such as technical feasibility (component sizing and costing), environmental and social acceptability, financial feasibility, legal and institutional issues;
- Risk assessment and proposed mitigation measures;
- Project structuring for Public Private Partnership (PPP)
- Detailed Project costing and financing plan;
- Procurement Options and Plan;
- Ownership structure of the various infrastructure along the value chain;
- Land requirements and purchase methods, if required;
- Identified pool of potential private players/investors to elicit responsive bids;
- Bid and contract documents for the various infrastructures along the identified value chains; and
- Monitoring and evaluation system for the project implementation.

3. **Strategic Advisor and Institutional Expert** (domestic, team leader, 2 person-months). The team leader will:

- (i) Develop a detailed blue print of the project, including institutional aspects, timelines and allocation of resources and monitoring and evaluation system;
- (ii) Assist ADB team in coordinating with central government ministries and state governments departments for various approvals and processes to be followed;
- (iii) Identify lessons learned from the sector and other regional countries to be incorporated into the proposed Project at the early stages of the TA implementation;
- (iv) Conduct mid-term review of progress with the team and suggest course correction, as required;
- (v) Develop a project implementation schedule for the 4 value chains;
- (vi) Ensuring completion of project to meet the timelines and in meeting the requirements of the TORs;
- (vii) Prepare a plan on how the procurement process during the bidding stage will be implemented;
- (viii) Manage the preparation and finalization of the inception, mid term and final reports with the team members.

4. **Agribusiness supply chain expert** (national, 6 person-months). The consultant will:

- (i) Cluster mapping of the state for the availability of raw material (primary and secondary level data);
- (ii) Assess the market demand and supply for different high value crops to identify location and product-specific infrastructure and facilities gaps that can add value to the product through processing at different levels, increase efficiency, preserve quality and/or reduce wastage/spoilage;
- (iii) Assess the demand for high-value crops and value-added products in the domestic and international markets in consultation with the product specialists on the team, and identify sub-sectors with the most growth potential;
- (iv) Conduct field surveys of farmers, consumers, traders, agro-enterprises, processors, exporters of raw and value added products, including private sector firms not currently involved but with the potential for participation;
- (v) Identify monitoring indicators and baseline data for benchmark information and design monitoring evaluation system;
- (vi) Once the specific value chains to be developed are selected, identify project components of each selected value chain aimed at increasing value addition at various levels;
- (vii) Using feedback from surveys, analyze the supply and demand chain for product categories selected for their potential in the sector to identify institutional, infrastructural and logistical barriers;
- (viii) Study the structure and effectiveness of farmer organizations in 4 identified value chains, and recommend a suitable farmer organization model, to ensure that small and marginal farmers are included in the value chain;
- (ix) In cooperation with the strategic advisor, pre-testing project components with potential private sector investors;
- (x) Identify existing value chain operators and finding ways to co-opt them in proposed value chains;
- (xi) Review the feedback of the private sector and other potential stakeholders likely to invest in the sub-projects along the value chain and incorporate them in the final design.

5. **Infrastructure Specialist (agricultural, logistics, and industrial infrastructure)** (international, 1 person-month; domestic, 2 person-months). The consultants will:

- (i) Design and engineer the various structures planned as components of each value chain, such as on-farm centers (OFC) in production areas (including mechanical harvesting and post harvest treatment equipment, storage, grading, sorting, packaging, and primary processing), agribusiness centers (ABC), including trading facilities, marketing intelligence, storages, pre-cooling and cold store facilities, sorting, grading and agro-processing facilities, and perishable cargo centers (PCC) at airports and railways;
- (ii) Assess the costs of various structures of the project components, in particular the costs of the technical civil works and equipment;
- (iii) Assess the need and availability of internal and external support infrastructure linkages, such as power, water, effluent treatment, roads etc.) and their costs;
- (iv) Include market intelligence and information systems for agricultural produce within the newly established agribusiness infrastructure, including mechanisms for the rapid transfer of price and demand information to farmers, and the dissemination of information on market opportunities;
- (v) Design and engineer the various elements of the selected support infrastructure;
- (vi) Assess the costs of the various structures of the selected support infrastructure, in particular the costs of the technical civil works and equipment;
- (vii) Suggest optimum ways of linking the various components of the selected value chains;
- (viii) In collaboration with the cold chain specialist, recommend the operational procedures of cargo handling by mapping every required step for transporting goods along the entire value chain;
- (ix) Prepare detailed designs of the logistical linking for each value chain;
- (x) Assess the costs of the various structures of the selected support infrastructure, in particular the costs of the technical civil works and equipment.

6. **Master Planner** (national, 2 person-months). The consultant will prepare the master plans of all identified project infrastructures in the selected value chains.

7. **Cold Chain Specialist** (international, 1 person-month, national, 1 person-month). The consultants will:

- (i) Assess the cold chain needs for the selected value chains, in view of the highly perishable high-value products;
- (ii) Suggest cold chain solutions for each value chain;
- (iii) Prepare detailed designs of the identified cold chain elements of the selected value chains;
- (iv) Assess the costs of the various cold chain elements of the selected value chains, in particular the costs of the technical civil works and equipment;

8. **Project Finance Expert/Public Private Partnership (PPP) Specialist** (national, 4 person-months). The consultant will do:

- (i) Detailed project costs for each value chain along with proposed means of finance, assessment of bankability of projects along with risk mitigation mechanism;
- (ii) Project structuring for determining various PPP options including ownership structure, project construction, and O&M;

- (iii) Suggest a strategy for suitable bundling/unbundling of the different investment components from both, administrative and financial angles, so that the sub-projects can be bid out as PPP sub-projects, and where not possible to do so, identify most suitable implementation agency for the balance sub-projects in the value chain;
 - (iv) Identify procurement options for various components of project and preparation of bid and contract documents;
 - (v) Examine the potential for enhancing the viability of the business models by dovetailing the different schemes of the GoI such as the Viability Gap Financing (VGF) Scheme of the Ministry of Finance or subsidy schemes of the MoA and GoB/GoM;
 - (vi) Determine the sources and quantum of investment from different sources and the possible ways of meeting the O&M expenses of the assets for the value chain of each selected product and revise the financial model of the DFR accordingly;
 - (vii) If land purchase is needed, propose procurement methods;
 - (viii) Propose a strategy and plan for (i) filling information gaps before bidding out the sub projects, (ii) project bidding, and (iii) procurement options;
 - (ix) Assist the Legal/Contracts expert in preparing the contract documents.
9. **Legal / PPP Contracts Expert** (national, 3 person-months). The consultant working in close coordination with the PPP Specialist and other team members, will do the following:
- (i) Undertake a review of the existing legal framework in the States with respect to the sub-project construction and implementation aspects, examine if it constrains PPP subprojects and recommend areas requiring specific notifications/amendments of existing framework to ensure enabling local legal and institutional conditions; and
 - (ii) Review and draft the PPP contracts/agreements for the subprojects to ensure consistency with the local legal and institutional environment.
10. **Social Development Specialist** (national, 3 person-months). The consultant will:
- (i) Assess social, legal and institutional aspects of various project components;
 - (ii) Recommend approaches for including small and marginal farmer groups in the sub projects;
 - (iii) Suggest social and political acceptability of project structures by pre-testing it with communities of farmers, traders and other stakeholders;
 - (iv) Conduct general Stakeholders' consultations to increase ownership of project by local rural communities;
 - (v) Conduct a detailed poverty and social assessment, following the guidelines in the ADB's *Handbook on Poverty and Social Analysis*;
 - (vi) Conduct an indigenous peoples safeguard assessment to determine whether the ensuing project would have any impacts directly or indirectly on the traditional livelihood systems, or culture of scheduled tribes, or if project activities will affect territories, natural or cultural resources that Scheduled Tribes or other indigenous peoples own, use, occupy, or claim as an ancestral domain or asset;
 - (vii) Support the team for developing the participation strategy for the TA activities;
 - (viii) Screen for land acquisition and involuntary resettlement issues, as needed;
 - (ix) Assess gender issues and the role of women in agribusiness activities, and recommend measures to address gender issues in all components of the project.

11. **Environmentalist** (national, 2 person-months). The consultant will:

- (i) Prepare a set of documents following ADB formats prescribed in ADB's Environment Assessment Guidelines;
- (ii) IEE or EIA for each ABCs/PCCs;
- (iii) Detailed guidelines for obtaining various clearances under Indian environment legislation for various project components;
- (iv) Environment assessment report for Financial Intermediaries (including environment assessment and review procedures for future sub-projects)
- (v) Obtain clearances from the statutory bodies like Pollution Control Board (PCB) as required under Indian's environmental legislation (in particular for bigger ABCs and PCCs for their construction and operation);
- (vi) Review the environmental impact of identified value chains, and recommend mitigation measures and monitoring programs, estimate their share of project cost, develop environmental guidelines for selected project components, and specify an institutional framework for monitoring the environmental impact;
- (vii) Evaluate the potential and recommend measures to reuse by-products or waste products along the identified value chains in an environmentally sound manner;
- (viii) Assess climate change vulnerability and risks of the proposed infrastructure and, in coordination with the infrastructure experts, recommend climate-proof designs.