

Export Wing, Ministry of Commerce
The People's Republic of Bangladesh

The Study
on
Potential Sub-Sector Growth
for
Export Diversification
in
the People's Republic of Bangladesh

FINAL REPORT
(Summary)

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JAPAN INTERNATIONAL COOPERATION AGENCY

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Abbreviations

Abbreviation	English	Japanese
A AABEA	: American Association of Bangladeshi Engineers and Architects	在米バングラデシュ人技術者・建築家協会
ADB	: Asian Development Bank	アジア開発銀行
ADP	: Annual Development Programme	年間開発計画
AIUB	: American International University - Bangladesh	アメリカン国際大学(バングラデシュ)
API	: Active Pharmaceutical Ingredients	医療原薬
APO	: Asian Productivity Organization	アジア生産性機構
ASOCIO	: Asian-Oceanian Computer Industry Organization	アジア・オセアニア・コンピューティング産業機構
ATDP	: Agro-based Industries and Technology Development Project	農産業・技術開発プロジェクト
B B2B	: Business to Business	企業間取引
BAA	: Bangladesh Agro-processors' Association	バングラデシュ農産品加工業者協会
BAAMA	: Bangladesh Automobiles Assemblers and Manufacturers Association	バングラデシュ自動車組立・製造業協会
BAB	: Bangladesh Accreditation Board	バングラデシュ認定局
BADC	: Bangladesh Agriculture Development Corporation	バングラデシュ農業開発公社
BAPI	: Bangladesh Association of Pharmaceutical Industry	バングラデシュ製薬業協会
BASIS	: Bangladesh Association of Software and Information Services	バングラデシュ・ソフトウェア・情報サービス協会
BB	: Bangladesh Bank	バングラデシュ銀行(中央銀行)
BBS	: Bangladesh Bureau of Statistics	バングラデシュ統計局
BCC	: Bangladesh Computer Council	バングラデシュ・コンピューター評議会
BCS	: Bangladesh Computer Samity	バングラデシュ・コンピューター協会
BCSIR	: Bangladesh Council of Science and Industrial Research	バングラデシュ科学工業研究評議会
BDS	: Business Development Service	ビジネス開発サービス
BDT	: Bangladesh Taka	バングラデシュの通貨単位(タカ)
BDXTP	: Bangladesh Export Diversification Project	(世界銀行) バングラデシュ輸出多角化プロジェクト
BEIOA	: Bangladesh Engineering Industry Owners' Association	バングラデシュ・エンジニアリング産業オーナー協会
BEMA	: Bangladesh Electronics Manufacturers Association	バングラデシュ電子機器製造業協会
BEPZA	: Bangladesh Export Processing Zone Authority	バングラデシュ輸出加工区庁
BFFEA	: Bangladesh Frozen Foods Exporters Association	バングラデシュ冷凍食品輸出業協会
BFTI	: Bangladesh Foreign Trade Institute	バングラデシュ海外貿易研究所
BGMEA	: Bangladesh Garment Manufacturers and Exporters Association	バングラデシュ衣料品製造業・輸出業者協会
BHB	: Bangladesh Handloom Board	バングラデシュ手織り業者委員会
BIBC	: Bangladesh ICT Business Center	バングラデシュICTビジネス・センター
BICF	: Bangladesh Investment Climate Fund	バングラデシュ投資環境ファンド
BIK Japan	: Bangladesh IT Kumiai Japan	バングラデシュIT組合
BITAC	: Bangladesh Industrial Technical Assistance Centre	バングラデシュ工業技術支援センター

Abbreviation	English	Japanese
BJA	: Bangladesh Jute Association	バングラデシュ・ジュート協会
BJEA	: Bangladesh Jute Exporters Association	バングラデシュ・ジュート輸出業者協会
BJGA	: Bangladesh Jute Goods Association	バングラデシュ・ジュート製品協会
BJMA	: Bangladesh Jute Mills Association	バングラデシュ・ジュート工場協会
BJMC	: Bangladesh Jute Mills Corporation	バングラデシュ・ジュート工場公社
BJRI	: Bangladesh Jute Research Institute	バングラデシュ・ジュート研究所
BJSA	: Bangladesh Jute Spinners Association	バングラデシュ・ジュート紡績企業協会
BKMEA	: Bangladesh Knitwear Manufacturers and Exporters Association	バングラデシュ・ニットウェア製造業・輸出業者協会
BOI	: Board of Investment	(バングラデシュ) 投資庁
BPATC	: Bangladesh Public Administration Training Centre	バングラデシュ行政訓練センター
BPC	: Business Promotion Council	(バングラデシュ) ビジネス振興評議会
BPO	: Business Process Outsourcing	ビジネス・プロセス・アウトソーシング
BRICs	: Brazil, Russia, India and China	ブラジル、ロシア、インド、および中国
BSIC	: Bangladesh Standard Industrial Classification	バングラデシュ標準産業分類
BSRS	: Bangladesh Shilpa Rin Sangstha	バングラデシュ産業信用銀行
BSTI	: Bangladesh Standards and Testing Institution	バングラデシュ標準規格・検査機関
BUET	: Bangladesh University of Engineering and Technology	バングラデシュ工科大学
C/C	: Coordination Committee	コーディネーションコミティー
C/P	: Counterpart	カウンターパート
C CAGR	: Compound Annual Growth Rate	年平均成長率
CAO	: Chief Adviser's Office	(バングラデシュ) 首相府
CBC	: Carpet Backing Cloth	絨毯裏地
CCCI	: Chittagong Chamber of Commerce and Industry	チッタゴン商工会議所
CIDA	: Canadian International Development Agency	カナダ国際開発庁
CIF	: Cost, Insurance and Freight	運賃保険料込み条件
CMMI	: Capability Maturity Model Integration	能力成熟度モデル統合
CNG	: Compressed Natural Gas	圧縮天然ガス
CPD	: Centre for Policy Dialogue	政策対話センター
CRM	: Customer Relationship Management	顧客関係管理
CSE	: Computer Science and Engineering	コンピューター理工学(科学・工学)
CSR	: Corporate Social Responsibility	企業の社会的責任
CUET	: Chittagong University of Engineering and Technology	チッタゴン工科大学
D DAC	: Development Assistance Committee	(OECD) 開発援助委員会
DAE	: Department of Agriculture Extension	(バングラデシュ) 農業改良普及庁
DANIDA	: Danish International Development Assistance	デンマーク国際開発援助

Abbreviation	English	Japanese
DCCI	: Dhaka Chamber of Commerce and Industry	ダッカ商工会議所
DF/R	: Draft Final Report	ドラフトファイナル・レポート
DFID	: United Kingdom Department for International Development	英国国際開発省
DM	: Direct Mail	ダイレクトメール
DPDT	: Department of Patents, Designs and Trademarks	(バングラデシュ)特許・デザイン・商標庁
DPSG	: Development Partners Support Group	開発パートナーズ支援グループ
DTP	: Desktop Publishing	デスクトップ・パブリッシング
DUET	: Dhaka University of Engineering and Technology	ダッカ工科大学
E E&E	: Electric and Electronics Products	電気・電子製品
EDF	: Export Development Fund	輸出開発ファンド
EEF	: Equity and Entrepreneurship Fund	起業家エクイティ基金
EMS	: Effective Export Market Size	有効輸出市場規模
EPB	: Export Promotion Bureau	(バングラデシュ)輸出振興庁
EPF	: Export Promotion Fund	輸出振興ファンド
EPZ	: Export Processing Zone	輸出加工区
ESPD	: Export Sector Diversification Program	輸出多様化のための金融プログラムの新規導入プログラム
EU	: European Union	欧州連合
F/R	: Final Report	ファイナル・レポート
F FAO	: Food and Agriculture Organization of the United Nations	国際連合食糧農業機関
FBCCI	: Federation of Bangladesh Chambers of Commerce and Industry	バングラデシュ商工会議所連盟
FDI	: Foreign Direct Investment	外国直接投資
FIFAS	: Foreign Investment Advisory Service	外国投資諮問サービス
G GBP	: Great Britain Pound	英国ポンド
GDP	: Gross Domestic Product	国内総生産
GIS	: Geographic Information System	地図情報システム
GSP	: Generalized System of Preference	一般特惠関税制度
GTZ	: German Technical Corporation	ドイツ技術協力公社
H HS code	: Harmonized Commodity Description and Coding System	HSコード
HYV	: High Yield Variety	高収量品種
IC/R	: Inception Report	インセプション・レポート
I IBPC	: ICT Business Promotion Council	(バングラデシュ)ICTビジネス振興評議会
ICB	: Investment Corporation of Bangladesh	バングラデシュ投資社
ICT	: Information and Communication Technology	情報通信技術
IDCOL	: Infrastructure Development Company Limited	インフラ開発社
IE	: Industrial Engineering	生産管理工学

Abbreviation	English	Japanese
IJSG	: International Jute Study Group	国際ジュート研究グループ
IMF	: International Monetary Fund	国際通貨基金
IPA	: Information Technology Promotion Agency	(日本)情報処理推進機構
IPO	: Initial Public Offering	新規株式公開
IPSAEP	: ICT Professional Skills Assessment and Enhancement Program	ICT専門家技術評価および向上プログラム
ISP	: Internet Service Provider	インターネット・サービス・プロバイダ
ISPAB	: Internet Service Providers Association of Bangladesh	バングラデシュ・インターネット・サービス・プロバイダ協会
IT	: Information Technology	情報技術
IT/R	: Interim Report	インテリム・レポート
ITC	: International Trade Centre	国際貿易センター
ITES	: IT Enabled Service	IT対応サービス
ITPEC	: IT Professionals Examination Council	ITプロフェッショナル試験評議会
ITSS	: IT Skill Standard	ITスキル標準
J JBIC	: Japan Bank for International Cooperation	日本国際協力銀行
JDPC	: Jute Diversification Promotion Centre	ジュート多様化促進センター
JETRO	: Japan External Trade Organization	日本貿易振興機構
JICA	: Japan International Cooperation Agency	国際協力機構
JLPT	: Japanese-Language Proficiency Test	日本語能力試験
JOBS	: Job Opportunities and Business Support Project	雇用機会・ビジネス支援プロジェクト
JSAC	: Jute Sector Adjustment Credit	ジュート・セクター調整融資
JSRP	Jute Sector Reform Program	ジュート・セクター改革プログラム
K KfW	: Kreditanstalt für Wiederaufbau	ドイツ復興金融公庫
KUET	: Khulna University of Engineering and Technology	クルナ工科大学
L L/C	: Letter of Credit	信用状
LCG	: Local Consultative Group	現地調整グループ
LDC	: Least Developed Country	後発開発途上国
LEI	: Light Engineering Industry	軽工業(品)
LEIC	: Local Enterprise Investment Centre	ローカル企業投資センター
LNG	: Liquid Natural Gas	液化天然ガス
M M/M	: Minutes of Meeting	ミニッツオブミーティング
MARCOM	: Market Communication	マーケットコミュニケーション
MDF	: Market Development Forum	市場開発フォーラム
MDG	: Millennium Development Goal	ミレニアム開発目標
MIDAS	: Micro Industries Development Assistance and Services	小規模工業開発支援・サービス
MOA	: Ministry of Agriculture	(バングラデシュ)農業省

Abbreviation	English	Japanese
MOC	: Ministry of Commerce	(バングラデシュ) 商業省
MOF	: Ministry of Finance	(バングラデシュ) 財務省
MOFA	: Ministry of Foreign Affairs	(バングラデシュ) 外務省
MOI	: Ministry of Industries	(バングラデシュ) 工業省
MOPEM	: Ministry of Power, Energy and Mineral Resources	(バングラデシュ) 電力・エネルギー・鉱物資源省
MOSICT	: Ministry of Science and Information & Communication Technology	(バングラデシュ) 科学・情報通信技術省
MOTJ	: Ministry of Textile and Jute	(バングラデシュ) 繊維・ジュート省
N NASCIB	: National Association of Small & Cottage Industries of Bangladesh	バングラデシュ零細・家内工業全国協会
NBR	: National Board of Revenue	(バングラデシュ) 歳入庁
NGO	: Non-governmental Organization	非政府組織、民間非営利団体
NORAD	: Norwegian Agency for Development Cooperation	ノルウェー開発協力庁
NPL	: Non Performing Loan	銀行不良債権
NPO	: National Productivity Organisation	国家生産性本部
NRB	: Non-Resident Bangladeshi	非居住バングラデシュ人
O ODA-TF	: Official Development Assistance – Task Force	現地ODAタスクフォース
ODC	: Offshore Development Center	オフショア開発センター
OJT	: On-the-Job Training	オージェイティイー
OOP	: Object Oriented Programming	オブジェクト指向型プログラミング
OS	: Operating System	オペレーティング・システム
OTOP	: One Tambon One Product	(タイ) 一村一品運動
P PC	: Privatization Commission	民営化委員会
PCM	: Project Cycle Management	プロジェクト・サイクル・マネジメント
PDM	: Project Design Matrix	プロジェクト・デザイン・マトリクス
PFI	: Participating Financial Institutions	参加金融機関
PMC	: Production Management Consultant	生産管理コンサルタント
POC	: Proof of Concept	概念実証
POS	: Point of Sales	店舗販売時点情報管理
PP, Pilot P	: Pilot Project	パイロットプロジェクト
PR/R	: Progress Report	プロGRESS・レポート
PRICE	: Poverty Reduction by Increasing Competitiveness of Enterprise	企業競争力強化による貧困削減
PROSPER	: Promotion of Sector Program on Entrepreneurs	企業家に対するセクター・プログラム新興
PRSP	: Poverty Reduction Strategy Paper	貧困削減戦略文書
PSDSP	: Private Sector Development Support Project	民間セクター開発支援プロジェクト
Q QCD	: Quality, Cost, Delivery	品質、価格、納期

Abbreviation	English	Japanese
R RMC	: Registered Management Consultant	登録経営コンサルタント
RMG	: Ready Made Garment	既製服
RUET	: Rajshahi University of Engineering and Technology	ラッシャヒ工科大学
S S/W	: Scope of Work	実施細則
SAFTA	: South Asia Free Trade Area	南アジア自由貿易地域
SE	: System Engineer	システム・エンジニア
SEDF	: South Asia Enterprise Development Facility	南アジア企業開発ファシリティ
SI	: System Integrator	システム・インテグレーター
SICT	: Support to ICT Task Force	ICTタスクフォース・サポート
SIDA	: Swedish International Cooperation Agency	スウェーデン国際協力庁
SME	: Small and Medium-sized Enterprise	中小企業
SMESDP	: Small & Medium Enterprises Sector Development Program	中小企業開発プログラム
SOE	: State Owned Enterprise	国営企業
SWOT	: Strengths, Weaknesses, Opportunities, Threats	強み、弱み、機会、脅威
T T/A	: Technical Assistance	技術協力
ToT	: Training of Trainer	トレーナー向けトレーニング
TQM	: Total Quality Management	総合的品質管理
TSC	: Trade Specialization Coefficient	貿易特化係数
U UGC	: University Grants Commission of Bangladesh	(バングラデシュ)大学助成委員会
UN	: United Nations	国際連合
UNCTAD	: United Nations Conference on Trade and Development	国連貿易開発会議
UNDP	: United Nations Development Programme	国連開発計画
UPS	: Uninterruptible Power Supply System	無停電電源装置
USAID	: United States Agency for International Development	米国国際開発庁
V VAT	: Value-Added Tax	付加価値税
W W/G	: Working Group	ワーキンググループ
W/S	: Workshop	ワークショップ
WITSA	: World Information Technology and Services Alliance	世界情報サービス産業機構
WTO	: World Trade Organization	世界貿易機関
WTO/TRIP	: Agreement on Trade-Related Aspects of Intellectual Property Rights	知的所有権の貿易関連の側面に関する協定

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Chapter 1 Introduction

Chapter 1 Introduction

1.1 Background

This is the Final Report for the Study on Potential Sub-sector Growth for Export Diversification in the People's Republic of Bangladesh (hereinafter referred to as "Study").

Currently, garments industry including woven garments and knitwear shares about 75% of export earnings in Bangladesh. However, the Multi Fiber Arrangement expired on January 1, 2005, which is a quota on the amount that developing countries can export their textile and clothing products to developed countries. Therefore, export competition in the world markets of the garments industry has been intensified in recent years. Under this circumstance, the Bangladeshi government had recognized needs to grow the new export products that had export-competitiveness and capability of making up for the expected reduction in export of garments industry.

Having faced these situations, the Bangladeshi government requested technical assistance or Study to the Japanese government in formulating the master plan for its export diversification as well as identifying the sub-sectors which have potential to come after the garments sub-sector in terms of export competitiveness. In response to this request, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched its Project Formulation Study team to Bangladesh from February 2006 to March 2006 during which the Study team examined and discussed framework of the technical assistance and target sub-sectors for the current Study. In consequence, the Scope of Work (S/W) on the current Study was exchanged on November 28, 2006 between the JICA and the Economic Relations Division, Ministry of Finance of the Bangladeshi government. The current Study embarked on in February 2007 based upon the S/W mentioned above and its First Field Survey commenced on February 16, 2007. The Study carried out a total of eight Field Surveys and it was completed by submitting the current Final Report in March 2009.

1.2 Objectives

(1) Overall Goal

A master plan on the sub-sector growth for the export diversification, which will be formulated in this Study, will be adopted as a policy of the Bangladeshi government.

(2) Project Purpose

- 1) A master plan on the sub-sector growth for export diversification will be developed.
 - 1-1) Action programs for the promising target sub-sectors will be implemented by initiative of the Ministry of Commerce and related industries.
 - 1-2) Substances of a mid-/long-term trans-sector export promotion plan will be reflected in the Private Sector Development Support Project (PSDSP).

(3) Output

- 1-1) Sub-sectors that have potentials to grow for export diversification of Bangladesh will be selected.
- 1-2) Problems and challenges of the selected sub-sectors for industrial development and export promotion will be indentified.
- 1-3) Possible solutions for the problems of the selected sub-sectors and model enterprises will be found out through implementation of the Pilot Projects.
- 1-4) Action programs for the selected sub-sectors for promotion of export competitiveness and solutions for the identified problems will be developed.
- 2-1) Problems and challenges that Bangladesh faces for export promotion, trade/investment promotion, and industrial development will be comprehended.
- 2-2) A mid-/long-term trans-sector plan to solve the problems for export promotion, trade/investment promotion, and industrial development of Bangladesh will be developed.
- 3) Problem-solving technologies will be transferred to the counterpart staff members and working group members through implementation of the Pilot Projects and development of a master plan.

1.3 Target Sub-sectors

The Bangladeshi government, in its Export Policy, designates the export promotion priority sectors for the diversification of its export products. When the current Study began, the Export Policy 2003-2006 was still effective, while the Export Policy 2006-2009 was effectuated in December 2007. Table 1-1 shows the export promotion priority sectors in both the Export Policy 2003-2006 and the Export Policy 2006-2009. Note that fiscal year in Bangladesh starts in July in current year and ends in June in the next year.

The JICA Project Formulation Study Team, which conducted the field survey from February 2006 to March 2006, provisionally selected six sub-sectors to be targeted in the

current Study by referring partly to the export promotion priority sectors in the Export Policy 2003-2006. These selected six sub-sectors are as follows:

- (1) Food Processing;
- (2) Jute Products;
- (3) Pharmaceutical Products;
- (4) Computer Software;
- (5) Metalworking and Machining; and
- (6) Electric and Electronics Products.

During the Second Field Survey, the current JICA Study Team and Ministry of Commerce agreed to select the two promising sub-sectors, namely jute products and computer software, out of those six sub-sectors as the target sub-sectors for the current Study. After that, the JICA Study Team proposed one Pilot Project for each of the selected two promising sub-sectors to which the counterpart agreed for implementation. Titles of these two Pilot Projects are shown below. Note that the details of implementation of the Pilot Projects are reported in the “Pilot Project Completion Report,” a supplementary volume of the present Final Report.

- (1) Jute Products Sub-sector: “Production Process Improvement (KAIZEN) Project; and
- (2) Computer Software Sub-sector: “Project for Establishing the Institutional Mechanism for Export Marketing of Software and ITES Industry in Bangladesh (Sample Market: Japan)”.

Table 1-1 Priority Sectors for Export Promotion (Ministry of Commerce)

Export Policy 2003-2006	Export Policy 2006-2009
<p><u>Highest Priority Sectors</u></p> <p>The highest priority sector will refer to the products that have high export potentials but, for different reasons, the potentials could not be used and necessary support could promote their exports. The following products will be listed as highest priori</p> <ol style="list-style-type: none"> (1) Software & ICT products (2) Agro-products and agro-processing products (3) Light engineering products (including auto-parts & bicycles) (4) Lether products (5) High priced readymade garments <p><u>Special Development Sectors</u></p> <p>The products which have export potentials but do not have a strong production, supply and export base will be included in the list of special development sectors. The following products will be listed as special development sectors.</p> <ol style="list-style-type: none"> (1) Pharmaceutical products (2) Cosmetics and toiletries (3) Luggage and fashion goods (4) Electronic products (5) C.R. Coil (6) Cards and calendars (7) Stationery products (8) Silk cloths (9) Handicrafts (10) Herbal medicines and medicinal plants 	<p><u>Highest Priority Sectors</u></p> <p>Highest Priority Sectors will refer to those product sectors which have special export potentials, but such potentiality could not be utilized properly due to certain constraints, and more success is attainable if adequate support is rendered to them. Fo</p> <ol style="list-style-type: none"> (1) Agro-products and agro-processing products (2) Light engineering products (including auto-parts and bicycles) (3) Footwear and leather products (4) Pharmaceutical products (5) Software and ICT products (6) Home textile <p><u>Special Development Sectors</u></p> <p>Product sectors which have export potentials but whose production, supply and export base are not well organized will be included in special development sectors so as to strengthen their export base. The following product sectors will be included in the</p> <ol style="list-style-type: none"> (1) Finished leather production (2) Frozen fish production and processing (3) Handicraft products (4) Electronic products (5) Fresh flower and foliage (6) Jute products (7) Hand-woven textiles from hill areas (pahari taat bostro) (8) Uncut diamond (9) Herbal medicine and medicinal plants.

Source: Export Policy 2003-2006 Ministry of Commerce, Government of the People's Republic of Bangladesh, December 2003

Export Policy 2006-2009 Ministry of Commerce, Government of the People's Republic of Bangladesh, December 2007

1.4 Scope of Study

This Study was conducted in three phases as shown below.

- (1) Phase 1: Selection of the two promising sub-sectors and design of the Pilot Projects
 - 1) Positioning of the Study in industrial promotion policies of Bangladesh and the analysis of the current status of the entire industrial sector in the country
 - 2) Analysis and evaluation of export competitiveness of six target sub-sectors.
 - 3) Selection of two promising sub-sectors
 - 4) Identification and analysis of obstacles and challenges related to industrial promotion and export promotion for the two promising sub-sectors
 - 5) Formulation of the framework of the Pilot Projects for the two promising sub-sectors

- (2) Phase 2: Implementation of the Pilot Projects
 - 1) Holding of seminars presenting details of the Pilot Projects
 - 2) Selection of model enterprises that are to participate in the Pilot Projects
 - 3) Implementation of the Pilot Projects for the two promising sub-sectors
 - 4) Evaluation of progress and outcome of the Pilot Projects
 - 5) Holding of seminars where results of the Pilot Projects are reported and shared
 - 6) Research and analysis on obstacles and challenges faced by the two promising sub-sectors and all the industrial sectors (trans-sector) in relation to industrial promotion and export promotion.

- (3) Phase 3: Formulation of action programs and a master plan
 - 1) Formulation of action programs that target export promotion of the two promising sub-sectors
 - 2) Formulation of medium- and long-term plans to address trans-sector issues in connection with the export promotion.
 - 3) Approval of the proposed contents of the master plan
 - 4) Holding of the seminars in which approved contents of the master plan are shared amongst stakeholders

1.5 Target Area

Whole area of Bangladesh

1.6 Schedule Completed

Schedule of the Field Surveys for the current Study is shown in (1) below. Work schedule of the whole Study is also shown in Figure 1-1. In addition, the Reports that had been submitted over the course of the Study are presented in (2) below (including the current Final Report).

(1) Schedule of Field Surveys

- 1) First Field Survey (Phase 1) : February 16, 2007 to March 3, 2007
- 2) Second Field Survey (Phase 1) : May 18, 2007 to July 11, 2007
- 3) Third Field Survey (Phase 2) : September 21, 2007 to November 10, 2007
- 4) Fourth Field Survey (Phase 2) : January 11, 2008 to February 9, 2008
- 5) Fifth Field Survey (Phase 2) : May 2, 2008 to May 31, 2008
- 6) Sixth Field Survey (Phase 2) : August 1, 2008 to August 30, 2008
- 7) Seventh Field Survey (Phase 3) : October 17, 2008 to November 15, 2008
- 8) Eighth Field Survey (Phase 3) : January 17, 2009 to January 31, 2009

(2) Schedule of Report Submission

- 1) Inception Report : Middle of February 2007
- 2) Progress Report (1) : Beginning of March 2007
- 3) Progress Report (2) : End of October 2007
- 4) Interim Report : Beginning of March 2008
- 5) Progress Report (3) : End of September 2008
- 6) Draft Final Report : Middle of December 2008
- 7) Final Report : Beginning of March 2009
- 8) Pilot Project Completion Report : Beginning of March 2009

1.7 Implementation System in Bangladesh

(1) Counterpart

The official counterpart of this Study in Bangladesh was the Ministry of Commerce. The Joint Secretary (Export) of the same Ministry was a responsible authority of the counterpart. In the meantime, the Export Promotion Bureau (EPB) under the Ministry of Commerce actually performed counterpart tasks on a daily basis and the EPB worked closely with the JICA Study Team.

(2) Coordination Committee

The Japanese and Bangladeshi stakeholders in this Study organized a Coordination Committee. This Committee acted as a supervisory organization which decided on and approved of the important issues in connection with the Study implementation. Members of the Coordination Committee are as follows:

- 1) Chairman: Joint Secretary (Export), Ministry of Commerce;
- 2) Secretariat: Deputy Chief (Planning), Export Wing, Ministry of Commerce;
- 3) Export Promotion Bureau;
- 4) Federation of Bangladesh Chambers of Commerce and Industry;
- 5) JICA Study Team Leader;
- 6) Deputy Resident Representative, JICA Bangladesh; and
- 7) Representative, Japan External Trade Organization (JETRO) Dhaka.

(3) Counterpart in Pilot Project Implementation

For the Pilot Project in jute products sub-sector, the National Productivity Organisation (NPO) worked as the counterpart which may also be called the working group. For the Pilot Project in the computer software sub-sector, the Bangladesh Association of Software and Information Services (BASIS) undertook this counterpart position.

1.8 Study Team

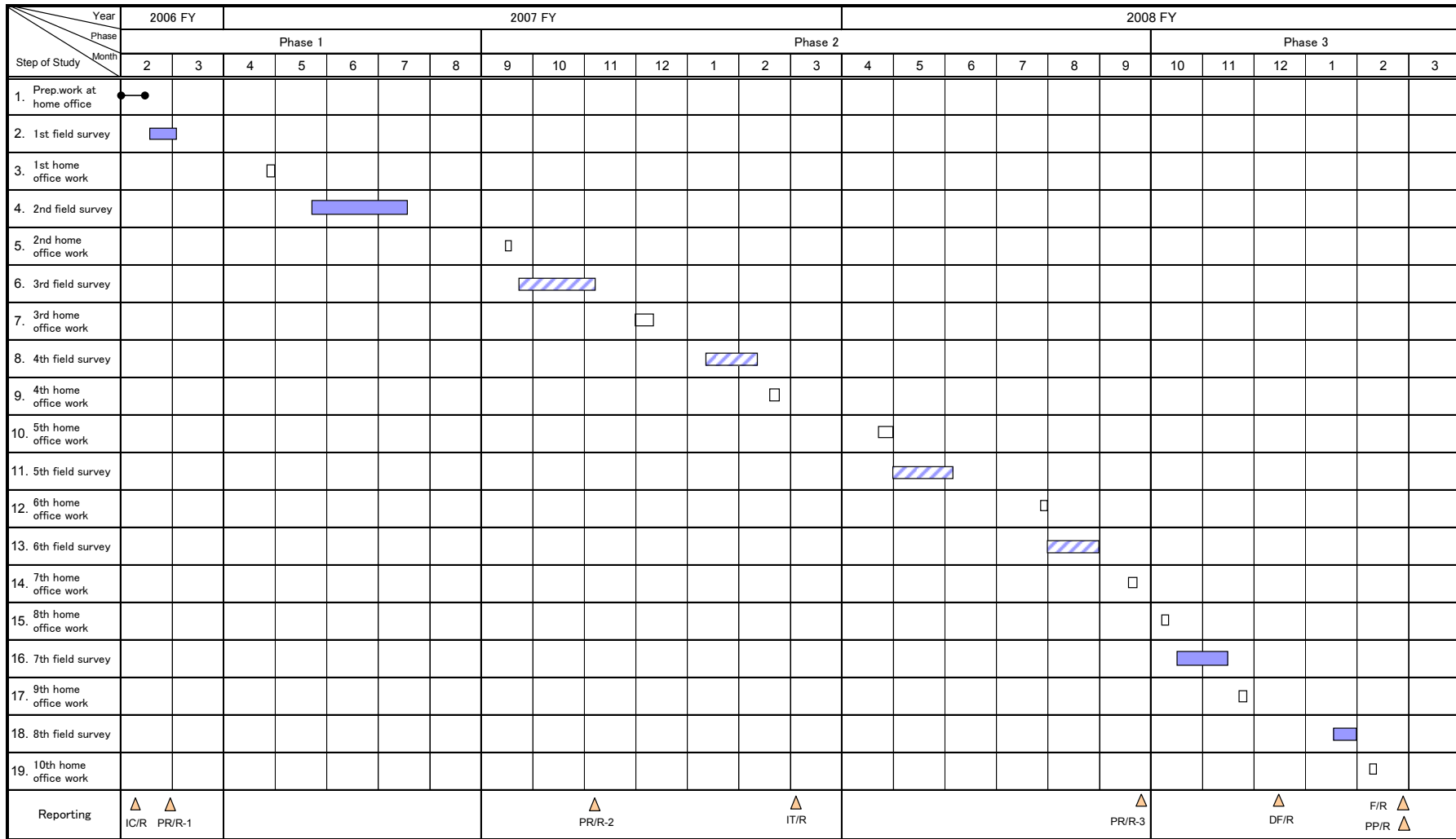
Table 1-2 shows the JICA Study Team members who had been dispatched to Bangladesh for the Field Surveys. Cells with the dark back indicate the Field Surveys in which the respective members were dispatched to Bangladesh.

Table 1-2 Members of JICA Study Team for Field Surveys

Name	Title	1st	2nd	3rd	4th	5th	6th	7th	8th
Shozo INAKAZU	Team Leader/ Promotion System Planning (UNICO)								
Yasuo TAKEUCHI	Sub-Leader/ Distribution/Market Analysis								
Yuji KUROKAWA	Industrial Structure Analysis (UNICO)								
Nobushige FUKASE	Quality/ Production Management (UNICO)								
Yasuo UESUGI	Quality/ Production Management (Jute Pilot Project) (UNICO)								
Naoya NISHIGAKI	Human Resource Development (Jute Pilot Project) (JDS)								
Mamoru YASUI	Distribution/ Market Analysis (2) (Software Pilot Project) (JDS)								
Keisuke SUGIYAMA	Product Development/ Marketing (Software Pilot Project) (UNICO)								
Hirofumi YAMAUCHI	Product Development/ Marketing (Software Pilot Project) (UNICO)								
Keisuke SUGIYAMA	Coordinator of the Team (Additional Post) (UNICO)								
Miwako OIKAWA	Coordinator of the Team (UNICO)								

*UNICO: UNICO International Corporation

JDS: Japan Development Service Co., Ltd



Remarks: ●● Prep. Work at Home Office ■ ▨ Field Survey □ Home Office Work △ Reporting
 IC/R: Inception Report, PR/R: Progress Report, IT/R: Interim Report, PP/R: Pilot Project Completion Report, DF/R: Draft Final Report, F/R: Final Report

Figure 1-1 Work Schedule

Chapter 2 National Economy and Trade Promotion Policy

Chapter 2 National Economy and Trade Promotion Policy

This chapter reviews current states of the Bangladesh's national economy and its trade promotion policies. Note that the base data/information provided in this chapter were initially derived from the survey that was conducted from February 2007 to July 2007 (from the First Field Survey to the Second Field Survey). The JICA Study Team then updated, as much as possible, such base data/information during the Eighth Field Survey that was carried out in January 2009.

2.1 Overview of National Economy

2.1.1 GDP and Industrial Structure

Table 2.1-1 shows the country's GDP trend during the past 15 years. Bangladesh achieved around 4.5-6.5% GDP growth over the past decade. The pace of growth slowed down from 5.2% in the 1990s to 5.0% in the early 2000s on an annual simple average. It then picked up and remains at over 6% after 2003/4. The country's population increased by 24 million in the past 15 years, from 118 million to 142 million. GDP per capita rose from US\$ 288 to US\$ 554 during the same period, but Bangladesh is still one of the least developed countries in the world.

Meanwhile, industrial structure of Bangladesh has been undergoing substantial changes. The primary sector, both agriculture and fisheries, has declined in relative position. Its percentage share in the whole economy decreased by 6.4%, from 24.8% in 1993/4 to 18.4% in 2007/8. Instead, the secondary sector increased the share by 4.1% and the tertiary sector did by 2.4% during the same period. More specifically, agriculture decreased its share by 5.1% and fisheries by 1.3%, whereas manufacturing increased the share by 2.6%, wholesaling and retailing by 2.3%, transportation and communication by 0.7%, social and personal service by 0.4%, and education by 0.5%. Electricity, gas and water in the secondary sector reduced its share by 0.5%. In the tertiary sector, hotel and restaurant, financial intermediary, and government and defense have not undergone substantial changes in their shares, whereas real estate and business shrank by 1.9%.

2.1.2 Inflation, Exchange Rates, Government Finance

As seen in Table 2.1-2, consumer prices have been rising over the past 12 years (1996/7 – 2007/8), with significant fluctuation in the range between 1.9% and 9.9%. Inflation rate based upon the consumer price index hiked to 9.9% in 2007/8 with the rate for agricultural product being as high as 12.3%.

Value of Bangladesh Taka (BDT) has been depreciating against the US dollar by 71.5% over the past 15 years. Bangladesh had maintained fixed exchange rate system (pegged to major currency basket with intervention currency being US dollar) until May 2003, whereby the Bangladesh Bank exercised full control on currency exchange rates. In fact, the Bangladesh Bank devaluated the BDT against foreign currencies for around 130 times from 1972 to 2002, during which the fixed exchange rate system was maintained. Depreciation of BDT against US dollar continued after Bangladesh had adopted floating exchange rate system in the end of May 2003. Value of BDT was depreciated against the US dollar by around 16.5% from 2003/4 to 2007/8. In the meantime, money supply grew by nearly 18% per annum for the recent 4 years from 2004/5 to 2007/8.

Under the inflation trend, government revenue has been growing steadily. As shown in Table 2.1-3, government's tax revenue amounted to the value of 8.7% of GDP of the country in 2007/8. The income tax revenue of the government in 2007/8 was 5.9 times bigger than that of a decade ago, while the VAT increased by 3.8 times, luxury tax by 3.4 times and import duty by 2.1 times over the same period. In 2007/8, the tax revenue was constituted by VAT of 37.2%, income tax of 24.5%, import duty of 20.4%, and luxury tax of 16.5%. Meanwhile, government expenditures have been growing faster than revenue to result in continued fiscal deficits.

2.1.3 International Balance of Payments

Table 2.1-4 presents the international balance of payments of Bangladesh in the past 12 years. First of all, the country's trade balance is persistently in deficit, which has been increasing on a nominal basis. It amounted to BDT 357.18 billion in 2007/8, accounting for 36.4% of the country's exports. Similarly, services balance is also in chronic deficit partly due to the fact that marine transportation is carried out by foreign ships. In addition, payment for investment profits such as interest and dividend income has been on a wide rise since 2003, which is coming closer to the level of service deficits.

In the area of transfer balance, inflow of foreign aid funds declined from the peak level in the late 1990s to half the level in the 2000s. Instead, remittance by overseas workers is on the rapid rise in equivalence to 60.3% of exports in 2007/8, thus contributing greatly to the improvement of the international balance of payment. In fact, the current account balance of payments turned from persistent deficits in the late 1990s to the surplus trend in the 2000s.

The capital account continues to produce an excess in receipts for short-term capital to reflect expansion of external trade, while the receipt of long-term capital in the form of direct investment has been on the rapid rise since the beginning of the 2000s. On the other hand, the receipt for securities investment emerges recently, albeit the amount is still small. As a result, the country's foreign currency reserve has been increasing since 2000 and amount to about US\$ 6,149 million as of the end of 2007/8.

Table 2.1-1 Yearly Changes in Bangladesh's GDP Composition

(Nominal, %, BDT10 million, US\$)

	Primary industry			Secondary industry					Tertiary industry										GDP		GDP per capita	Population
	Agriculture	Fisheries	Total(%)	Mining	Manufac- turing	Electricity /gas/ water	Construc- tion	Total(%)	Wholesa- ling/retail	Hotel/ restaurant	Transpor- tation/ communi- cation	Finance/ interme- diary	Real estate/ business	Govern- ment/ defense	Education	Health/ welfare	Social/ personal service	Total(%)	Real growth rate	Nominal (BDT a hundred thousand)	GDP (US\$)	Population (One million)
1993-94	19.9	4.9	24.8	1.0	14.8	1.6	6.1	23.5	12.1	0.6	9.4	1.5	8.9	2.5	2.1	2.3	8.9	48.3	-	135,412	288	118
1994-95	20.3	5.0	25.3	1.0	14.7	1.5	6.4	23.6	12.4	0.6	8.9	1.5	8.6	2.4	2.0	2.2	8.6	47.2	4.9	152,518	316	120
1995-96	19.5	5.1	24.6	1.0	14.8	1.4	6.6	23.8	12.4	0.6	8.7	1.5	9.1	2.4	2.0	2.2	8.6	47.5	4.6	166,324	334	122
1996-97	19.4	5.3	24.7	1.0	15.0	1.4	6.7	24.1	12.3	0.6	8.7	1.5	9.0	2.5	2.0	2.2	8.5	47.3	5.4	180,701	340	124
1997-98	19.1	5.4	24.5	1.0	15.6	1.3	6.9	24.8	12.4	0.6	8.6	1.5	9.8	2.5	2.1	2.2	8.5	48.2	5.2	200,177	348	127
1998-99	19.6	5.7	25.3	0.9	14.9	1.3	7.1	24.2	12.4	0.6	8.4	1.5	8.9	2.5	2.2	2.2	8.4	47.1	4.9	219,697	357	128
1999-00	18.9	5.8	24.7	1.0	14.7	1.3	7.4	24.4	12.3	0.6	8.2	1.5	8.9	2.6	2.3	2.3	8.6	47.3	5.9	237,086	363	130
2000-01	18.0	5.3	23.3	1.0	15.1	1.3	7.6	25.0	12.8	0.6	8.3	1.5	8.8	2.6	2.3	2.3	8.6	47.8	5.3	253,546	362	130
2001-02	16.8	5.1	21.9	1.1	15.3	1.3	7.7	25.4	12.9	0.6	8.7	1.5	8.8	2.6	2.3	2.2	8.7	48.3	4.4	273,201	361	132
2002-03	16.2	4.7	20.9	1.1	15.2	1.3	7.7	25.3	13.0	0.7	9.3	1.6	8.5	2.6	2.4	2.2	8.9	49.2	5.3	300,580	389	133
2003-04	15.7	4.4	20.1	1.1	15.5	1.3	7.6	25.5	13.3	0.7	10.4	1.6	8.3	2.6	2.4	2.2	9.0	50.5	6.3	332,973	418	135
2004-05	15.2	4.2	19.4	1.1	15.9	1.3	7.8	26.1	13.6	0.7	10.3	1.6	8.0	2.6	2.4	2.2	9.1	50.5	6.0	370,707	441	137
2005-06	14.8	3.9	18.7	1.1	16.5	1.3	8.1	27.0	13.7	0.7	10.4	1.6	7.7	2.6	2.4	2.2	9.2	50.5	6.6	416,155	456	139
2006-07	14.5	3.7	18.2	1.1	17.3	1.2	7.9	27.5	14.1	0.7	10.4	1.6	7.5	2.7	2.4	2.1	9.3	50.8	6.5	451,362	482	141
2007-08	14.8	3.6	18.4	1.1	17.4	1.1	8.0	27.6	14.4	0.7	10.1	1.7	7.0	2.7	2.6	2.2	9.3	50.7	541,919	554	1.42	

Note: The fiscal year starts on July 1 and ends on June 30 in the following year. Import tariff revenue (4%) should be added to total output by all the industries in order to attain 100%.

Source: Bangladesh Bank, "Economic Trends November 2008"

Table 2.1-2 Inflation, Finance and Foreign Exchange Rate Trends

	Consumer price inflation rate (1995-96=100, %)			Wholesale price inflation rate (1967-70~100, %)		Rate of increase in money supply (%)		Commercial bank		Exchange rate (BDT/US\$)
	Agricultural product	Non-food		Agricultural product	Non-food	M1	M2	Bank deposit 3-6 months	Lending rate	
1993-94										40.0
1994-95						18.0	16.0			40.2
1995-96				7.0	4.8	9.7	8.2			40.8
1996-97	4.0			0.3	1.3	4.9	10.8			42.7
1997-98	8.7	10.5	6.0	5.6	4.0	4.8	10.4	8.9	13.0	45.5
1998-99	7.1	9.3	3.9	8.4	2.3	8.6	12.8	9.5	12.6	48.1
1999-00	2.8	2.7	3.1	-0.1	-3.0	15.3	18.6	8.6	13.0	50.3
2000-01	1.9	1.4	3.0	-2.4	2.4	12.4	17.0	8.9	12.6	54.0
2001-02	2.8	1.6	4.6	0.4	-0.1	8.1	13.1	9.1	13.0	57.4
2002-03	4.4	3.5	5.7	6.2	3.1	10.7	15.6	7.5	12.2	57.9
2003-04	5.8	6.9	4.4	3.7	3.5	14.0	13.8	6.4	11.2	58.9
2004-05	6.5	9.0	4.3	3.3	3.7	16.5	16.8	5.5	10.5	61.4
2005-06	7.2	7.8	6.4	7.0	13.8	21.3	19.5	5.8	11.1	67.2
2006-07	7.2	8.1	5.8	17.6	17.1	6.5	12.3	69.1
2007-08	9.9	12.3	6.3	19.3	17.6	7.2	12.6	68.6

Note: 1 The fiscal year starts on July 1 and ends on June 30 in the following year. Figures for consumer price, wholesale price and money supply are change over the last year, while exchange rates are annual average.

2 M1 = cash + checking account + deposit at the central bank. M2 = M1 + Fixed deposit

Source: Bangladesh Bank, "Economic Trends November 2008"

Table 2.1-3 Government Revenue

(BDT10 million)

	Other tax revenues								Non-tax revenues			
	Import tariff	Excise duty	Income tax	VAT		Luxury tax		Total	Land	Forest	Postal	Registration
				Domestic	Import	Domestic	Import					
1993-94	2,984	158	1,705	1,033	1,713	1,182	70	8,996	91	-	87	114
1994-95	2,677	178	1,492	1,248	2,215	1,344	188	10,523	207	32	100	118
1995-96	3,773	183	1,533	1,305	2,555	1,464	359	11,370	443	-	90	126
1996-97	4,013	303	1,665	1,551	2,788	1,619	452	12,503	164	52	108	131
1997-98	4,539	215	1,954	1,668	2,901	1,716	566	13,749	226	41	112	131
1998-99	4,739	223	2,361	1,813	3,047	1,710	767	14,869	120	42	98	168
1999-00	4,254	261	2,605	2,108	3,064	1,790	947	15,122	57	72	106	180
2000-01	5,101	275	3,501	2,701	3,680	2,114	1,255	18,774	123	68	112	192
2001-02	5,395	293	3,789	3,229	3,758	2,276	1,332	20,224	97	69	126	202
2002-03	6,679	318	4,236	3,660	4,121	3,139	1,271	23,654	149	77	116	262
2003-04	7,088	159	4,707	4,316	4,398	3,546	1,686	26,193	142	86	107	333
2004-05	7,913	144	5,577	5,111	5,347	3,703	1,853	29,905	182	96	128	367
2005-06	7,825	161	7,142	6,472	5,886	4,666	1,563	33,987	172	100	119	384
2006-07	8,154	184	8,721	7,421	6,311	4,846	1,197	37,219	166	62	121	446
2007-08	9,619	213	11,580	9,090	8,474	6,016	1,753	47,201	---	---	---	---

Note: The fiscal year starts on July 1 and ends on June 30 in the following year.

Source: Bangladesh Bank, "Economic Trends November 2008"

Table 2.1-4 International Balance of Payments

	(BDT10 million)														(US\$1 million)			
	Trade balance		Services balance			Transfer balance		Current account	Capital account				Increase/ decrease in foreign currency reserve	Error/ omission	Foreign currency reserve (mil.US\$, the end of a term)			
	Export	Import	Service	Investment profit		Government	Private		Short-term	Direct investment	Securities investment	Other investment						
1993-94																		
1994-95																		3,070
1995-96																		2,039
1996-97	18,836	27,436	-8,600	-2,462	-459	-2,921	1,606	7,563	9,168	-2,353	1,547	71	-565	-825	228	-1,433	692	1,719
1997-98	23,467	30,784	-7,317	-2,590	-454	-3,044	1,214	7,973	9,187	-1,173	1,380	1,133	14	-866	1,661	110	-379	1,739
1998-99	25,546	34,708	-9,162	-2,844	-653	-3,497	1,258	9,508	10,766	-1,893	1,672	952	-27	-3,474	-877	-973	1,797	1,523
1999-00	28,870	38,091	-9,221	-3,219	-1,112	-4,331	2,233	11,234	13,467	-86	1,422	983	0	-2,290	115	364	334	1,602
2000-01	34,905	45,495	-10,590	-4,923	-1,426	-6,349	1,171	11,434	12,605	-4,334	1,550	941	-2	-524	1,965	-1,593	777	1,307
2001-02	34,038	44,206	-10,169	-2,866	-1,835	-4,701	419	15,849	16,267	1,398	2,354	372	-32	-429	2,265	1,553	-2,110	1,583
2002-03	37,587	51,173	-13,586	-4,013	-1,146	-5,159	470	19,417	19,887	1,143	2,481	532	6	572	3,591	5,118	385	2,470
2003-04	45,535	57,817	-12,282	-4,382	-2,317	-6,699	285	21,706	21,991	3,010	1,374	2,269	32	-3,701	-26	1,444	-1,534	2,705
2004-05	53,961	72,945	-18,984	-4,980	-4,942	-9,922	220	26,330	26,551	-2,355	1,001	4,758	0	1,489	7,248	1,901	-2,992	2,930
2005-06	67,944	82,260	-14,316	-6,580	-5,044	-11,624	223	35,641	35,864	4,790	1,623	4,528	241	-3,708	2,684	3,580	-3,894	3,484
2006-07	83,205	107,202	-23,997	-8,726	-6,010	-14,736	667	44,608	45,274	6,542	3,381	5,247	727	-369	8,986	10,893	-4,635	5,077
2007-08	98,124	133,842	-35,718	-9,950	-7,256	-17,206	311	59,256	59,567	6,644	2,272	5,439	540	-5,342	2,905	7,315	-2,414	6,149

Note: The fiscal year starts on July 1 and ends on June 30 in the following year.

Source: Bangladesh Bank, "Economic Trends November 2008"

2.2 Trade Structure

2.2.1 Export Items

The country's export trend is reviewed with reference to Table 2.2-1. Looking at export items and their trend, exports of ready-made garments (RMG) including knit products and knitwear grew tenfold in the past 15 years and represent 66.2% of the total export value in 2007/8. Notably, RMG exports are on the rise, especially knit products, despite the anticipation that they decline due to the termination of the Multi Fiber Arrangement (MFA). This seems to reflect the fact that manufacturers of RMG products have established their position in export markets by establishing competitiveness on the basis of low labor cost. GTZ has recognized this trend and has shifted its target sub-sectors to RMG production, instead of leather, silk and jute products. International organizations are refocusing on RMG manufacturers in Bangladesh. In addition, there are some cases in which textile mills are beginning to be relocated from China to Bangladesh.

Exports of fish and shrimps/prawns (the second largest export item in terms of value) grew by 3.84 times between 1993/4 and 2007/8, while their percentage share in the total export value decreased from 10.3% to 4.5% over the same period. Meanwhile, export value of raw jute and jute products together increased by 3 times between 1993/94 and 2007/8, whereas their combined percentage share in the total export value reduced from 12.4% to 4.2% over the same period. These growth rates are still lower than those of RMG products, and further, their percentage shares in total export value rather declined due to larger increase of export value achieved by RMG products. Further, tea – a traditional export item – is in the declining trend in a long run, although its export value increased sharply in 2007/8. Fertilizer exports are not stable, whereas exports of petroleum products after refinement such as naphtha, kerosene and coal tar are on the steady rise, albeit the value is small.

2.2.2 Export Market

Table 2.2-2 shows the recent trend in the country's exports to major destinations (top ten countries in 2007-8) between 2003-4 and 2007-8. Although Japan is actually placed at 14th, it is put in the table for reference. In 2003-4, the USA was the largest export partner (25.9% of total), followed by EU countries that held a combined share of 56.3%. Exports to "other countries" accounted for 11.3% only. In 2007-8, exports to the USA maintained the first position, while its share slightly fell to 25.4%. EU countries still held sizable share in total. Exports to the countries other than USA and EU increased the share from 17.8% in 2003-4 to 21.2% in 2007-8. Thus, the country's export markets are getting diversified.

As for the relationship with the Japanese textile market, RMG products made in Bangladesh have faced difficulty in market acceptance due to quality problems, while the Bangladesh government and industry focused on the USA and Europe, rather than Japan. However, in September 2008, one of the largest apparel retail companies in Japan called “UNIQLO” (a part of share-holding company “First Retailing Co. Ltd”) established the procurement office in Dhaka by which it will transfer some of its procurement base from China to Bangladesh. According to the local newspaper, the company plans to make RMG imports of as much as US\$ 600 million per annum from Bangladesh. If this was to be materialized, then Japan would become the fourth or fifth largest countries in terms of value of export from Bangladesh.

The country’s trade structure is characterized by significant export of RMG production (which holds lion’s share of about 75% of the total export value) by imported materials and import of agriculture products. The RMG-oriented trade structure is translated that external trade is not deeply linked to the national economy as it only brings income by consignment business from a viewpoint of industrial linkage. As for agricultural products, the country imports edible oil, wheat, rice, beans and sugar, which accounted for a combined share of 16.1% of total import. On the other hand, the country’s agricultural exports are limited to tea and miscellaneous items, which is small in value and on the decline.

Table 2.2-1 Bangladesh's Export

(FOB price, BDT10 million)

	Raw jute	Jute product	Tea	Leather	Shrimp/ prawn	RMG (incl. Knit)	Petroleum products	Fertilizer	Other	Export Total (Incl. EPZ)
1993-94	256	956	175	632	1,013	5,646	35	178	907	9,799
1994-95	256	1,365	130	876	1,321	7,438	50	311	1,382	13,130
1995-96	294	1,240	115	897	1,311	8,195	49	12	1,744	13,857
1996-97	538	1,330	150	898	1,397	9,893	41	5	2,312	16,564
1997-98	484	1,328	207	810	1,491	12,627	10	58	3,388	20,393
1998-99	270	1,168	150	767	1,483	12,976	15	59	3,963	20,851
1999-00	370	1,131	86	760	1,813	15,724	57	-	4,982	24,923
2000-01	402	1,274	119	1,364	2,036	20,265	56	6	6,897	32,419
2001-02	379	1,398	91	1,309	1,689	19,270	65	-	6,733	30,934
2002-03	401	1,272	77	1,229	1,859	20,852	136	-	7,416	33,242
2003-04	454	1,271	95	1,441	2,284	26,189	152	-	8,695	40,581
2004-05	564	1,677	94	1,608	2,576	33,333	194	82	10,707	50,835
2005-06	860	2,159	80	1,981	2,951	40,529	316	-	13,792	62,608
2006-07	977	2,602	42	2,290	3,702	51,891	324	271	16,838	78,918
2007-08	1,075	2,555	107	2,425	3,893	57,090	759	227	18,112	86,283

Note: The year concerned July 1 - Next year June 30.

Source: Bangladesh Bank, "Economic Trends November 2008"

Table 2.2-2 Recent Export Trend by Destination (2003/4 – 2007/8)
(Top Nine Ten Countries in 2007/8)

(Unit: US\$ million)

	2003-04		2004-05	2005-06	2006-07	2007-08	
	Value of export	Percentage share	Value of export	Value of export	Value of export	Value of export	Percentage share
USA	1,971.6	25.9%	2,418.7	3,039.8	3,441.0	3,590.6	25.4%
Canada	284.7	3.7%	335.3	407.0	457.2	532.9	3.8%
India	89.3	1.2%	143.7	242.2	289.4	358.1	2.5%
EU	4,279.7	56.3%	4,621.6	5,502.9	6,400.9	7,549.2	53.5%
(Germany)	1,298.6	17.1%	1,351.1	1,763.4	1,955.4	2,174.8	15.4%
(UK)	898.7	11.8%	944.2	1,053.7	1,173.9	1,374.0	9.7%
(France)	553.5	7.3%	625.5	678.9	731.8	953.1	6.8%
(Netherlands)	290.5	3.8%	290.9	327.2	459.0	653.9	4.6%
(Italy)	316.3	4.2%	369.8	427.9	516.0	579.2	4.1%
(Belgium)	326.7	4.3%	327.8	359.3	435.8	488.4	3.5%
(EU others)	595.4	7.8%	712.3	892.5	1,129.0	1,325.8	9.4%
Japan	118.3	1.6%	122.5	138.5	147.5	172.6	1.2%
Others	859.4	11.3%	1,012.7	1,195.8	1,441.9	1,907.4	13.5%
Total	7,603.0	100.00%	8,654.5	10,526.2	12,177.9	14,110.8	100.0%

Note: 1. The above years mean the fiscal year between July 1 of each year and June 30 of the subsequent year.

2. Countries in parenthesis are member countries of EU.

Source: Bangladesh Bank, "Annual Report 2006-7-08," EPB, "Export Statistics and Export Receipt"

Table 2.2-3 Bangladesh's Imports

(CIF price, BDT10 million)

	Food									Raw material/fuel							
	Rice	Wheat	Milk/dairy products	Spice	Seed for oil pressing	Edible oil	Beans	Sugar	Sub-total	Ash	Chemical fertilizer	Crude oil	Petroleum products	Iron and steel	Dye	Cotton	Subtotal
1993-94	40	564	148	88	160	468	112	52	1,632	44	540	464	672	520	144	288	2,672
1994-95	884	1,029	165	64	322	884	36	129	3,513	48	571	711	828	828	201	543	3,730
1995-96	1,462	931	217	94	364	731	98	25	3,922	102	396	678	1,184	1,315	225	756	4,656
1996-97	119	666	226	43	265	922	231	209	2,681	141	641	743	1,456	1,866	265	833	5,945
1997-98	1,123	555	205	45	423	982	200	132	3,665	159	491	636	1,341	1,778	300	941	5,646
1998-99	3,268	154	269	130	481	1,379	341	202	6,224	183	577	567	1,298	1,658	317	1,120	5,720
1999-00	579	1,338	302	90	453	1,288	569	151	4,770	297	705	1,167	2,043	1,977	357	1,394	7,940
2000-01	925	955	333	78	347	1,175	464	250	4,527	572	698	1,471	3,055	2,502	488	1,941	10,727
2001-02	87	983	339	72	412	1,439	505	135	3,972	862	615	1,391	2,764	2,372	503	1,794	10,301
2002-03	1,220	1,145	353	185	369	2,110	840	601	6,823	834	630	1,545	3,588	2,634	500	2,274	12,005
2003-04	842	1,690	359	177	434	2,773	707	647	7,629	821	882	1,484	4,536	2,826	644	3,436	14,629
2004-05	1,627	1,915	532	254	526	2,698	974	1,355	9,881	1,050	2,035	2,157	7,735	4,193	814	4,096	22,080
2005-06	787	2,012	489	212	607	3,174	1,094	837	9,212	1,413	2,262	4,080	9,437	6,590	997	4,987	29,766
2006-07	1,234	2,774	572	525	736	4,022	1,356	2,034	13,253	1,656	2,370	3,607	11,807	6,805	1,113	5,920	33,278
2007-08	5,993	3,681	943	550	932	6,905	2,242	2,718	23,964	2,380	4,330	4,767	14,116	8,091	1,492	8,317	43,493

	Semi-finished and finished products								Import total
	Medical	Plastics /rubber	Spun yarn	Rayon yarn	Fiber product	Others	Machinery	Sub-total	
1993-94	60	451	672	124	3,364	6,695	520	11,886	16,190
1994-95	64	596	805	161	4,121	9,047	796	15,590	22,833
1995-96	82	759	1,209	176	4,260	11,198	1,221	18,905	27,483
1996-97	95	775	1,687	192	4,689	11,957	1,422	20,817	29,443
1997-98	123	929	1,486	218	5,746	13,950	1,293	23,745	33,056
1998-99	139	917	1,360	187	5,330	15,942	1,411	25,286	37,230
1999-00	135	1,159	1,509	216	5,801	17,624	1,579	28,023	40,733
2000-01	179	1,411	1,739	212	6,968	20,181	2,599	33,289	48,543
2001-02	224	1,435	1,622	226	6,102	20,060	3,184	32,853	47,126
2002-03	258	1,627	1,561	239	6,406	21,785	3,172	35,048	53,876
2003-04	267	2,161	1,900	339	7,627	23,013	4,298	39,605	61,863
2004-05	253	2,934	2,414	461	9,646	23,209	6,876	45,793	77,754
2005-06	336	3,516	3,367	507	11,598	26,566	10,365	56,255	99,130
2006-07	338	4,440	4,023	671	13,064	31,210	13,332	67,078	118,478
2007-08	426	5,542	4,739	756	12,984	38,926	11,440	74,813	148,370

Note: The fiscal year starts on July 1 and ends on June 30 in the following year.

Source: Bangladesh Bank, "Economic Trends November 2008"

2.3 Trade Promotion Policy

(1) Export environment for Bangladesh

Bangladesh receives the following favorable treatments from its trade partners.

- 1) EU exempts tariff on all products from LDCs (excepting rice, sugar and banana) without quota.
- 2) Canada follows the same practice since 2003.
- 3) Australia and New Zealand exempts tariff.
- 4) Japan exempts tariff under GSP (Generalized System of Preference).
- 5) China, India, Pakistan, Russia, South Korea and Thailand impose concessionary tariffs only.

A special privilege is given to pharmaceutical production. Under the WTO/TRIPS (Agreement on Trade Aspect of Intellectual Property Rights), Bangladesh is granted of a privilege to use foreign patents with free of charge. The country uses the privilege to produce APIs (Active Pharmaceutical Ingredients) and exports them to LDCs. However, this privilege will expire in 2016, after which the country is required to pay royalty for use of foreign patents.

On the other hand, “Import Policy 2006 – 2009” which has purposes of a) technology imports, b) imports for export industries and c) gradual lift of finished products along WTO’s regime was published in October 2007, accompanying a registration of importers, under which a renewal fee is required.

(2) Export Policy by the Ministry of Commerce

For further export promotion, the Bangladesh government has established the Export Promotion Bureau (EPB) as a division attached to the Ministry of Commerce, which has 270 staff members in the headquarters and 30 at four district offices and conducts the following activities.

- 1) Compilation of export statistics and provision of information on export markets for exporters
- 2) Issuance of certificates for the country of origin and GSP-compliance certificates and provide credit to software industry
- 3) Sponsoring of overseas trade fair for Bangladesh products
- 4) Trade consultation and advice for export-oriented companies
- 5) Support for resolution of conflicts with buyers in importing countries

- 6) Analysis of export items and markets as well as analysis of export policy under the WTO framework

Table 2.3-1 lists the Highest Priority Sectors and the Special Development Sectors designated in the Export Policy 2006-2009 and incentives offered (At present, Export Policy 2006-2009 is in effect). The Highest Priority Sectors mean industries that are selected for export promotion on account of high potential. The Special Development Sectors are placed next to the Highest Priority Sectors and are considered to have high export potential but to require the improvement of production, supply and export capabilities. Industries designated as those priority sectors are eligible to various incentives: 1) low interest rate loan; 2) income tax return; 3) subsidy for user charge of infrastructure facilities; 4) export finance; 5) discount for air transport charge; 6) reimbursement of customs duty; 7) subsidies relating to infrastructure-related usage fee; 8) marketing support; and 9) support for foreign direct investment.

Table 2.3-1 Industries Designated for Export Promotion in Export Policy 2006-2009

	Designated industries	Incentives
Highest priority sectors	a. Agro-products and agro-processing products b. Light engineering products (including auto-parts and bicycles) c. Footwear and leather products d. Pharmaceutical products e. Software and ICT products f. Home textile	a. Project loans with reduced interest rates on a priority basis b. Income tax exemptions c. Subsidies which are compatible with WTO Agreement on Agriculture, and WTO Agreement on Subsidies and Countervailing Measures d. Possible financial benefits or subsidies for utility services such as electricity, water and gas, provided that they are compatible with WTO Agreement on Agriculture, and WTO Agreement on Subsidies and Countervailing Measures e. Export loans with soft terms and lesser interest rates f. Reduced air travel fares g. Duty draw back/bond facilities h. Privileges for the establishment of backward linkage industries including infrastructural development so as to reduce production cost i. Expansion of institutional and technical facilities to improve and control product quality j. Assistance in production and marketing k. Assistance in foreign market search l. Taking necessary initiatives to attract foreign investments

Special priority sectors	<ul style="list-style-type: none"> a. Finished leather production b. Frozen fish production and processing c. Handicraft products d. Electronic products e. Fresh flower and foliage f. Jute products g. Hand-woven textiles from hill areas (pahari taat bostro) h. Uncut diamond i. Herbal medicine and medicinal plants 	<ul style="list-style-type: none"> a. Project loans with general interest rates on a priority basis b. Consideration for export loans with soft terms and lesser interest rates c. Subsidies which are compatible with WTO Agreement on Agriculture, and WTO Agreement on Subsidies and Countervailing Measures d. Reduced air fare for shipment of products e. Duty draw back/bond facilities f. Privileges for the establishment of backward linkage industries including infrastructural development so as to reduce production cost g. Expansion of technical facilities to improve product quality h. Assistance in product marketing i. Assistance in foreign market search j. Possible financial benefits for utility services such as electricity, water and gas k. Taking necessary initiatives to attract foreign investments (FDI)
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Source: Ministry of Commerce, "Export Policy 2006 – 2009," December 2007

(3) Export finance by the central bank

The Bangladesh Bank (the central bank of Bangladesh) operates the following three export finance schemes for export promotion.

1) Export Development Fund (EDF)

This is the revolving fund operated since 1989. In 2007, the fund amounted to US\$ 100 million. It provides foreign currency loans, via commercial banks, for exporters to import raw materials and parts for an export contract that they have concluded. The repayment period is one year or less. The maximum amount of loan is US\$ 1 million per company, covering up to 70% of the value of the export contract. The interest rate is LIBOR + 1.0%, e.g., 6% in 2007. The Bank is considering increasing this line of credit volume.

2) Local currency loan (Packing Credit)

This scheme provides a low interest rate (7%) loan for exporters. No limit of credit is set and loan is executed via a commercial bank. It provides a great advantage for exporters who usually have to pay a 12% or higher interest rate for commercial loans.

3) Equity and Entrepreneurship Fund (EEF)

This is applicable to food processing/agro-based sector and IT sector.

(4) Export promotion at Export Processing Zone (EPZ)

The EPZ is a special area established for export promotion with privileges. As of the end of December 2008, 292 companies operated in the EPZs and employed 230,000 people (of which 60% is female). Chittagong accommodates the largest number of companies (143), followed by Dhaka (96), Comila (22), and Mongla (9). Breakdown of tenant companies by country of origin is shown below. Local companies and Korean companies account for 25% and 22% of the total respectively, whereas there is relatively the small number of companies from the USA, Europe, and Southeast Asia (e.g., Singapore and Thailand) despite close export relationship with Bangladesh. The EPZs in Chittagong and Dhaka are fully occupied.

Table 2.3-2 Country-wise number of companies operating in EPZs

Country	Number of the Company	Investment (US\$ one million)	Number of the employees
a. Bangladesh	73	288	51,292
b. Korea	63	356	64,571
c. China and Hong Kong	37	180	31,299
d. Japan	24	170	6,287
e. Taiwan	14	65	6,798
f. India	13	11	2,005
g. USA.	12	51	11,857
h. UK	10	30	12,552
Total (8 countries/regions)	246	1,151	186,661

Source: BEPZA

By industry type, textile and garment industries account for 66%, totaling 193 factories, which are divided into 69 garment, 40 garment accessories, 33 textile, 30 knit, 16 towel, and 5 tent establishments. As for other industries, there are 16 electrical/electronics factories, 13 in plastics, 11 in metals, 13 in footwear and leather, and 8 in processing of agricultural products.

Chapter 3 Proposals for Trans-sector Export Promotion Plan

Chapter 3 Proposals for Trans-sector Export Promotion Plan

This chapter contains policy proposals relating to export promotion for all industrial sub-sectors in Bangladesh. Section 3.1 evaluates effectiveness of Export Policy 2006 – 2009, which forms the basis of the country’s export promotion policy. Finally, Section 3.2 recommends in a comprehensive way the key issues to promote export diversification of Bangladesh

3.1 Analysis of the Current Export Policy and Recommendations

This section examines the country’s export promotion policy, as to whether it is properly operated, and makes recommendations on important matters.

3.1.1 Clear Target Setting

According to the EPB, previous Export Policies specified export targets and necessary actions to be taken. However, Export Policy 2006 – 2009 does not contain either of them. On the other hand, the EPB, which is virtually the implementation body for the Export Policy, classifies export items into three categories according to change over the previous year (i.e., increase, unchanged, and decrease) and use them as an index. The EPB’s organization is divided into departments according to commodities, and export records in terms of change over the previous year are used as a major index to measure performance.

In reality, however, the increase or decrease in commodity exports is not governed by the Export Policy and is largely caused by the world economy and market trends. Thus, commodity-based export targets (value basis) should be established for the purpose of making the government’s forecast known to the public, while neither the EPB nor the MOC is responsible for achieving the export targets in terms of value. Instead, they should be responsible for setting and achieving targets for export incentive. Therefore, it is desirable to specify in Export Policy target export values as well as quantity of incentives to be given to priority sub-sectors, together with action programs.

3.1.2 Clear Focusing on the Highest Priority Sector

The Highest Priority Sector (six sub-sectors) is said to represent industries that have high export potential but cannot show it fully in actual export business for various reasons. On the other hand, the Special Development Sector represents nine sub-sectors that have export capability but need improvement in the areas of production, supply and/or exporting (see Table 1-1).

According to the EPB, there are no clear criteria for selection of priority industries. There is no clear standard for reshuffling every three years. At present, RMG (Ready Made Garment and Knitwear) accounts for 75% of the total export value of the country, and the total export value of the priority 15 sub-sectors exceeds 75% of the rest of 25% of country's total excluding RMG as seen in Table 3.1-1. This means that most sub-sectors making exports, other than RMG, are designated as priority industrial sub-sectors. Finally, there is no clear standard for distinguishing the Highest Priority Sector from the Special Development Sector. Development policy papers published by the government usually tend to give priority to a broad range of sectors or sub-sectors. This is understandable as the government has to make political consideration under some circumstances.

Table 3.1-1 Ranking of Export from Bangladesh by Commodity

(Unit: Billion Taka)

Order	Commodities	July-June 2005-2006		July-June 2006-2007	
		Export	%	Export	%
1	Woven garments	274.47	38.82	321.66	38.25
2	Knitwear	256.54	36.29	314.47	37.39
3	Frozen food	30.86	4.37	35.59	4.23
4	Specialized textile & household linen, Textile articles	24.13	3.41	33.06	3.93
5	Raw jute & Jute goods (all sorts)	34.23	4.84	32.31	3.84
6	Leather (Crust/finished)	17.29	2.45	18.38	2.19
7	Engineering products	13.36	1.89	16.36	1.95
8	Chemical products (Fertilizer, Pharmaceuticals)	14.00	1.98	14.86	1.77
9	Footwear (all sorts)	6.64	0.94	9.39	1.12
10	Agricultural products	6.35	0.90	6.06	0.72
11	Petroleum by products	5.94	0.84	5.79	0.69
12	Ceramic products	1.68	0.24	2.07	0.25
13	Computer services	1.82	0.26	1.68	0.20
14	Agro processed food	1.37	0.19	1.56	0.19
15	Handicrafts	0.29	0.04	0.56	0.07
16	Tea (In packet/bulk)	0.80	0.11	0.48	0.06
	Other manufactured products	14.60	2.07	23.09	2.75
	Other primary commodities	2.58	0.36	3.60	0.43
	Total	706.95	100.00	840.97	100.00

Source: Export Promotion Bureau "Statement of Monthly Export, June 2007"

In consideration of the above factors, the MOC and the EPB shall provide the six sub-sectors listed in Highest Priority Sector with the most preferential incentives as the

government's strong intention. The question is how promotion and support measures for these industrial sub-sectors should be applied. Also, the MOC and EPB shall also request various ministries, e.g., finance, technology, and market development, to follow the guideline set in the current Export Policy.

Finally, it should be pointed out that the six sub-sectors in Highest Priority Sector do not correspond with sub-sectors selected by the BPC under the MOC (i.e., software, light engineering, and leather products) and those covered by the EPB's financial support program (EPF) (software and handicraft products), but they are included in the 15 priority sub-sectors. Nevertheless, the MOC and the EPB should not change the sub-sectors of Highest Priority Sector until they achieve a certain success in export expansion or until they become unjustifiable for usage of government resources to support from the viewpoint of national economy

3.1.3 Monitoring and Modification of Export Policy

It is recommended that export promotion by the MOC/EPB should be carried out in the PDCA cycle. Accordingly, proposals made in 3.1.2 are related to the "Plan" component. In 3.2.2, the "Plan," "Do" and "Action" components are addressed. This section makes proposals relating to the "Check" component, which includes periodical monitoring of performance of the Export Policy, the check on deviation between the target and the actual result, and modification of the target and the means (support measures).

At present, the documents of Export Policy is subject to annual review, but it does not include the monitoring of performance of incentives actually given to industries by various ministries and agencies. The EPB conducts questionnaire surveys of trade associations, chambers of commerce and industry, and financial institutions, but collected data are not compiled or analyzed in an integrated form. For instance, there is no way to know the actual value of tax incentive given for each of the priority sub-sectors.

As a result, it is not practical to measure effectiveness of Export Policy on a performance basis and to revise Export Policy as required. It is therefore proposed to monitor actual incentives performed by relating ministries and agencies, in order to use them for midterm and every three-year's revision of Export Policy. The target sub-sectors for monitoring may be limited to the six sub-sectors in Highest Priority Sector or 15 sub-sectors including those in Special Development Sector.

3.1.4 Establishment of Contact Point at Related Ministries

As Export Policy covers a wide range of areas, more than two departments at every ministry handle it. As a result, the EPB has to communicate with many contact persons, requiring considerable time and effort to make smooth operation difficult in many cases. It is therefore proposed to integrate contact points at each ministry into one. It is not necessary to establish a new division handling Export Policy. In addition, it is recommended to hold a periodical meeting by these ministry-level contact persons and representatives of the central bank, under the leadership of the MOC (and EPB as the secretariat). The meeting should provide opportunity to monitor and evaluate the actual progress of incentives provided by ministries and to hear policy recommendations from them.

3.1.5 Harmonization with Development Partners (Donors)' Programs

In Bangladesh, a variety of donor organizations (developing partners) carry out development programs under a bilateral or multilateral arrangement. They are planned and implemented on the basis of philosophy and prospect of each organization and are not necessarily in line with Bangladesh's development policy and Export Policy. To ensure that Export Policy produces its maximum effect, the government should more participate in the planning stage of each development program and request for modification if necessary. Furthermore, the MOC and EPB may guide development partners' programs from their planning stage in line with Export Policy.

As Export Policy is a guideline and does not have legal force, it is difficult to achieve its objective unless support programs directly targeting export industries or priority industries are implemented. For instance, the MOC requests commercial banks to extend low-interest loans to companies specifically in the six Highest Priority Sectors, but commercial banks will not likely provide such loans in consideration of their own interest. To overcome the problem, it is imperative to establish a special export promotion finance program to provide low-interest loans and to commission actual lending to commercial banks. Or a credit guarantee system may be established to lower risks for commercial bank's loans.

Given the government's limited resources, donor organizations can provide effective support in a wide range of areas other than finance, including technical assistance for export promotion and market development. It is therefore important to harmonize Export Policy with development programs assisted by development partners.

3.2 Key Issues and Proposals Relating to Export Diversification

The proposals presented in this section are made on the basis of the following information and findings.

- 1) Results of preliminary study on the six candidate sub-sectors, as implemented in the priority sub-sector selection process presented
- 2) Lessons learned from implementation of two Pilot Projects
- 3) Results of various surveys in relation to the development of action programs
- 4) Knowledge of the JICA Study Team obtained from similar projects and activities conducted by the members of the Study Team in other countries

3.2.1 Promotion of Bangladesh for World Market Recognition

In the Pilot Project covering computer software industry, business matching with the Japanese market was promoted. The most notable finding from the Pilot Project is the lack of recognition in the Japanese market that Bangladesh is an emerging software exporter. In fact, Bangladesh remains obscure in the Japanese market not only for software but other goods and services as well. The lack of market recognition is probably true of other countries. Thus, the first step of the country's export promotion plan should focus on efforts to raise recognition of Bangladesh in the world market.

In consideration of government resource limitation, promotional efforts should start with selection of priority markets or countries. Table 3.2-1 lists top ten countries in terms of export destination. The top ten countries account for a combined share of 80% of the total export value. The top-ten list is dominated by the USA, Canada, and West European countries, with India, a neighboring country, placed at the 10th. (Note that India may rank higher because smuggling data are not included.) Clearly, the country's export partners are geographically skewed.

Table 3.2-1 Export Destination by Country (Top 10)

Country	July 2006-June 2007		July 2007-June 2008	
	(Million US\$)	(%)	(Million US\$)	(%)
1 U.S.A	3,441	28.26	3,590	25.45
2 Germany	1,955	16.06	2,175	15.41
3 U.K	1,174	9.64	1,374	9.74
4 France	732	6.01	953	6.75
5 Netherlands	459	3.77	654	4.63
6 Spain	528	4.33	598	4.24
7 Italy	516	4.24	579	4.10
8 Canada	457	3.75	533	3.78
9 Belgium	436	3.58	488	3.46
10 India	289	2.38	358	2.54
Top 10 Total	9,987	82.02	11,302	80.10
World Total	12,178	100.00	14,111	100.00

Source: "Country-wise Export of Commodities by broad description from Bangladesh during the period July-June, 2007-2008," EPB

Outside the top-ten list, Japan (14th place in 2007/8), China (18th place), and Russia (23rd place), and the Middle East countries constitute substantial markets. It is therefore proposed to select priority target countries from the above list and to conduct the following promotional activities.

- 1) Reinforcement of Bangladesh's diplomatic establishments and their functions
 - To appoint full-time staff in charge of export promotion at embassies in the target markets (assigned by the Ministry of Commerce and the EPB).
- 2) Publicity and media exposure
 - To increase publicity by using opportunities such as the anniversary of the friendship treaty with the target country and cultural exchange.
- 3) Intensification of top sales activity
 - To increase visits by key government officials to the target country (President, Prime Minister, and ministers) in conjunction with the activities in 2).
- 4) Holding of product exhibitions and seminars for country's promotion and cultural exchange purposes
 - To hold events that promote the country's culture and other aspects, including product exhibitions and investment promotion seminars, while taking maximum advantage of support from donors of the target country.

3.2.2 Focus on Export Diversification through Promotion of Foreign Direct Investment

(1) Background and rationale

Export diversification means to decrease the share of RMG (ready made garment including knitwear) and increase the number of key export items, while maintaining the current export level of RMG which accounts for over 75% of the country's total export value. To achieve this, the following approaches should be taken.

- 1) To focus on export increase (value basis) for top-ten commodity items (e.g., frozen shrimps, jute products, and leather products; the item in second place holds only 5% share).
- 2) To increase exports of non-traditional items below the top-ten ranking (e.g., light engineering, electrical and electronics products).
- 3) To promote exports by foreign companies (for both traditional and non-traditional items) through the attraction of foreign direct investment.

As for the two sub-sectors selected for the Study, the jute products industry is classified into 1) above, whereas the software industry in 2), although it is close to the top-ten group. Note that promotion of an item that is further away from the top ten takes a longer period of time to become a major export item and decreases cost effectiveness of public support. On the other hand, category 3) tends to be neglected in Bangladesh. Foreign direct investment in the industrial sector brings market opportunity, capital, job opportunity, and technology to the country without the government's effort. It can also help improve competitiveness of industries in category 2) by using them as supplier.

The Bangladesh government does not appear to realize effectiveness of foreign direct investment fully. It can be said that economic takeoff of Southeast Asian countries owes much to direct investment by Japanese manufacturers. In fact, direct investment by Japanese companies moved from Hong Kong and Singapore to Korea and Taiwan, then to Thailand and Malaysia and finally to China, in order to look for countries with lower labor cost. These countries made successful takeoff concurrently with Japanese investment. The Bangladesh government should study and understand the effective linkage between export diversification and foreign investment attraction under the leadership of the BOI.

(2) Proposed approach for promotion of foreign direct investment

During the meeting with the BOI officials, the JICA Study Team received questions on methods to attract foreign direct investment. The following approach is proposed by using a major investment promotion campaign (one year) carried out by the Thai BOI for Japanese companies as an example.

- 1) Target: Should be focused on only one country
- 2) Campaign period: One year
- 3) Budget: US\$ 3 – 5 million over one year
- 4) Activities: The following activities will be carried out by hiring foreign and local consultants.

- Development of an investment promotion kit

Including legislation and incentive programs for foreign investment, application and registration procedures, provision of industrial estates/EPZs, infrastructure, and collection and compilation of relevant cost data.

- Media-mix approach

A full-page advertisement will be made on leading newspapers in the target country, together with TV spot advertisements, production of a documentary program, and arrangement for media interview with key officials. These activities include sales promotion of Bangladesh itself, as discussed in 3.3.1. Then, an investment promotion advertisement will be put on newsletters of banks, trading companies, chambers of commerce and industry, which are closely linked to potential investors in the target country. Also, investment promotion seminars are held in selected regions and cities of the target country in cooperation of the above companies and organizations.

- Focused campaign approach

This type of investment attraction focuses on each of potential investors of the target country. Based on company databases (list of seminar participants, list of bank customers, and directories), questionnaire surveys are conducted. Companies that are interested in investment to Bangladesh are compiled into a database and the promotion kit is sent to them. Investment promotion tours are planned and promoted by telephone and corporate visit.

- Organization and implementation of the investment promotion tour

As the final part of the focused campaign, the investment promotion tours are organized. The tour visits industrial estates (EPZs), factories, and infrastructure facilities. An important factor here is enthusiasm of top government officials. These types of tours have a large effect on foreign investment attraction much more than usually expected.

3.2.3 Introduction of the Equipment Modernization Finance Scheme for Export-oriented Industries

When Bangladesh became independent in 1971, it nationalized major companies, which were privatized again (sold to private investors) ten years later. During the ten-year period of nationalization, equipment renewal was insufficient. As privatized jute mills were required to assume debts made by state enterprises, they could not have funds to modernize equipment and machinery. As a result, their production equipment is fairly aged. However, there is the shortage of fund supply in comparison to large potential demand. It is easily presumed that other sub-sectors also have large demand for long-term credit facilities to modernize equipment and machinery.

Although the government provides support in the area of tax incentive and subsidies for export promotion, it does not have any credit facilities for export promotion. It is proposed to introduce the credit facility “export sector diversification program” (proposed in 5.3 as Program 2-3 for the jute products industry) for all industries. As the program is mostly the same as Program 2-3, its key points are presented as follows.

- Eligible borrower: Companies in all industrial sectors, which intend to make capital investment for export expansion
- Use of loan: Purchase of machinery and equipment required for production and its spare parts, as well as additional working capital incurred by such capital investment
- Export requirement: 60% or more of products produced by said investment shall be exported (value basis).
- Repayment condition: Long-term loan (5-8 years including the grace period of around 2 years)
- Interest rate: Below the prevailing market rate

3.2.4 Dissemination of Basic Production Management Technology

The major comparative advantage in terms of export competitiveness, commonly seen among all industrial sectors in Bangladesh, is high quality and low cost workforce. On the other hand, the major disadvantage is the lack of efficiency in production. The lack of

efficiency means not only hardware aspects, such as insufficient infrastructure and aging production equipment, but also software aspects including government service and finance. Among various problems, the JICA Study Team has found “production management technology” to be the most crucial factor that generally lacks in the entire industrial sector. The lack of this “software technology” became apparent in the course of the Pilot Project for the jute products industry, which provided opportunity to observe and analyze the actual production lines.

During the Pilot Project, the JICA Study Team visited the four model jute mills, four times each, to provide field advice and guidance as a KAIZEN program. As a result, production at these factories increased by more than 10% on average. The results were achieved by applying production management techniques. Not much cost was incurred. This software technology can be applied to all export-oriented industries and can improve productivity significantly. It should therefore be disseminated to other industries on the basis of long-term plans (5 – 10 years). Specifically, it is proposed to disseminate the production management technology to the whole country under the scheme illustrated in Figure 3.2-1, which is based on Strategies 3 and 4 for the action program for the jute products industry, as presented in 5.3. See Programs 3-1, 3-2, 4-1 and 4-2 in 5.3 for detailed steps of the improvement scheme and the curriculum. Note that, as seen from the diagram, the training of production management consultants (PMCs) is given of priority.

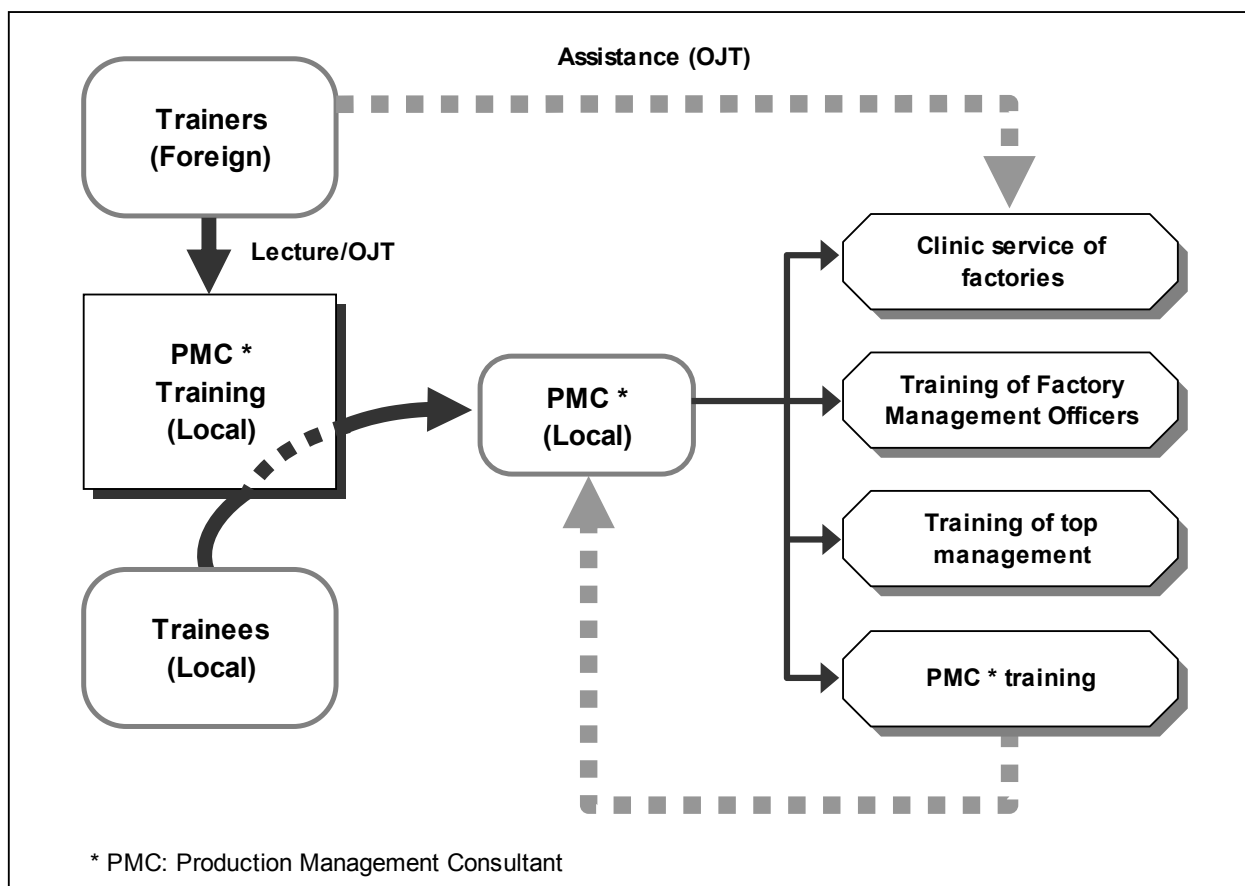


Figure 3.2-1 Schematic Diagram of Production Management Improvement

3.2.5 Special Recommendations

In addition to the above proposals, recommendations are made in the following three areas that are considered to be critical in successful export promotion, although they are generally outside the scope of the Study. They are based on and reflect the Study Team's past experience.

(1) Improvement of electricity supply

Power outage and unstable quality of electricity supply should be recognized and improved as the most urgent issue for Bangladesh's industrial sector. While the issue is not entirely neglected, the government should give the highest priority by devoting its resources as far as possible. Power outage creates immeasurable damage to the industrial sector. The Study Team's experience in the Pilot Project suggests that the export industry's production cost can be reduced by around 20% if stable electricity supply is ensured.

(2) Improvement of packaging

Improper export packaging is said to cause significant loss (estimated at 30%) to fresh vegetables exported (air transported) from the country. This presumably happens in distribution of other products, including low processed primary products and industrial products. Also, packaging of processed food including confections does not reach export grades. As perceived by importing countries, packaging severely affects sanitary and safety of export products and the country's packaging technology including design should be improved significantly. For instance, packaging technology in Thailand has achieved considerable improvement through the One Tambon (Village) One Product (OTOP) program. It may be used as a model case for the Bangladesh industry.

(3) Promotion of direct air transport service with target countries

Many countries have experienced that the lack of direct air transport service is a major obstacle to export promotion, even if promotional efforts are made in the target country. Export promotion can be expected when there is the smooth movement of goods and people between exporting and importing countries. In particular, direct service should be established between Bangladesh and the target country for investment promotion. The government needs to contact airline companies and other relevant organizations in order to collect necessary information and initiate negotiations.

Chapter 4 Selection of Promising Sub-sectors and Pilot Project

Chapter 4 Selection of Promising Sub-sectors and Pilot Project

In this chapter, Section 4.1 describes the method by which the current Study selected the two promising sub-sectors that were targeted in the Study, out of the candidate six sub-sectors, as well as the result of the selection process. Section 4.2 presents planning policy and basic design of the Pilot Projects that were conducted for the selected two promising sub-sectors, as well as results and lessons obtained by implementing them. Figure 4.1-1 below shows a workflow of the Study which is reported in the chapters 4, 5 and 6.

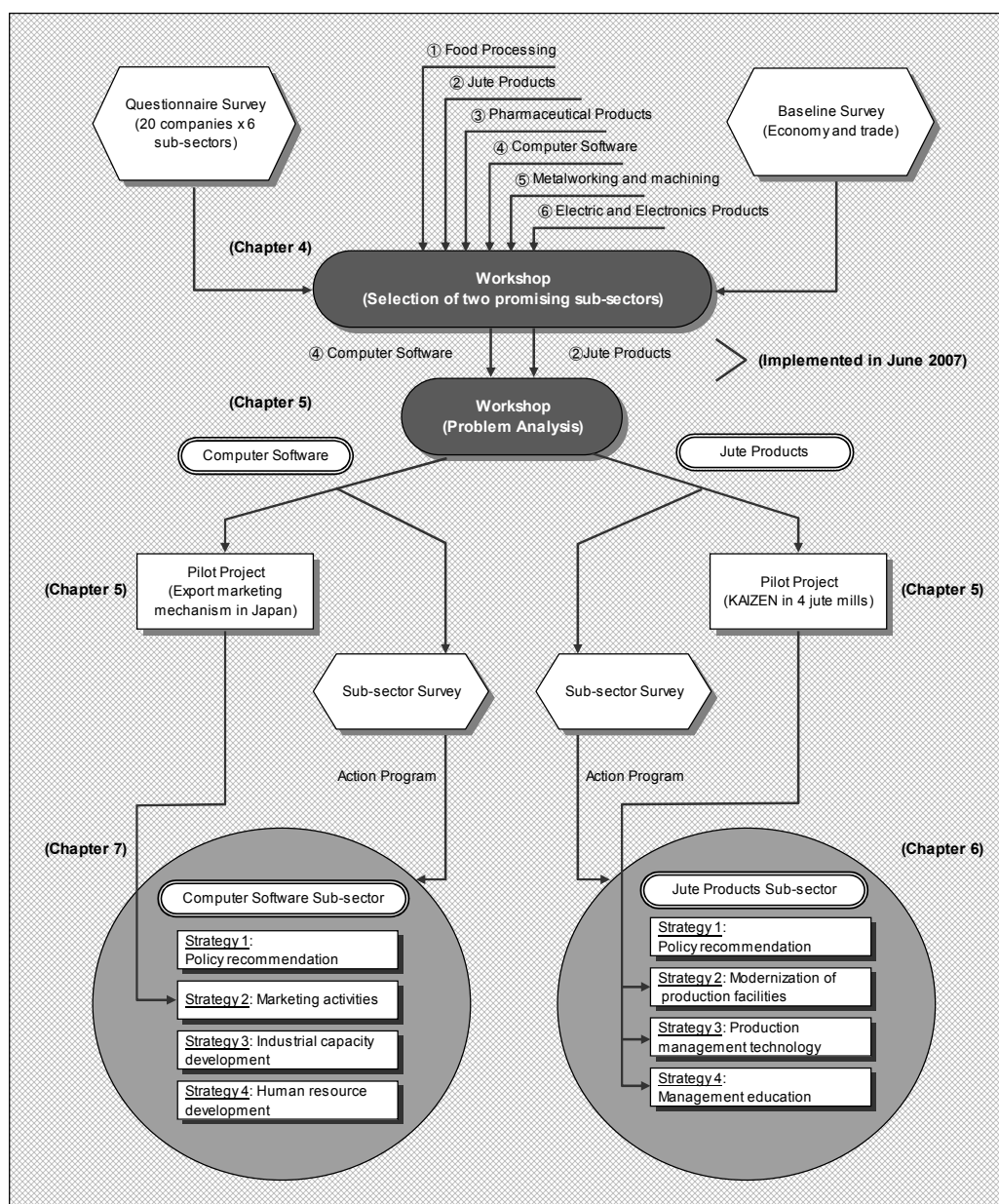


Figure 4.1-1 Methodology and Work Flow of Study

4.1 Selection of two Promising Sub-sectors

Two promising sub-sectors were selected from the following six candidates as the target groups of the Study. For each selected sub-sector, a Pilot Project was designed and implemented, and an action program was formulated as proposals for export diversification.

- 1) Food processing
- 2) Jute products
- 3) Pharmaceutical products
- 4) Computer software
- 5) Metalworking and machining
- 6) Electrical and electronics products

4.1.1 Method of Selection

To select the two promising sub-sectors from the six candidates, the following four criteria were used for measuring priority. Each criterion was scored on a four-point scale, from 0 to 1, 2 and 3 and therefore a full mark is to be 12 points. Top two sub-sectors in score were selected as promising sub-sectors for the Study.

(1) Level of international competitiveness (Competitiveness)

Trade Specialization Coefficient (TSC) was computed for six candidates by the following formula using data of United Nations Commodity Trade Statistics Database:

$$TSC = \frac{\text{Export} - \text{Import}}{\text{Export} + \text{Import}}$$

As TSC value results in between -1 (least competitive) and +1 (most competitive), TSC was converted to the four-point scale score; “1” in TSC is equivalent to 3 points and “-1” to zero point.

(2) Effective export market size (Potential market)

To measure a possible export market size for the sub-sector in Bangladesh, the top three export destination countries of each sub-sector for Bangladesh were first selected from trade statistics. Secondly the import value of the three countries, namely import from Bangladesh plus other countries, was summed up. It is called the “Effective Export Market Size (EMS)” for the sub-sector in this Study.

Then the EMS value was converted, giving the full mark of the point 3 to such sub-sector that has the largest EMS value among six candidates and the point 1 to such sub-sector that has the smallest EMS. Sub-sectors between the largest and the lowest were scored proportionally in between.

(3) Surrounding conditions for growth (Growth potential)

The growth potential of six candidate sub-sectors was measured by two methods.

1) Evaluation at the workshop

A workshop for selection of the two sub-sectors was held on June 3, 2007 at a conference room of EPB with a total of 40 participants, including EPB staff, ODA Task Force of Japan (Embassy, JICA, JBIC (now merged with JICA), and JETRO), the members of the JICA Study Team and some related Bangladeshis. The participants were grouped into six groups for scoring of criteria of (3) and (4). The following factors were evaluated for scoring of item (3):

- a) Sufficient availability and ease of purchasing raw materials of high quality (raw material)
- b) Sufficient stock of skilled workforce in the sub-sector, together with the sub-sector's popularity for workers (labor force)
- c) Availability of established export channels and efficient distribution (marketing)
- d) Presence of R&D organizations and universities relating to the sub-sector (product development capability)
- e) Extent of new investment in the sub-sector (increasing investment)

Point 3: Surrounding conditions are very good for growth

Point 2: Surrounding conditions are fairly good for growth

Point 1: Surrounding conditions are unfavorable for growth

Point 0: No possibility for growth

2) Scoring by the questionnaire survey

The JICA Study Team summarized results of a questionnaire survey made to 20 companies each for six candidate sub-sectors. These 20 companies made a self-evaluation, on a four-point scale, from 0 to 1, 2 and 3, on surrounding conditions for growth (Growth potential) of the sub-sector to which the companies belong.

(4) Possibility to eliminate constraints against export expansion (Constraints)

This evaluation factor was designed to identify a level of constraints against export growth in each sub-sector. If no constraint is seen for future growth of the sub-sector, 3 points are given. Contrarily, if constraints are too difficult to be solved, 0 point is to be given. Two methods were taken for scoring the factor in the same way as done for the item (3) above, namely evaluation at the workshop and scoring by the questionnaire survey.

4.1.2 Result of Selection

Results of scoring are shown in the Table 4.1-1.

Table 4.1-1 Priority Ranking of Six Sub-sectors by Score

Sub-sector	Workshop	Questionnaire
	Score (Rank)	Score (Rank)
1) Jute products	8.05 (1)	7.66 (2)
2) Computer software	8.01 (2)	7.90 (1)
3) Food processing	4.92 (3)	5.59 (4)
4) Electric and Electronic products	4.87 (4)	6.43 (3)
5) Pharmaceutical products	4.63 (5)	5.58 (5)
6) Light engineering industry	4.17 (6)	5.23 (6)

Source: The JICA Study Team

The scoring by the two channels gave jute products and computer software the first and the second places respectively with a great margin to the third place and below. With this fact, the both parties, the JICA Study Team and the Ministry of Commerce, agreed to select the jute products and computer software as two priority sub-sectors for the present Study. Implementation of the Pilot Projects and the development of the comprehensive action program were to be carried out for the selected two sub-sectors.

4.2 Pilot Project**4.2.1 Pilot Project for the Jute Products Sub-sector****4.2.1.1 Conceptual Framework of the Pilot Project**

Conceptual design of the Pilot Project for jute products sub-sector was made as follows.

Name of Project: Production Processes Improvement (KAIZEN) Project
Target Area: Throughout Bangladesh

Target Group:	Private jute mills in Bangladesh, which have spinning and weaving processes. Four mills are selected as experimental mills.
Implementing Body:	National Productivity Organisation (NPO) (Supporting Agencies) JICA Study Team and EPB
Overall Goal:	Export of jute products of Bangladesh will increase in terms of value and volume.
Project Purpose:	Four experimental mills will strengthen international competitiveness by improving productivity and quality, and method of KAIZEN will come into wide use in jute mills in Bangladesh

Output

1. A KAIZEN team is organized in a mill and commences collection of performance data of the mill.
2. Method of the performance data collection is reviewed and revised for continuation.
3. Subjects and method of KAIZEN are scrutinized upon the collected data and KAIZEN starts.
4. KAIZEN activities are continued with periodical review and necessary revisions.
5. The results and effects of KAIZEN are summarized for released to public as good practices.

Activities (Those activities are done in each experimental mill)

- 1-1 Organize a KAIZEN team in a mill.
- 1-2 Structure a KAIZEN system among the management of the mill, the JICA Study Team and the KAIZEN team.
- 1-3 Make stakeholders and all employees of the mill aware of the KAIZEN movement.
- 1-4 The JICA Study Team teaches the KAIZEN team activities of KAIZEN.
- 1-5 The KAIZEN team begins collection of performance data of the mill.

- 2-1 The JICA Study Team reviews the midway results of the data collection and give necessary revisions to the KAIZEN team.
- 2.2 Preliminarily summarize the performance data and discuss production processes to be improved by KAIZEN activities.
- 2-3 Determine the method of data collection to be done by the KAIZEN team until the next visit of the JICA Study Team to the mill.

- 3-1 Discuss and determine subjects, target figures for improvement and methods of KAIZEN.

3-2 A KAIZEN team implements KAIZEN activities by a guidance of the JICA Study Team.

4-1 Review the effects of KAIZEN and revise methods if the target figures are not achieved.

4-2 Review and revise method of KAIZEN so as to achieve the target figures.

5-1 Compare the performance data Before- and After-KAIZEN and assess the effects of KAIZEN.

5-2 Announce the effects of KAIZEN to all stakeholders and employees of the mill and organize a permanent system to continue KAIZEN.

5-3 Release the effects of KAIZEN to the public at a KAIZEN seminar.

5-4 Publish a report of the KAIZEN practice for the benefit of the jute products industry in Bangladesh.

4.2.1.2 Organization for Project Implementation

(1) Counterpart: National Productivity Organisation (NPO)

(2) Organization for project implementation

1) Team of instructors

Table 4.2-1 KAIZEN Working Group

KAIZEN Technical Support Team	JICA Study Team	Mr. Yasuo TAKEUCHI Sub-leader of the JICA Study Team, Pilot Project leader
		Mr. Yasuo UESUGI Expert in charge of production control technology
		Mr. Naoya NISHIGAKI Expert in charge of management methods / cost management
		Mr. Md. Shahe Alam Translator (Japanese and English/Bengali)
	NPO	(Team-Leader) Mrs. Awlia Khanam, Senior Research Officer
		Mr. MD. Abdul Musabbir, Research Officer
		Mr. MD. Nazrul Islam, Statistical Investigator
KAIZEN team	15-25 officers were assigned in each mill.	

* At least 1 member of NPO staffs accompanies the JICA Study Team at any time.

2) Selected model jute mills

Companies that participated in the Pilot Project (KAIZEN implementation process) were selected from those that attended the workshop on June 24, 2007. At the workshop, the JICA Study Team outlined the Pilot Project and invited attendants to participate in the Project. The Study Team selected, mainly in view of efficient itinerary, four model jute mills out of eight jute mills that had made a formal application.

3) KAIZEN team in jute mills

A KAIZEN team was organized in each mill by assigning members by production process wise. The KAIZEN team consisted of 20 to 25 staff led by a mill manager.

4.2.1.3 Implementation Schedule

Figure 4.2-1 shows a timetable for implementation of the Pilot Project. As shown below, field surveys and activities in Japan were carried out alternately. During the Pilot Project, a total of four field surveys were conducted. Activity schedule for each field survey is outlined as follows.

- (1) The 3rd field survey ----- Round (1)
(September 21, 2007 ~ November 10, 2007 <51 days>)
- (2) The 4th field survey ----- Round (2)
(January 11, 2008 ~ February 9, 2008 <30 days>)
- (3) The 5th field survey ----- Round (3)
(May 1, 2008 ~ the end of May 2008 <30 days>)
- (4) 6th field survey ----- Round (4)
(August 1, 2008 ~ August 30, 2008 <30 days>)

Step of Study	Year	FY 2007						FY 2008							
	Phase	Phase 2													
	Month	9	10	11	12	1	2	3	4	5	6	7	8	9	10
1. 3rd field survey			1												
2. 4th field survey						2									
3. 5th field survey										3					
4. 6th field survey													4		

Figure 4.2-1 Work Schedule for Pilot Project in Jute Products Sub-sector

4.2.1.4 Outcome, Recommendations and Lessons

(1) Outcome

The Input and Activities of the Pilot Project were made without any change from the original plan. As a result, the Output was smoothly produced, and the Project Purpose (outcome of the project) – to improve productivity of the Bangladesh jute products industry – was successfully achieved so far as the model mills were concerned.

Table 4.2-2 shows results of the KAIZEN activities in quantitative terms. All the four model mills achieved the target figures that they had set on their own.

**Table 4.2-2 Summary of Improvement in Productivities of Model Mills (%)
(From January 2008 to July 2008)**

Mill	Spinning		Weaving	
	Decrease in rate of thread breakage	Production increase	Decrease in machine shutdown rate	Production increase
A	38.8	18.4	27.7	13.0
B	24.2	13.6	11.1	15.1
C	53.8	6.2	19.8	9.8
D	65.9	5.6	35.5	15.7
Average	45.7	11.0	23.5	13.4

In the average figures, the spinning section of the model jute mills improved their production by 11% in terms of quantity mainly because of spinning stoppage reduction by 45.7%. The weaving section also increased their production by 13.4% in quantity mainly because of weaving machine stoppage reduction by 23.5%.

(2) Recommendations

1) Systematic implementation of KAIZEN activity in the entire jute industry

In Bangladesh, there are 18 jute mills operated under the state enterprise, BJMC, and 80 jute manufacturers that belong to BJMA (trade association), all of which have both spinning and weaving processes. In addition, 55 companies are registered with BJSA, trade association of jute product manufacturers that operate the spinning process only. These organizations are expected to lead organizational efforts to initiate KAIZEN activity and disseminate it throughout the country. Preferably, the efforts should be taken under agreement by the three organizations.

2) Promotion of KAIZEN activity and recruitment of beneficiary companies

It is recommended to promote KAIZEN activity to jute companies widely and recruit companies that are interested in implementing it, by advertising it on publications of the abovementioned organizations and by holding seminars similar to the wrap-up seminar of the Pilot Project. This promotional campaign should be led by the NPO by tapping experience from the Pilot Project and using the KAIZEN Manual as far as possible.

3) Establishment of the KAIZEN activity support system and resources

It has been formally decided that KAIZEN activity initiated in the Pilot Project will continue to be promoted by the NPO, which has been established for industry's productivity improvement and is thus qualified to assume such role. One major obstacle as foreseen is the difficulty in securing the operating budget at the MOI. Another problem is the shortage of NPO staff members who have gained experience in the Pilot Project (only three did in the form of OJT). The recruitment of additional KAIZEN advisers from other technical support organizations should be considered.

It is desirable to invite two or three experts in KAIZEN guidance and advisory service from Japan to conduct training for advisers (lecture and OJT). Formal request for Japanese organizations may be considered after the above (1) has been achieved.

4) Need for cost sharing by beneficiary companies relating to implementation of KAIZEN activity

As mentioned earlier, the NPO has agreed to disseminate the KAIZEN techniques developed under the Pilot Project to jute mills throughout the country. However, it is difficult for the NPO to secure the MOI budget to cover necessary costs. In the Pilot Project, the JICA bore costs relating to NPO staff members, including daily allowance, transportation, accommodation, and meals. In the future, these costs should be borne by companies that benefit from KAIZEN activity. Thus, the recruitment of beneficiary companies should be made by announcing the need for cost sharing.

(3) Lessons

1) The management's commitment as key success factor

In the Pilot Project, major activities were conducted at each mill under leadership of the mill manager and workers, who organized a KAIZEN team. In practice, however, many decisions relating to the project implementation and KAIZEN activity must be made by the management at the head office. For instance, the management's approval was required to dispose of unused articles in the 3S activity. This means, if the management had not realized the need for project implementation, many activities would not have been put into practice.

In Bangladesh, companies and other organizations often require the management's approval on many day-to-day business decisions. Under this circumstance, the management's interest and commitment are essential for the project's success. To do so, it is important to let the management understand tangible benefits expected from the project.

2) Importance of motivation to drive employees' awareness and attitude

The Pilot Project has revealed that KAIZEN activity helps drive employees' awareness and attitude. At a model mill, the management promised employees to distribute profits to be earned from the proposed KAIZEN activity. Thus, KAIZEN activity can cause the change in mindset of both management and workers. The effect of KAIZEN activity depends much on awareness and attitude of workers who are engaged in it. Also, it was a pleasant surprise to find that many workers at the model mills were committed to KAIZEN activity, as opposed to the impression obtained during the field tour prior to the start of the activity.

3) Importance of quantitative analysis of problems and the sharing of the results

Under the Pilot Project, the KAIZEN team was able to collect relevant data, identify problems in quantitative terms, and share the results among team members. In the past, employees had presumably been aware of problems intuitively. On the other hand, the Pilot Project created a new experience where they were able to visualize problems by analyzing and sharing them on a quantitative basis. A clear understanding of a problem led to a clear solution. This indicates that quantitative analysis of problems and the sharing of the results are very important for companies and their employees to understand modern production management techniques.

4.2.2 Pilot Project for the Computer Software Sub-sector

4.2.2.1 Conceptual Framework of Pilot Project

Conceptual design of the Pilot Project for computer software sub-sector was made as follows.

Name of Project:	The Project for Establishing the Institutional Mechanism for Export Marketing of Computer Software Industry in Bangladesh (Sample Market: Japan)
Target Area:	Bangladesh and Japan
Target Group:	Computer Software Companies in Bangladesh
Implementing Agency:	BASIS (Especially the International Market Development Standing Committee) (Supporting Agencies) JICA Study Team and EPB
Overall Goal:	Computer Software export from Bangladesh will increase
Project Purpose:	Computer Software Industry in Bangladesh will acquire institutional capabilities that can be applied to many international markets especially non-English speaking markets (It is expected that the Project will promote access to Japanese market as it employs the Japanese market as the sample)

Output

1. Brochures of the companies that intend to exploit international markets will be drawn up.
2. Comprehensive brochure for the Computer Software industry in Bangladesh will be

drawn up.

3. Database of Computer Software companies of Bangladesh will be established (for business reference of Japanese buyers).
4. Market needs of the potential-partner Japanese companies will be comprehended and criteria for partner qualification (of Japanese companies) will be established.
5. Institutional system for the Bridge SE (System Engineer) that intermediates Bangladeshi and Japanese markets will be structured.
6. A seminar for advertisement and popularization of Computer Software industry of Bangladesh will take place in Japan.
7. A system for business matchmaking between Bangladeshi and Japanese companies through intermediation of the Bridge SE will be established.

Activities

- 1-1 Recruit and select Computer Software companies that are interested in exploiting Japanese market.
- 1-2 Draw up brand-new brochures for their own companies with support from the JICA Study Team.
- 1-3 Finalize those brochures both in English and Japanese for export marketing.

- 2-1 Collect data and information of Computer Software industry in Bangladesh.
- 2-2 Draw up the brochure for Computer Software industry in Bangladesh.

- 3-1 Select articles to be presented in the database of Bangladeshi Computer Software Companies where potential buyers can conduct business search.
- 3-2 Create the database through collected data and information as well as by referring to Output 1 and 2.

- 4-1 Conduct a questionnaire survey on Japanese Computer Software companies by which those interested in business with Bangladeshi companies can be extracted (The questionnaire is to be conducted in Japan by the JICA Study Team).
- 4-2 Organize information on the Japanese companies collected by the questionnaire for business reference of Bangladeshi suppliers.

- 5-1 Recruit Japan-based Bangladesh companies (or subsidiaries), Bangladeshi ICT businessmen in Japan in order to constitute the Bridge SE system (by the JICA Study Team).
- 5-2 Establish the Bridge SE system that intermediate business between Bangladesh and Japan.

- 6-1 Identify the seminar venue (in Japan) and select/invite Japanese companies.
- 6-2 Hold the seminar.

- 7-1 Identify needs of both Bangladeshi and Japanese markets and bridge the gap between the identified needs.
- 7-2 Establish the system where information on demand/supply in the both markets can widely be shared.
- 7-3 BASIS establishes the system where it introduces potential business partners to the interested Japanese companies.

4.2.2.2 Project Description

(1) Market structure of demand side

The detailed scheme of the Pilot Project is described below by reference to Figure 4.2-2. The objective of the Pilot Project was to promote software exports of Bangladesh to non-English speaking countries. Japan was selected as a sample of non-English speaking countries. Thus, the right-hand side of the Figure, i.e., “ABROAD,” represents Japan. This constitutes a market where there are end users of computer software as well as suppliers called system integrator (SI) vendors.

(2) Supply side

The supply side involves the Bangladeshi software industry, representing the left-hand (BANGLADESH) side in Figure 4.2-2. In the industry, there are currently more than 400 companies that are formally registered, of which approximately 260 belong to the Bangladesh

(3) Building of the bridging function

In Figure 4.2-2, “Bridge SE” is indicated in the central area by the dark back. Bridge SE was to be located in Japan to promote and receive orders from Japanese companies, outsource them to Bangladeshi companies, and deliver completed software to Japanese customers. One of the problems relating to this contractual relationship is that the Bridge SE needs to communicate, negotiate and contract with Japanese customers (SI vendors) in Japanese, while it has to use English (or Bengali) for outsourcing to and supervision of Bangladeshi software companies. Also, the Bridge SE must have expert knowledge on a broad range of software services. For these reasons, the Pilot Project viewed the building of the bridging function as the most important issue.

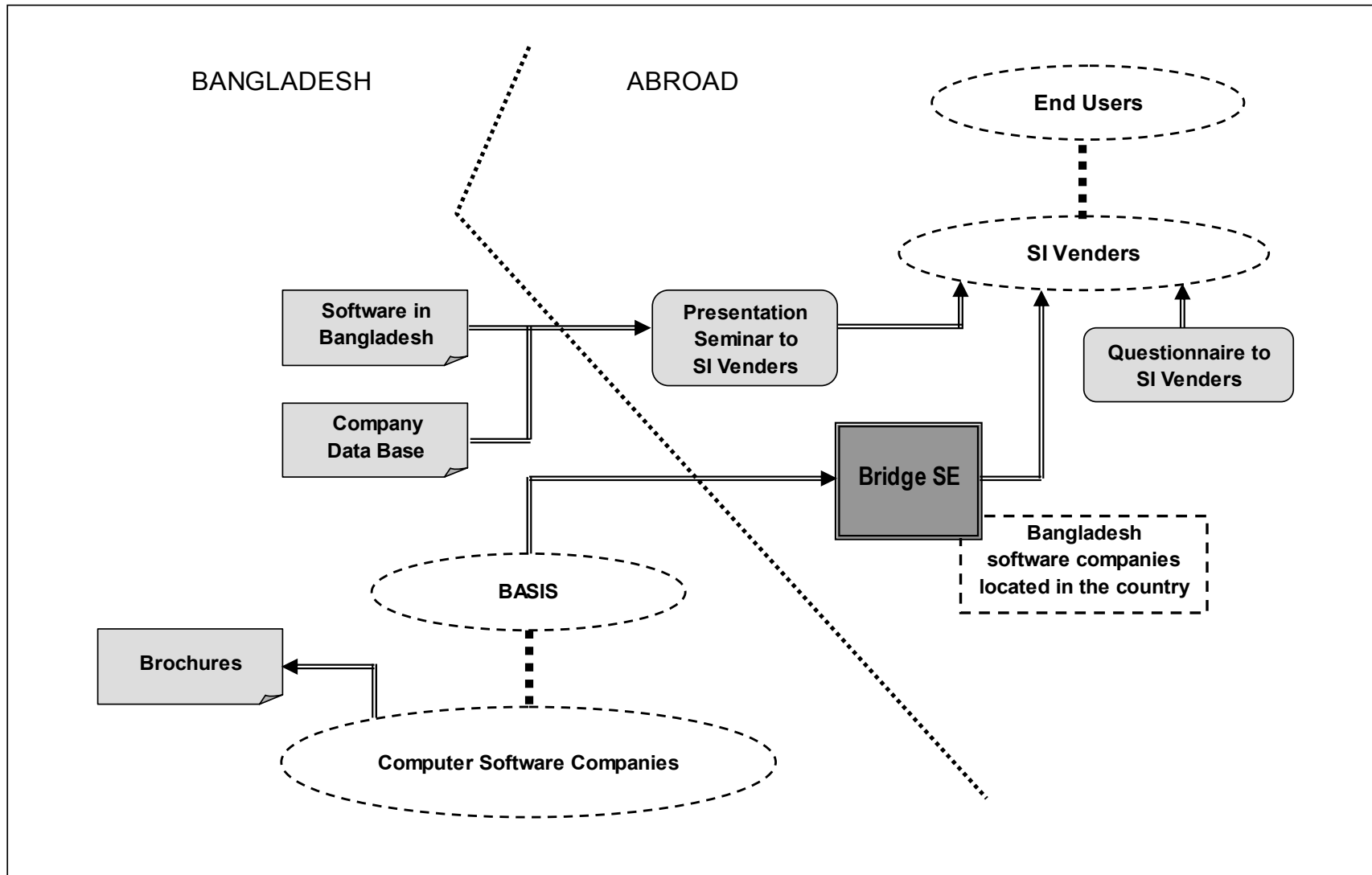


Figure 4.2-2 Schematic Concept of Pilot Project

4.2.2.3 Organization for Project Implementation

- (1) Counterpart: Bangladesh Association of Software and Information Services (BASIS)
- (2) Organization for project implementation

The JICA Study Team assigned two experts to the Pilot Project, and the sub-leader oversaw the project implementation in Bangladesh, whereas the leader conducted coordination activities in Japan.

- (3) Implementation Schedule

Figure 4.2-3 shows a timetable of the Pilot Project. The following describes the implementation schedule of the activities that had been undertaken in the Pilot Project, by time-series of the Study implementation.

- 1) The 3rd field survey (September 17, 2007 - November 3, 2007)
- 2) The 3rd home work
- 3) The 4th field survey (January 18, 2008 - February 9, 2008)
- 4) The 4th home work
- 5) The 5th home work
- 6) The 5th field survey (May 16, 2008 - June 4, 2008)
- 7) The Sixth home work
- 8) The 6th filed survey (August 1, 2008 - August 30, 2008)

Step of Study	Year	FY 2007					FY 2008							
	Phase	Phase 2												
	Month	9	10	11	12	1	2	3	4	5	6	7	8	9
1. 2nd home work		□												
2. 3rd field survey		▨		①										
3. 3rd home work					□									
4. 4th field survey						▨		②						
5. 4th home work							□							
6. 5th home work									□					
7. 5th field survey									▨		③			
8. 6th home work												□		
9. 6th field survey												▨		④
10. 7th home work														□

Figure 4.2-3 Work Schedule for Pilot Project in Computer Software Industry

4.2.2.4 Outcome, Recommendations and Lessons

(1) Outcome

Inputs and Activities of the Pilot Project were made substantially according to the original plan. As a result, Output was smoothly produced and satisfactory results were obtained. In the implementation process that required participation of the counterpart organization and related parties, it took considerable effort to establish the Bridge SE organization and organize the seminar in Tokyo. Overall, the Project did not face any notable problem and was smoothly ended.

After the completion of the Pilot Project, the BIK Japan acquired its first business inquiry in January 2009. The BIK Japan sent this inquiry to the BASIS with some specification translated into English on January 17, 2009. Then, the BASIS forwarded the inquiry to all the 37 member companies that participated in the Pilot Project on the next day (January 18, 2009). According to the BIK Japan, several companies responded to the inquiry despite the fact the due date for the response was the next day of the date when the BASIS distributed the inquiry over to the member companies. The workflow from acquirement of business inquiry to the response to the inquiry exactly followed the plan developed in the Pilot Project. This indicates that the achieved Project Purpose (export marketing mechanism in Japan) actually functions in real business. It should be noted, however, there are some problems in regard to the Pilot Project as discussed below.

(2) Recommendations

1) The Bridge SE resource should be reinforced

Under the Pilot Project, the Bridge SE organization, the BIK Japan, was established by three software/IT companies operated by Bangladeshis residing in Japan. These companies are specialized in software development and related service and are capable of doing business in Bengali, English, and Japanese. However, they are not excelled at marketing activity in Japan. Meanwhile, many Japanese companies prefer to deal with Japanese sales personnel. Thus, it makes sense that the Bridge SE organization has Japanese staffs who conduct sales and marketing activities. In fact, the BIK Japan now commissions most of its sales activities to a Japanese company. Yet, it has still to establish a strong technical and financial base required to pursue its purpose with sustainability. It is therefore desirable to strengthen the BIK Japan from this viewpoint as well as in consideration of possibility to start up a new Bridge SE organization.

- 2) BASIS should assume ownership in maintaining and developing the collaborative arrangement with the Bridge SE organization

During the Pilot Project period, the JICA Study Team served as the bridge between the BASIS and the BIK Japan. Due to the lack of communication between them under their own initiative, however, any formal arrangement has not been made to define their collaborative relationship and its rules. As the BASIS is expected to assume ownership in maintaining and developing the collaborative relationship with the Bridge SE resource in Japan, it needs to establish leadership in driving continuation of the Pilot Project. In particular, it should build consensus amongst the participating companies about the leadership and the collaborative arrangement with the BIK Japan (or a new Bridge SE organization), followed by the future direction of its involvement with the continuation of the Pilot Project.

- 3) The Bangladesh government and industry should provide financial support for the Bridge SE organization

BIK Japan is organized by three software/IT companies operated by Bangladeshis residing in Japan. The three companies are very small and use a Japanese company to carry out sales activity on a fee basis. In fact, they continue to spend money without a definite prospect for winning contracts and may reach financial limitation in due course. To support their activity, therefore, it is imperative to provide financial support from the participating companies in Bangladesh (potential beneficiaries) via the BASIS. Furthermore, it is desirable that the Bangladeshi government bear certain portions of marketing costs via the BASIS.

- 4) Participating companies and BASIS should build up a pool of software engineers with Japanese language ability

The export promotion system established under the Pilot Project had the primary purpose of helping Bangladeshi software/ITES companies with their lack of Japanese language ability. In the course of the Project, however, it became apparent that Japanese companies wanted to ascertain technical and business capabilities of Bangladesh software/ITES companies by working with Bangladesh engineers (with Japanese language ability) in on-site development projects. This means, Bangladesh software engineers are required to have sufficient language ability required for such development tasks in Japan.

To meet such demand, it is desirable to reinforce Japanese language education in Bangladesh in a long-term. In addition to the long-term approach, it is recommended to

promote effective use of Bangladeshi engineers who are currently working in Japan. One idea is that the companies participating in the Project collaboratively retain Bangladeshi engineers working in the companies of Bangladeshis residing in Japan on a lease-agreement basis, and send them to Japanese customers.

(3) Lessons

1) Need for sharing the Project Purpose

The Pilot Project set the Project Purpose that was difficult to quantify or visualize. As a result, while the Project Purpose was achieved from perspective of the planner (JICA Study Team), it was not very clear to the beneficiaries (counterpart and participants). Then, the beneficiaries seemed to view the Overall Goal (increase in sales and exports) as the Project Purpose. Although the JICA Study Team tried to make the Project Purpose clear through the series of workshops and seminars, its effort fell short of enabling the two parties to share the common Purpose with clear understanding. It is therefore important to monitor and evaluate understanding of related parties of the project and its intent, which should be carried out periodically throughout the project period.

2) Importance of leadership within the counterpart organization

Under the Pilot Project, the private trade association served as the counterpart. The counterpart staff members were the presidents of private enterprises and were not able to devote themselves to the Project management. As a result, the Project lacked strong leadership. The leadership within the counterpart organization would have increased its sense of ownership about the Project, while empowering communication with the Bridge SE organization in Japan.

3) Importance of human resource

In the Pilot Project, the proposed Outputs had been steadily produced, which led to the achievement of the Project Purpose. Yet, the achievement had not generated the desired effect (actual contract award), partly because it takes considerable time for the Bangladeshi software/ITES industry to penetrate into the Japanese market, together with generally long lead time for software business between initial contact and contract award. At the same time, quality of human resources in the Bridge SE organization is considered to be an additional factor. While they have sufficient knowledge and skills in software technology and Japanese language, their marketing capability relating to the Japanese market is not satisfactory. As mentioned earlier, the alliance with a Japanese company was established to make up for the situation and extensive marketing activities have already started. In

addition to the establishment of the organization, availability of competent human resources in the organization is essential in the project's success.

4) Importance of a participatory approach

In the implementation process, extensive cooperation was obtained from the government organizations, private organizations, and companies in Japan and Bangladesh. It was beyond the expectation and seems to come from national characteristics of Bangladesh and the congeniality with Japan and its people. Another factor peculiar to the Pilot Project is the effort by the JICA Study Team to take a participatory approach emphasizing free exchange of opinions and collaborative activities based on the common perspective and recognition. Although the Project Purpose may not have been entirely shared, as discussed in (1), the participatory approach was proven to be a critical factor for maximizing the effects of development projects in the country.

Chapter 5 Action Program for Jute Products Industry

Chapter 5 Action Program for Jute Products Industry

This chapter first describes the current state of the jute products industry of Bangladesh and issues faced by it in Section 5.1. Section 5.2 presents a framework of an action program for export diversification of the jute products industry of Bangladesh, followed by Section 5.3 that makes a concrete proposition on the action program.

5.1 Current State of the Jute Products Industry

This section reviews the business environment surrounding jute products industry in Bangladesh and performs SWOT analysis to identify key issues.

5.1.1 History of the Jute Industry in Bangladesh

(First and second phases)

From 1941 to 1971 or up to 30-40 years ago, the jute industry was the country's leading exporter. In 1971/72, when Bangladesh became independent from Pakistan, exports of jute products such as hessian cloth and sacking amounted to around 450,000 tons and US\$ 195 million annually ("State of Affairs of the Jute Industry of Bangladesh," Mr. Kamran T. Rahman, Chairman of BJMA, November 5, 2007). When raw jute was added, the total jute export far exceeded US\$ 250 million. Based on the country's total export in 1972/73, amounting to US\$ 348.42million ("Bangladesh Export Statistics 2004-2005," EPB), the jute industry accounted for more than 70% of total exports.

(Third phase)

The jute industry (nationalized) underwent the glorious period between 1971 and 1983. Jute products accounted for more than 70% of the country's exports. Unlike the garment industry today, the industry used local raw materials only and thus its sales contribute exclusively to national economic development. This was the period when state enterprises made profits.

(Fourth phase)

Between 1983 and 2007, state owned enterprises continued to record deficits and were increasingly privatized. In the process, private companies coexisted with state enterprises and grew steadily. Under the World Bank's Jute Sector Reform Program (JSRP), which was started in 1993, privatization of public mills accelerated.

5.1.2 Positioning of the Bangladesh Jute Industry in the World

According to FAO Statistics, four countries dominated world production of raw jute as shown in Table 5.1-1. India is the largest producer of raw jute and Bangladesh comes second. These two countries represent a combined share of 97.5% of world raw jute production. On the other hand, Bangladesh accounts for 92.1% of the world raw jute export. Major importing countries are Pakistan, India, and China.

Table 5.1-1 World Production and Export of Raw Jute

(Unit: 1,000 t)

Country	Production			Export		
	2004/2005	2005/2006	(%) 2005/2006	2004/2005	2005/2006	(%) 2005/2006
Bangladesh	810.00	990.00	40.5	306.6	440.5	92.2
India	1,193.60	1,392.30	57.0	-	-	-
Myanmar	33.99	43.26	1.8	13.7	17.3	3.6
Nepal	16.89	17.66	0.7	-	-	-
Others	-	-	-	19.8	19.8	4.2
Total	2,054.48	2,443.22	100.0	340.2	477.5	100.0

Source: World Production and Export of Jute Fiber, FAO Statistics 2006

Table 5.1-2 shows world production and export statistics of jute products, which are made from raw jute. As seen in the table, Bangladesh exports approximately 85% of jute products manufactured locally and is the world leading exporter by controlling nearly 60% of the world market. In Table 5.1-1, production volume of jute products is less than one half that of raw jute because raw jute is exported without locally processing more than 45%.

On the other hand, India makes more jute products than its raw jute production because it imports raw jute mainly from Bangladesh. Also, India exports only 13% of jute products made locally. Thus, the country is the world largest producer and consumer of jute products. This is probably attributable to its restriction on use of plastics materials for packaging. In the world statistics of jute product exports, India and Bangladesh hold a combined share of more than 85%.

Table 5.1-2 World Production and Export Statistics of Jute Products

Country	Production (Unit: 1,000t)					Export (Unit: 1,000t)			
	1995	2001/02	2002/03	2003/04	2004/05	2002	2003	2004	2005
Bangladesh	524.4	479.1	515.9	543.1	485.7	400.6	391.9	439.4	440.0
India	1,506.2	1,585.9	1,655.6	1,587.5	1,592.0	189.9	243.8	193.0	208.1
China	535.0	-	-	-	-	9.1	15.9	16.1	16.5
Thailand	101.6	-	-	-	-	7.3	7.9	6.3	6.3
Pakistan	76.9	-	-	-	-	-	-	-	-
Nepal	16.0					10.0	10.0	13.0	13.0
Myanmar	0.0	3.0	3.8	4.3	3.9	-	-	-	-
Rest of the world	248.7	-	-	-	-	60.2	54.9	72.4	70.1
Total	3,008.8	-	-	-	-	676.0	724.4	740.2	758.0
Share of Bangladesh						59.3%	54.1%	59.4%	58.3%

Source: FAO statistics 2006

5.1.3 Production, Export and Distribution

(1) Production capacity and operating rate

As of October 2008, companies in the jute products sector are registered with the two trade associations and a state owned company, which is BJMC. Note that the figures are adjusted for registration with two associations. The total number of employees represented by member companies is also presented.

	<u>Number of companies (2008)</u>	<u>Number of employees (2005/06)</u>
BJMA	55	42,908
BJSA	51	46,508
<u>BJMC</u>	<u>15*</u>	<u>49,732</u>
Total	122	139,131

Note*: BJMC's figure means the number of mills under one company, but it is denoted as the number of companies for convenience

The total installed capacity is said to be around 350,000 spindles and 30,000 looms in Bangladesh. Based on a standard set of one loom and eight spindling machines, generally adopted in the textile industry, the following production capacities are estimated as shown in Table 5.1-3. Also in Table 5.1-3, the average operating rates are sourced from BJMC's data.

Table 5.1-3 Installed Capacity and Operating Rates

	Installed Capacity		Operating Rates
	Looms	Spindles	Average
BJMA	11,112	88,896	28.3%
BJMC	10,734	85,872	62.8%
BJSA	-	127,203	89.2%
Total	21,846	301,971	Average 45.3%

Source: BJMA, BJMC and JICA Study Team

As of October 2008, BJMC has difficulty in financing the cost for procurement of raw materials due to cumulative deficits and its operating rate seems to fall below 50%. As more mills are expected to close down, both of the production capacity and the operating rate need to be adjusted downward.

(2) Production and export records

Table 5.1-4 shows recent trends in production and export of jute products. Products listed in the table are defined as follows and are considered to compose the jute product category. Although jute-based handicrafts and similar products are not included in statistics, their figures are negligible.

- Hessian : Woven cloth with a finer weave pattern than sacking, used for shopping bags and other applications
- Sacking : Jute woven bags for storing grains or coffee beans, etc.
- CBC : Carpet backing cloth
- Carpet : Woven Carpet completed
- Yarn/twine : Jute fibers processed to yarns or twines, not woven

Table 5.1-4 Production and Export in Bangladesh

	Production (Unit: ton)						
	2000~2001	2001~2002	2002~2003	2003~2004	2004~2005	2005~2006	2006~2007
Hessian	82,159	72,554	65,205	59,012	45,181	53,402	40,494
Sacking	182,769	190,802	177,353	178,769	130,873	164,049	152,889
CBC	37,566	33,867	29,701	26,178	17,214	24,543	19,809
Carpet	1,115	786	568	249	95	21	6
Yarn/Twine	198,329	278,273	224,601	319,571	329,890	301,940	360,115
Total	501,938	576,282	497,428	583,779	523,253	543,955	573,313
Raw Jute Consumption	281,100	294,900	278,500	326,900	293,000	304,600	321,100
	Export (Unit: ton)						
Hessian	75,130	83,106	56,656	60,547	44,577	56,259	37,809
Sacking	145,246	131,906	116,056	90,303	91,207	118,176	104,546
CBC	32,297	28,093	26,509	24,630	15,717	21,084	18,592
Carpet	290	106	50	24	1	8	5
Yarn/Twine	173,892	197,775	198,503	235,802	269,063	280,610	318,044
Total	426,855	440,986	397,774	411,306	420,565	476,137	478,996
Raw Jute Consumption	-	-	-	-	-	-	-
Export ratio (%)	85.00	83.80	80.00	70.50	80.40	87.50	83.50

Source: BJSJA

The jute industry in Bangladesh produced 9.9 million tons of raw jute in 2005/6, of which nearly 45% (4.4 million tons) was exported as raw jute mainly to Pakistan, India and China. The remaining 5.5 million tons were used to manufacture jute products in Bangladesh, most of which were low value added, traditional products. As nearly 85% of jute products made in the country were exported, more than 90% of locally produced raw jute was consumed outside the country in form of raw jute and jute products.

Breakdown of jute exports (value basis) by product category is shown below.

Table 5.1-5 Breakdowns of Jute Exports by Product Category

(Unit: Million Taka)

Year	Exports (value basis)		
	Product	Raw Jute	Total
2001/02	131.0	37.5	168.5
2002/03	122.8	51.8	174.6
2003/04	119.9	45.5	165.4
2004/05	148.4	30.7	204.7
2005/06	201.2	97.7	298.9
2006/07	215.6	91.4	307.0
	(US\$ 312 million US)		(US\$ 445million US)

(3) Export destinations

Major countries importing Bangladeshi raw jute and jute products in 2007/08 are listed below in order of value.

Table 5.1-6 Major Export Destinations for Bangladesh Raw Jute and Jute Products

Raw Jute			Jute Goods		
	(US\$ Million)	(%)		(US\$ Million)	(%)
Pakistan	47.2	28.6	Turkey	93.5	23.1
China	45.4	27.5	Iran	43.1	10.6
India	41.5	25.1	India	34.5	8.5
Russia	5.0	3.0	Belgium	28.5	7.0
Ivory coast	3.6	2.2	Syria	19.2	4.7
Brazil	2.8	1.7	Sudan	18.8	4.6
Sub-total	145.5	88.1	USA	14.9	3.7
Total	165.1	100.0	Indonesia	14.2	3.5
			Netherland	12.5	3.1
			Japan	12.3	3.0
			Thailand	10.5	2.6
			Sub-total	302.0	74.5
			Total	405.5	100.0

Source: "Country-wise export of commodities by broad description from Bangladesh during the period July – June, 2007-2008," EPB

The country's jute production/export balance in 2005/06 is estimated as follows.

Table 5.1-7 Jute Production/Export Balance (2005/06)

(Unit: 1,000 tons)

1) Production of raw jute	990.0
2) Export of raw jute	440.5
3) Production of jute products	544.0
4) Export of jute products	476.1
5) Total consumption of raw jute (2) + 3)	984.5
6) Total export (2) + 4)	916.6
7) Export ratio (6)/1)	92.5%

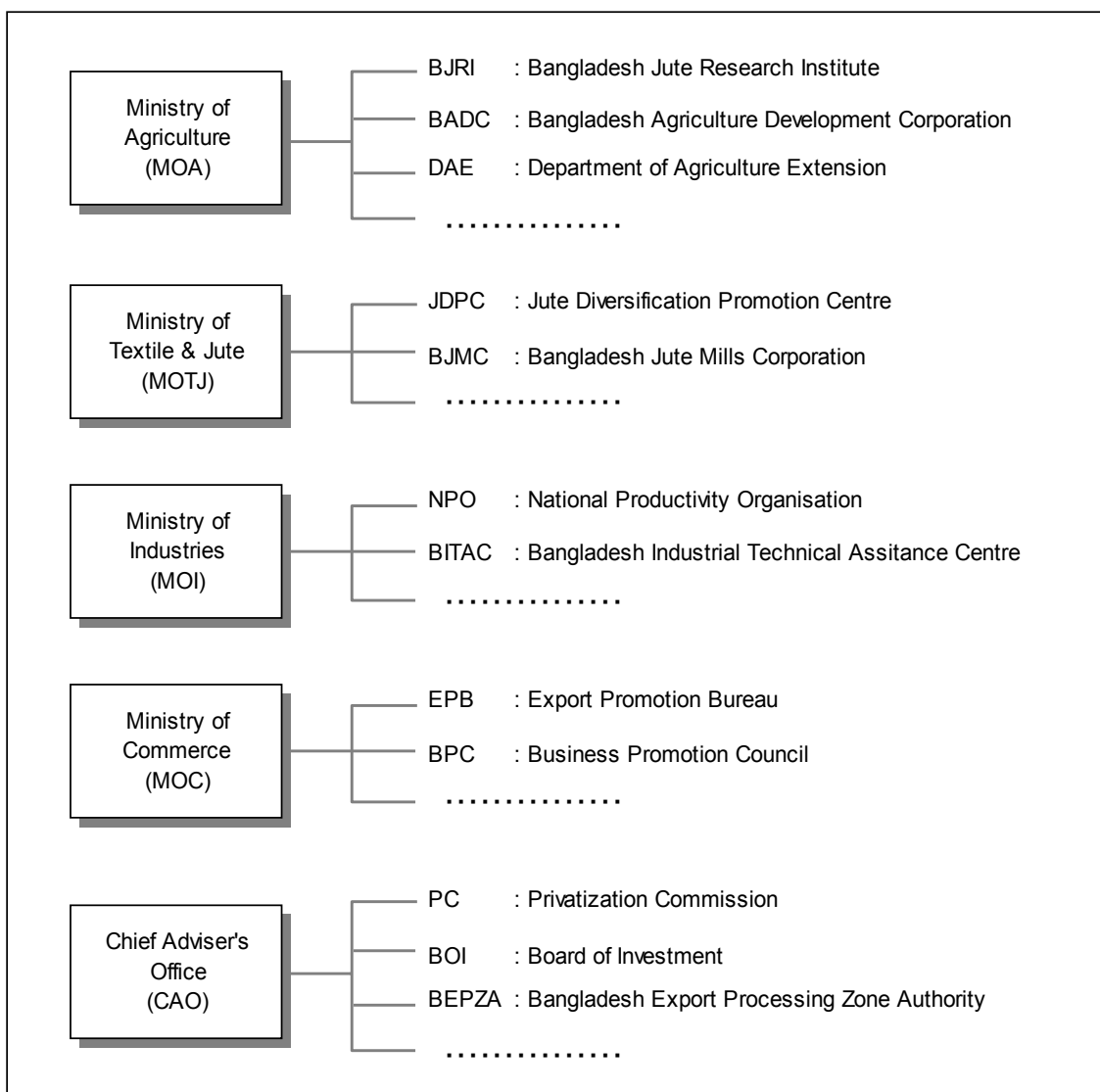
Note: No adjustment is made for inventory volume.

Source: Tables 5.1-1 – 5.1.-6

5.1.4 Organizations Relating to Jute Industry Promotion

(1) Public Organizations

Figure 5.1-1 lists five ministries and their subordinate organizations that are closely associated with promotion of the Bangladesh jute industry. Notably, these ministries primarily perform the planning, budgeting, supervising, and monitoring functions, leaving program implementation and other operational activities to subordinate organizations.



Source: JICA Study Team's surveys

Figure 5.1-1 Ministries and Their Subordinate Organizations that are Closely Associated with Promotion of Jute Industry

(2) Private Organizations

- 1) IJSG (International Jute Study Group) (International organization)
- 2) BJMA (Bangladesh Jute Mills Association)
- 3) BJSA (Bangladesh Jute Spinners Association)
- 4) BJGA (Bangladesh Jute Goods Association)
- 5) BJA (Bangladesh Jute Association)

5.1.5 Conclusion (SWOT Analysis)

To conclude the current state analysis of the jute products industry, SWOT analysis was conducted as follows. Its results are highlighted for each of the four elements (strength, weakness, opportunity and threat) in order of importance.

(1) Strengths

1) Environment suitable for jute cultivation, including climate and farming population

Bangladesh is suitable for jute cultivation because of its high temperature and high humidity climate. Also, it is situated on a fertile delta area formed at the confluence of two rivers, the Ganges originated in the Himalayas and the Brahmaputra originated in Tibet. There is the flood season to allow retting of jute plants. A combination of these favorable conditions makes the country the ideal place for producing high grade jute at low cost. Furthermore, there are 3.4 – 3.6 million farmers engaged in jute production, enough to meet growing demand. Abundant farming population capable of producing jute reliably and at low cost is a notable strength for the industry.

2) Long-term export channels and supply system

Because of the traditional industry, the country has well-developed infrastructure from raw jute production to jute product export, as well as long-standing export markets in India, Europe, the Middle East, and Africa. Supply capacity and the stable customer base, which have been developed through the history of maintaining the position of the world leading jute exporter, are undoubtedly a formidable strength. Production facilities boast expertise and experience that have been gained through long years of operation and are capable of ensuring stable supply.

3) Low-cost and high-quality workforce available to jute product manufacturers

In Bangladesh, there is ample supply of high quality and low-cost workforce, albeit the poor working environment and conditions. This helps industry to achieve the current level of production, regardless of aging production equipment and difficulty in purchase of spare parts. In particular, many mills are established in rural areas where jute farms are concentrated, resulting in stable supply of labor force.

4) The second largest jute producer with surplus supply capacity

Bangladesh is the second largest producer of raw jute (990,000 tons in 2005/06, according to FAO), following India which produces slightly less than 1.4 million tons. Yet,

India makes large amount of imports and has no surplus supply capacity for domestic raw jute. On the other hand, Bangladesh is the major exporting country of raw jute (nearly one half of production). Thus, the amount of raw jute currently exported would be allocated for mass production of JDPs as they are commercialized.

5) Broad government support

BJRI, BADC and DAE provide public support in relation to seeds, and BJRI and JDPC support technological development. For product exports, a cash back program equivalent to 7.5% of the FOB price is available. Also, the industry is eligible to a variety of support programs including export finance. Although the current level of government support has declined from the peak level, it still remains significant in terms of breadth and depth.

(2) Weaknesses

1) Weakness in government leadership in jute industry promotion

The cultivated area for jute tends to decline due to competition from food crops such as rice (In fact, the Bangladeshi government directed the farmers to augment rice production after heavy damage caused by huge cyclone in 2008). On the other hand, demand for traditional jute products is expanding worldwide on the strength of the rise in environmental concern (Although the latest statistical data for the world jute demand is not available, interview survey for jute companies in Bangladesh revealed that they are currently not able to keep up with the incoming business inquiries from overseas). In addition, jute products industry is exploring new application for jute usages. In order to respond effectively to these situations, it is necessary to improve yield per unit area in the stage of jute agriculture, as well as to modernize the aged production facilities and introduce production management technologies in the industrial stage. Besides, the existence of the state-owned company, BJMC, in the industry is one of the causes for the complicated structure of the jute industry of Bangladesh. While there needs be the strong leadership of the government to solve the problems stated above, it is, in practice, difficult to find such leadership from the government agencies including MOTJ.

2) Low productivity of the traditional jute products industry

Low productivity (i.e., low profitability) in the manufacturing of jute products is considered to be a root cause for problems faced by the industry. Low profitability prevents proper maintenance of production equipment, not to mention the purchase of new equipment. Traditional jute product manufacturers are known for low salary and poor working conditions in comparison to other industries. They may go bankrupt from loss of workforce. Yet,

they can improve profitability substantially by improving productivity, as shown in the action program proposal in 5.3. If not, this weakness will continue.

3) Inability of local suppliers to supply spare parts

Even if the jute industry achieves productivity improvement by introducing production management techniques, the extent of improvement will be inherently limited. This is substantiated by experience from the Pilot Project conducted at four private model jute mills, i.e., productivity can be improved by 10% - 15%, but further improvement is not possible unless parts are supplied with high quality and at adequate price. At present, there are a number of local suppliers, but they do not have adequate supply capacity in terms of quality and price. It is important to foster them quickly in order to establish a reliable supplier base.

4) Negative impacts of BJMC on the industry's healthy development

The state enterprise has been operated at a loss in long years. It cannot survive without the government's financial assistance of TK1.5 – 2 billion to make up for the annual deficits. Meanwhile, its management lacks proper principle or policy. It sets low export prices deliberately for the purpose of maintaining a high operating rate, while neglecting profits, and it unduly raises the purchase price for raw jute. These behaviors cause confusion in the jute product market where it competes with private companies. This anomalous condition should be corrected urgently if the Bangladesh jute industry is to achieve healthy growth.

5) Frequent power outage and low quality of electricity

Power outage occurs every day, lasting one to two hours. Quality of electricity supply is low due to significant voltage fluctuation. While power outage adversely affects production quantity, voltage fluctuation has a negative influence on quality of yarns. Improvement of electricity supply is therefore conducive to improvement of productivity and profitability of the jute industry, and should be given of priority. Meanwhile, jute mills may consider the installation of a co-generation system or the switching to a gas-fueled power generation system (although local gas resources face a risk of depletion). In any case, stable supply of electricity is one of the government's mandates.

6) Small demand for jute products in the country

At present, one million tons of raw jute are produced annually and approximately 45% are exported without local processing. The remaining 55% are locally processed to manufacture jute products, but 85% of them are exported. This means that only 10% (raw

jute basis) are consumed locally. It is far smaller than the domestic consumption rate in India. To increase local consumption, the government may consider the enactment of a law requiring 100% jute products to be used for cement bags, sugar packing, and sacks for potatoes and other agricultural products, as done in India. In addition, extensive efforts are required to increase domestic consumption.

(3) Opportunities

1) Increased popularity of jute products due to the environmental friendliness drive

Environmental friendliness becomes a watchword for industry in the context of the global warming issue. Jute absorbs 14 tons of carbon dioxide and releases 10 tons of oxygen as one ton of jute grows. This is a very high absorption rate in comparison to other plants and makes jute an environmentally friendly product. Furthermore, jute products boast a lower CO₂ emission than synthetic fiber products and are renewable and naturally decomposed when they are used for farming purposes, offering an additional advantage in terms of environmental impacts. In consequence, jute products are expected to be increasingly demanded widely in the world.

2) Emergence of mass produced jute products

There is increasing demand for mass produced, higher value added, jute products, including building materials, automotive parts, and farming materials. There are a number of business inquiries and talks that may lead to commercialization of actual products. They can create great opportunity for manufacturers of traditional jute products.

3) Opportunity for raw jute production despite the decrease in the cultivated area

Even if demand for jute products increases, the industry's growth potential will be limited by the decrease in the cultivated area for raw jute, which is happening recently. While it creates concern about the future of the industry, there is opportunity to increase raw jute production significantly on the same cultivated area if BBD HYV seeds are planted by all farmers and appropriate farming techniques are disseminated. In fact, it is feasible to double the yield per ha from present two tons to four tones if five BBD HYV seeds (Tossa varieties) and seven BBD HYV seeds (Desi varieties) developed by BJRI are planted and cultivated according to appropriate conditions. Furthermore, it is conceivable that new varieties with a higher yield will be developed in the near future. If this occurs, raw jute production will not decrease even if the cultivated area for jute is replaced with competing crops such as rice.

4) Opportunity for improvement of profitability for traditional, mass produced products

On the industrial average, production equipment for jute products is operated at slightly over 45% of capacity. The operating rate of BJMA mills is much lower at 28.3%. Reasons for the low rate of operation are attributed to absence of production technologies, aged production facilities, and a lack of spare parts of high quality for the production machines. As a result, jute industry of Bangladesh is observing the case in which the more the jute is processed (from raw jute to yarn and finally to products), the lower the value is added. As processing does not bring in higher added value, the jute companies tend to limit the operation for manufacturing the processed products, which in turn decrease the rate of operation in the jute industry. However, if domestic supply of spare parts increases, and if appropriate production management technologies and modern production facilities are introduced, profitability of jute industry, even from traditional jute products, would largely increase

5) Increased investment in flexible production of high value added products

Investment in SMEs for the purpose of manufacturing and selling handicrafts, household goods, and general merchandize is on the rise. This means the emergence of small manufacturers specialized in flexible production (variety of products in small lot), as differed from mass producers of traditional products. While their presence in the export business (value basis) is very small, further growth will develop them to a major export item because they are high value added products.

(4) Threats

1) Reconsideration of the jute industry's potential by government and society

The jute industry was previously the leading industry representing 70% - 80% of the country's export, similar to the apparel industry at present. It is now on the decline as it has lost share to synthetic fiber products that can be made and sold at low cost. As a result, the jute industry is viewed as a thing of the past by the government, labeled as a labor-intensive, low-profit industry. The industry cannot attract workers. If the negative image of the industry persists in society, its growth opportunity will be taken away.

2) Possible damage caused by mismanagement of the BJMC privatization process

As discussed earlier, BJMC, which produces more than 50% of the total jute product production in the country, has been operated at a loss over long years, while creating undue pressure on private companies in the raw material and end user product markets. Although

privatization of BJMC mills is the irreversible process, it would create substantial loss if all the 15 BJMC mills closed over the short period of time. In that case, the jute industry of Bangladesh would lose, for example, jute export markets that BJMC has developed for long, as well as stable employment opportunities and raw jute market. Jute farmers would lose raw jute market opportunity by half in the same case. It may adversely affect the export market for jute products, the industry's employment, and the raw jute market, which have been subject to improper management by BJMC, together with the MOTJ. However, correction of such mismanagement would create a strong shock to the jute industry if privatization is carried out in incorrect steps.

3) Potential business failure due to continuation of the industry's poor working conditions

Traditional jute product mills pay low wage and have very poor working conditions, e.g., the air is polluted by jute dust particles (visibility of less than 10m) to produce unsanitary conditions. Hard labor in the dark and hot conditions, with low wage, will discourage workers from jute mills. In fact, signs of workers' departure are already seen at some mills.

4) Departure of farmers from jute production

Farms in Bangladesh are capable of triple cropping, but many of them practice crop rotation using jute for soil fertilization. Once the food crisis occurs, however, the government will encourage farms to produce food crops by offering subsidy (this was done under the previous cyclone damages). As farmers are free to choose which crop they grow, they may switch to food crop production if they cannot sell raw jute at competitive prices in comparison to other products. The significant decrease in the number of farmers producing jute could adversely affect the operation of the jute products industry.

5) Development of decomposable synthetic fiber

The synthetic fiber industry is developing fibers and plastics that are flammable and decomposable in soil. If they are commercially developed to provide low-cost, light and moldable products using petrochemical materials, they will erode the environmentally friendly advantage of jute products.

5.2 Development Vision, Purpose and Strategy (Jute Products)

On June 24, 2007, a one-day workshop was held under attendance of 48 persons representing the jute industry and related organizations in Bangladesh. Its aim was to discuss the problems faced by the jute products subsector and to agree on the core problem and its direct

causes. To do so, the participatory problem analysis was performed. It is one type of the PCM (Project Cycle Management) technique, under which participants write down their opinion on a specific topic in a card, and then the opinions are arranged and characterized under agreement by the participants. Figure 5.2-1 shows the results of the problem analysis, which is called a simplified problem tree. Based on the problem tree, a development purpose for the action program was established, followed by a development vision and a general framework for development strategies.

Development vision:

The jute products industry largely contributes to the rise of living standards of the Bangladesh people by export of higher value added products.

Development purpose:

The jute products industry revives as a modernized industry through improvement of productivity.

Strategy 1 Recommendation on policy related issues

Strategy 2 Modernization of production facilities

Strategy 3 Dissemination of production management technology

Strategy 4 Reorientation of the management and mill officers

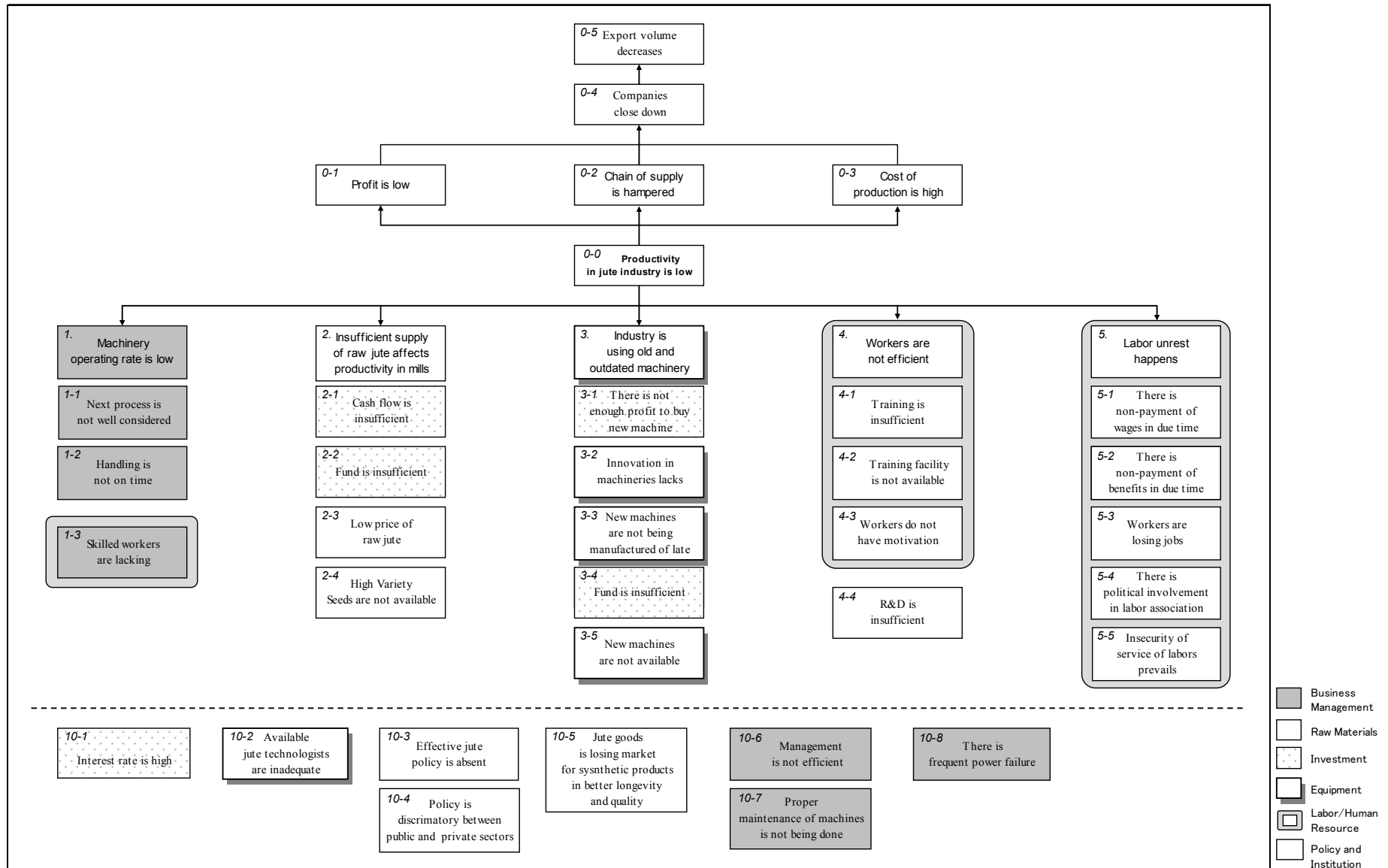


Figure 5.2-1 Problem Tree for Jute Products Sub-sector (Result of Problem Analysis at the Second Workshop on June 24, 2007)

5.3 Action Program Proposals

The aims of strategies, which were set forth in the previous section, are achieved by implementation of a certain numbers of actual activities. The Study names each activity as a “program.” Therefore, a group of strategies are designed to achieve the development purpose, and a group of programs are designed to achieve an aim of a strategy. This structure composes the entire action program in form of a tree. When the tree is inversely pursued, successful implementation of the programs can attain the development purpose via attainment of strategies’ aims and finally the development vision. Note, however, that the action program hereby proposed does not cover all measures to attain the development purpose. There may be considerable alternatives and additions in stage of strategies as well as programs.

5.3.1 Summary and Constitution of Action Program

The Table 5.3-1 shows the entire structure that consists of a development vision, a development purpose, strategies and their programs. The JICA Study Team is proposing nine programs under four strategies, taking into account the following:

- 1) Various problems raised at the workshop for problem analysis in June 2007,
- 2) Questionnaire survey made for 20 companies of the jute products industry,
- 3) Lessons and experiences obtained through implementation of the pilot project,
- 4) Interview surveys to related organizations and documents obtained, and
- 5) Opinions of participants in the workshop of August 2008 on the preliminary presentation of the action program

The Table 5.3-2 shows the summary of the proposed action program, while Figure 5.3-1 illustrates a schematic diagram of the action program. The nine programs are designed to easily implement. Although the number of the proposed programs is not large, the jute products industry will be largely improved by implementation of more than half of the proposed programs.

Table 5.3-1 Action Program on Export Promotion of Jute Products Industry

Development Vision:

The jute products industry largely contributes to raise of living standards of the Bangladeshi people by export of higher value added products.

Development purpose:

The jute products industry revives as a modernized industry through improvement of productivity.

(Strategy 1) Recommendation on policy related issues

Program 1-1 Introduction of unification functions of related organizations in jute industries

Program 1-2 Program for doubling of the acreage yield in jute cultivation

(Strategy 2) Modernization of production facilities

Program 2-1 Guidance for new investment in Jute Diversified Products (JDP)

Program 2-2 Acceleration of transaction of local spare parts for jute mills

Program 2-3 Introduction of new credit facilities for the export sector diversification program

(Strategy 3) Dissemination of production management technology

Program 3-1 Training of consultants for production management technologies

Program 3-2 Implementation of a traveling-clinic-type KAIZEN activities to jute mills

(Strategy 4) Reorientation of the management and mill officers

Program 4-1 Introduction of training system for management officers in jute mills

Program 4-2 Introduction of training system for management and their successors of jute mills

Table 5.3-2 Summary of Program Proposals for the Jute Products Industry

Program name	Target group	Output	Major activities	Executing body
Strategy 1 Recommendation on policy related issues				
Program 1-1 Introduction of unified functions of related organizations in jute industry	Jute industry as general	Focused allocation of government resources for jute industry promotion (disbursed by multiple ministries)	Establishment of the National Jute Commission organized by representatives of the public and private sectors	Initiation by the cabinet, MOTJ (secretariat)
Program 1-2 Program for doubling of the acreage yield in jute cultivation	Approx.3.5 million jute farmers	Doubling of jute yield per unit area by means of dissemination of BBD HYV seeds and adequate farming techniques	Focused allocation of resources based on a specific yield doubling plan	MOA (BJRI/BADC/DAE) Strategy 2 Modernization of production facilities
Strategy 2 Modernization of production facilities				
Program 2-1 Guidance for new investment in Jute Diversified Products (JDP)	Potential investors in the jute industry	Focusing on successful inducement of new investment in relation to JDPs	Strengthening of a formal system to support sharing of new product information by private organizations	MOTJ/JDPJ, BJMA, BJSJA
Program 2-2 Acceleration of transaction of local spare parts for jute mills	Jute product and parts industries	Invigoration of trade between local parts suppliers and jute product manufacturers, or improvement of transparency	Strengthening of communication in relation to parts trade; creation of the competitive market	BJNA, BJSJA, BEIOA
Program 2-3 Introduction of new credit facilities for the export sector diversification program	Companies making capital investment for export expansion	Supply of long-term capital spending fund for product diversification and equipment modernization	Request for financial support by donor organizations, and consideration of an implementation system and assessment of financial demand	MOC/MOF (promotion); BB and PFIs (implementation)
Strategy 3 Dissemination of production management technology				
Program 3-1 Training of consultants for production management technologies	NPO/BATAC staff members/engineers in general	Training of 100 production management experts (trainers) in three years	Implementation of a six-month training course consisting of lecture and practical training	MOTJ, MOI (NPO, BITAC)
Problem 3-2 Implementation of a traveling-clinic-type KAIZEN activities to jute mills	Jute mills wanting to have kaizen-related guidance and advice	Productivity improvement by 10% through kaizen activities under field advice by experts	Diagnosis and advice by one expert for one mill (five visits per week, totaling five months)	MOI (NPO, BITAC)
Strategy 4 Reorientation of the management and mill officers				
Program 4-1 Introduction of training system for management officers in jute mills	Jute mill officers	Teaching of modern production management techniques to mill officers who have not received formal training	Lecture-based training in four areas (where jute mills are concentrated), consisting of three days per week, totaling six weeks	Private organizations such as BJMA and BJSJA
Program 4-2 Introduction of training system for management and their successors of jute mills	Jute mill owners and managers	Creation of opportunity for the management and would-be successors to learn modern management techniques	Lecture-based training in Dacca, consisting of three days per week, totaling six weeks	Private organizations such as BJMA and BJSJA

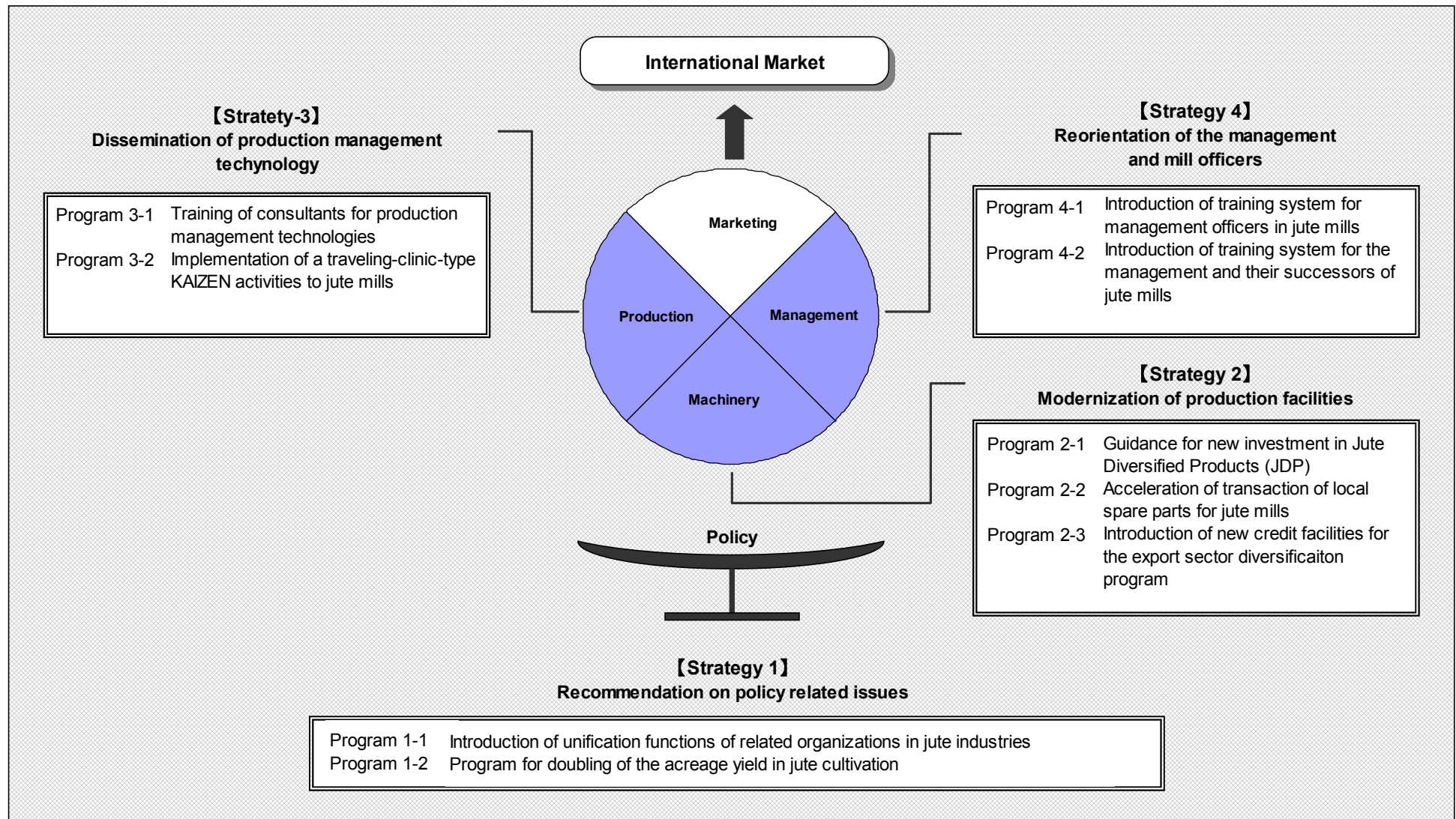


Figure 5.3-1 Schematic Diagram for Action Program (Jute)

5.3.2 Priority Setting for Program Implementation

In establishing implementation schedules for the nine proposed programs, priority is set for the order of implementation on the basis of two factors, i.e., the level of contribution to the accomplishment of the development purpose and the level of program feasibility. The level of contribution is weighed more (twice) than the feasibility, i.e., 100-20 points (Levels 1-4) are assigned to the former, and 50-10 points (Levels 1-4) to the latter.

The two scores are added up, and the total scores for all the programs are classified into three ranks. The highest priority group represents the overall score of 100 or more points, the second priority group more than 50 points and less than 100 points, and the third priority group less than 50 points. The results are summarized in Table 5.3-3.

The highest priority group: Two programs

The second priority group: Four programs

The third priority group: Three programs

5.3.3 Five Year Implementation Plan

Figure 5.3-2 shows five-year implementation schedule of the proposed nine programs. It is assumed that Bangladesh side will start detailed examination of the action program proposals immediately after the submission of this report and the formal preparation work will start in July 2009 when the new fiscal year commences. It also is assumed that all programs can commence their activities at the same time with an exception that Programs 3-2, 4-1 and 4-2 will start later than Program 3-1 by one year because of their sequence in implementation.

Table 5.3-3 Priority Rating for the Proposed Programs

Program name	Level of contribution	Feasibility	Total	Priority
Strategy 1 Recommendation on policy related issues				
Program 1-1 Introduction of unified functions of related organizations in the jute industry	20	10	30	■
Program 1-2 Program for doubling of the acreage yield in jute cultivation	20	30	50	■
Strategy 2 Modernization of production facilities				
Program 2-1 Guidance for new investment in Jute Diversified Products (JDP)	40	50	90	■■■■
Program 2-2 Acceleration of transaction of local spare parts for jute mills	100	50	150	■■■■■■■■
Program 2-3 Introduction of new credit facilities for the export sector diversification program	100	20	120	■■■■■■■■
Strategy 3 Dissemination of production management technology				
Program 3-1 Training of consultants for production management technologies	60	20	80	■■■■
Program 3-2 Implementation of a traveling-clinic-type KAIZEN activities to jute mills	60	30	90	■■■■
Strategy 4 Reorientation of the management and mill officers				
Program 4-1 Introduction of training system for management officers in jute mills	60	20	80	■■■■
Program 4-2 Introduction of training system for management and their successors of jute mills	40	10	50	■

Note: Highest priority group ■■■■■■ (100 points or higher)

Second priority group ■■■■ (50 points - less than 100 points)

Third priority group ■ (Less than 50 points)

Source: JICA Study Team

	1st year (2009July-)	2nd year (2010July-)	3rd year (2011July-)	4th year (2012July-)	5th year (2013July-)	Continu- -ation	Output during 5 years	Important assumption
(Strategy 1) Recommendation on policy related issues								
Program 1-1 Introduction of unification functions of related organizations in jute industries	Consensus	Establishment	Actions as Commission			▷	Establishment of National Jute Commission & its start	Consensus of the cabinet
Program 1-2 Program for doubling of the acreage yield in jute cultivation	Planning	Organization	Actions for doubling of jute yield			▷	Doubling of the acarage yield from 2t/Ha to 4t/Ha	Allocation of the government resources to the program
(Strategy 2) Modernization of production facilities								
Program 2-1 Guidance for new investment in Jute Diversified Products (JDP)	Study preparation	Strengthening		Sound operation		▷	Increase in investment to area of Jute Diversified Products.	Allocation of the government resources to the program
Program 2-2 Acceleration of transaction of local spare parts for jute mills	Planning	Exhibition Open bit	Exhibition Open bit	Exhibition Open bit		▶	Doubling of domestic supply of spare parts: Periodical exhibitions and open bids	Mutual trust between buyers and suppliers
Program 2-3 Introduction of new credit facilities for the export sector diversification program	Decision	Application	Evaluation	Organization-building	Financing to expert industries	▷	Introduction of a long-term credit facility for modernization of machinery	Source of fund (F/A from a development partner)
(Strategy 3) Dissemination of production management technology								
Program 3-1 Training of consultants for production management technologies	Preparation	5 batches training with 20 trainees each (6 month course)				▶	Fostering 100 certified consultants: 5 batches x 20 trainees	Possibility of foreign T/A
Program 3-2 Implementation of a traveling-clinic-type KAIZEN activities to jute mills		Preparation	Guidance for 30 jute mills by 2 pairs of consultants (6 mills/batch)			■	KAIZEN guidance for 30 jute mills: 2 teams x 2 batches x 3 mills/batch	Possibility of foreign T/A: Success of Program 3-1
(Strategy 4) Reorientation of the management and mill officers								
Program 4-1 Introduction of training system for management officers in jute mills		Preparation	Education for 20 persons at 4 regions a year (6 weeks/batch)			■	Training of 240 persons of manager level: 12 batches x 20 trainees	Success of Program 3-1
Program 4-2 Introduction of training system for management and their successors of jute mill		Preparation	Education for 15 persons a year at Dhaka (6 weeks/batch)			■	Training of 90 management of jute mills: 6 batche x 15 trainees	Interest of management of jute mills

T/A: Technical Assistance
 F/A: Financial Assistance

▷ The program will be continued as a roulin work after five years.
 ▶ The program will be repeatedly continued as batches after five years.
 ■ The program is completed within five years, beinb followed by another program.

Figure 5.3-2 The five-year Implementation Plan and Schedule for the Action Program

Chapter 6 Action Program for Software Industry

Chapter 6 Action Program for Software Industry

This chapter first describes the current state of the software industry of Bangladesh and issues faced by it in Section 6.1 and Section 6.2 presents a framework of an action program for export diversification of the software industry of Bangladesh, followed by Section 6.3 that makes a concrete proposition on the action program.

6.1 Current State of the Software Industry

This section reviews the business environment surrounding software industry in Bangladesh and performs SWOT analysis to identify key issues.

6.1.1 Industry Size and Business Environment

(1) Industry size

According to the World Information Technology and Services Alliance (WITSA), software market size in the world (total of domestic sales in all the countries) was estimated at around US\$ 318 billion in 2006. The United States, the world largest software market, accounts for some 43% (about US\$ 136 billion) of the total market in the world, while the Western Europe holds the share of 34% (about US\$ 108 billion) and Japan holds that of 6% (about US\$ 18 billion). Thus, three of the most developed regions of the world carry the combined share of 83% of the software market of the world.

Meanwhile, according to the Bangladesh Association of Software and Information Services (BASIS), the software market size in Bangladesh (domestic sales) was estimated at around US\$ 120 million in 2007. This approximately amounts to 0.038% of the size of software market in the world in 2006. Also, the size of the software market in Bangladesh is smaller than those of other countries having the emerging IT industry, including China (US\$ 11 billion as of 2006), India (US\$8 billion as of 2006), and Viet Nam (US\$ 220 million as of 2005)¹.

¹ Center of the International Cooperation for Computerization. "Trends in Offshore Software Development in Japan"

Table 6.1-1 Comparison of Software Industry Size with Emerging IT Markets

Country	China	India	Vietnam	Bangladesh
Market Size (in US\$ million)	(2006) 11,000	(2006) 8,000	(2005) 220	(2007) 120
The Number of Companies (number)	(2005) 10,000	(2006) 3,300	(2005) 720	(2007) 400
The Number of IT Professionals (number)	(2006) 450,000	(2006) 1,300,000	(2006) 35,000	(2006) 25,000

Source: Center of the International Cooperation for Computerization, BASIS, BCS

At present, over 400 software companies are registered in Bangladesh pursuant to the Company Act. These companies employ around 12,000 persons in total. These companies are dominated by small and medium-sized enterprises in terms of employment. For instance, the number of employees in the 38 companies that have participated in the Pilot Project under the present Study ranges between 5 and 215, with the average being around 50. According to the Bangladesh Computer Samity (BCS), there were approximately 25,200 IT professionals in the country (as of 2006), including those working for non-IT companies. Nevertheless, these figures are smaller than those in Viet Nam that also has the emerging IT industry but smaller population than Bangladesh does (refer to Table 6.1-1).

(2) Business environment

1) Infrastructure

According to a questionnaire survey of 20 software companies conducted by the JICA Study Team (via a local consultant) in May 2007, as many as 11 companies cited unstable electricity supply as the largest obstacle to their business growth. Software companies, by nature of business, require uninterrupted and quality supply of electricity. In fact, approximately 85% of the companies that participated in the Pilot Project own or share an in-house power generator (or co-generator) and 64% have an uninterrupted power supply system (UPS) mostly for servers.

As for telecommunication networks, Bangladesh has been connected to a marine cable network (SEA-ME-WE-4) since 2006, which provides 24Gb bandwidth for internet connectivity. Major cities in the country are connected to the network via high speed optic fiber cables. The actual access speed rate for internet achieved by the 38 companies that participated in the Pilot Project, according to the questionnaire survey, varies widely between around 21kbps and 3Mb. The survey results indicate the average rate of about 384kbps, with the most frequent response being 128kbps (9 companies), followed by 256kbps (4 companies) and 512kbps (4 companies).

Note that the Bangladesh Computer Council (BCC) developed a building complex accommodating software companies-called “ICT Incubator”-in 2002. Tenants (approximately 50) are provided with uninterrupted electricity supply and free access to the high speed internet.

2) Finance

According to interview surveys with the Bangladesh Bank (the central bank of Bangladesh) and commercial banks, which were carried out by the JICA Study Team, non-collateral loans are not available in Bangladesh except the case where special policy support is extended. Collaterals are generally restricted to immovable assets, while government bonds and the certificate of order from an international organization or a multinational corporation is accepted in exceptional cases. As many software companies do not possess a highly valued fixed property, they have difficulty in gaining access to commercial loan. The results of the questionnaire survey covering BASIS member companies (conducted by the JICA Study Team in July 2008) indicate that only about 30% of 57 companies have obtained commercial loans thitherto.

In Bangladesh, there are special financial schemes for software companies. One of them is the Export Promotion Fund (EPF) managed by the EPB. The EPF offers a loan scheme to provide export-related working capital for software and handicraft companies, as described in 6.1.2 (2) “Export Capacity and Competitiveness.” On the other hand, the Bangladesh Bank operates an equity finance scheme, called the Equity and Entrepreneurship Fund (EEF), which supplies public capital to companies that lack fundraising capability in the form of equity contribution. Under the scheme, the Bangladesh Bank (representing the government) makes equity contribution up to 49% of the total share. Beneficiary companies are required to buy back the government’s equity interest within eight years after the first contribution made by the Bangladesh Bank.

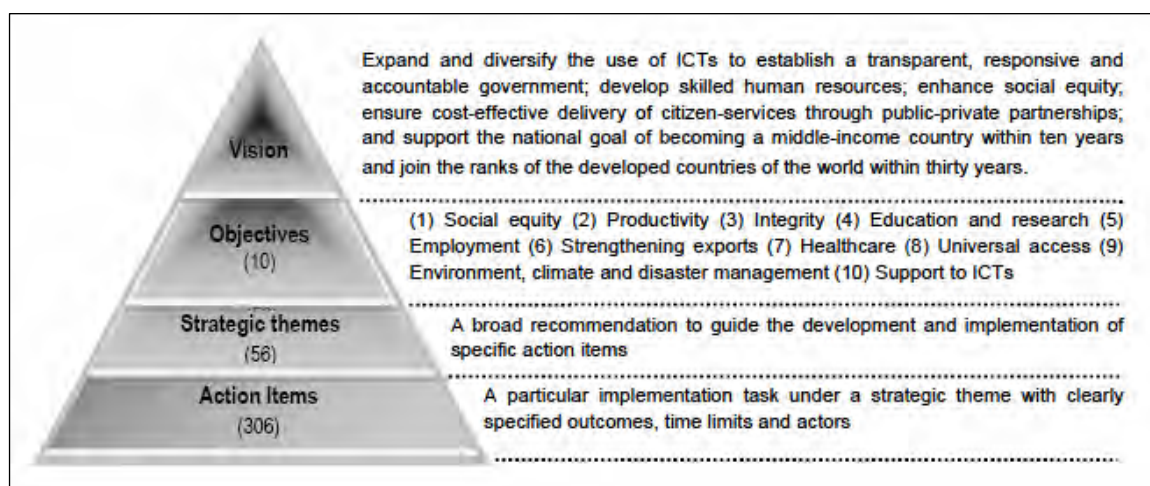
As of the end of October 2008, the Infrastructure Development Company Limited (IDCOL), a nonbank financial institution under the Ministry of Finance, decided to establish a non-collateral loan facility to provide working capital for IT companies, entitled “Shonchalok.” The Ministry and the IDCOL will contribute TK. 250 million each to establish the fund, from which TK. 50 million will be loaned to five financial institutions that provide cooperation in the initial stage, at an interest rate of 7% per annum. These financial institutions will provide working capital loans for member companies of IT industry associations: TK. 10 million at maximum per order; upon presentation of a certificate of

order; and the maximum interest rate of 11.5% per annum. Note that the financial institutions will solely assume default risk.

(3) Related policies and institutions

1) Policies

Bangladesh has the National ICT Policy. It was first formulated in 2002 as the National ICT Policy 2002 and is still in effect as of November 1, 2008. Meanwhile, the National ICT Policy Review Committee started the policy amendment process in May 2008 and submitted the final draft for the new National ICT Policy to the Ministry of Science and Information and Communication Technology (MOSICT) in September 2008. The final draft concludes that the current National ICT Policy 2002 has not been effectively implemented. While the Policy contains 103 policy directive items in 16 fields, only 8 items have been implemented, 61 partially implemented, and 34 not implemented at all. Then, the final draft for the new National ICT Policy sets forth the action plan consisting of visions, objectives, strategic themes, and action items. As shown in the Figure 6.1-1, a vision has 10 objectives, followed by 56 strategic items and 306 action items to reflect the intention of respective items above them. All the 306 items defines an execution agency, expected outcome, and an implementation period (short-term: 18 months or shorter; medium-term: 19 months to less than 5 years; and long-term: 5 years to less than 10 years).



Source: National ICT Policy Review Committee "Report of the National ICT Policy Review Committee"

Figure 6.1-1 Image of the New ICT Policy

Besides, the Bangladesh Awami League, a ruling party of the new government that came into power in January 2009, stated in its election manifesto that “Our vision is to make Bangladesh digital in 2021.”² The manifesto makes a public statement as follows:

- 1) IT education will be made compulsory at secondary level by 2013;
- 2) IT education will be made compulsory at primary level by 2021;
- 3) ICT Task Force will be reactivated; and
- 4) High-tech park, software technology park, ICT incubator and computer villages will be set up at suitable locations in the country.

2) Related taxation and laws

Software companies in Bangladesh are fully exempted from corporate income tax until FY2011. Furthermore, computer software is subject to low import tax rate of 7.5%, which is divided into import duty of 3%, advanced income tax (prepaid tax on profits from domestic sales of imported goods) of 3%, and advanced trade VAT of 1.5%. Note that the ordinary VAT and the supplementary tax (imposed on luxury goods) are exempted. Also, the import duty is not applied to computer software if it is imported for exporting purpose; it is reimbursed after payment, called “Duty Draw Back Facility.” In the area of law and acts relating to software, the ICT Act 2006 and the Copyright Act 2000 were enacted, including the provisions to address the improvement of the security environment in the software industry.

(4) Related organizations

In Bangladesh, the following government organizations and trade associations are engaged in development and promotion of the software industry.

1) Government agencies

- 1) Support to ICT Task Force (SICT) Programme
- 2) Bangladesh Computer Council (BCC)
- 3) ICT Business Promotion Council (IBPC)

2) Trade associations

- 1) Bangladesh Association of Software and Information Services (BASIS)
- 2) Bangladesh Computer Samity (BCS)
- 3) Internet Service Providers Association of Bangladesh (ISPAB)

² Quoted from “Election Manifesto of Bangladesh Awami League-2008,” Bangladesh Awami League

6.1.2 Current State of Software Export

(1) Current state

According to export statistics of Bangladesh in FY2007/8, the value of software exports³ of Bangladesh accounts for only 0.18% of the country's total export value. The industry's exports have been growing rapidly in recent years and the total value of software exports grew at an annual average rate of 78% between FY2002/3 and FY2005/6. However, it turned to negative growth in the recent two years and the export value in FY2007/8 remained at approximately US\$ 24.8 million (Table 5.1-2), way below the EPB's target of US\$ 30 million.

Table 6.1-2 Recent Trends in Software/ITES Export Value

Fiscal year	2002-03	2003-04	2004-05	2005-06	2006-07	2007-8
Export value	4.20	7.19	12.68	27.01	26.08	24.82
Rate of increase/decrease	50.0%	71.2%	76.4%	113.0%	-3.4%	-4.8%

Source: Bangladesh Bank

Table 6.1-3 Major Destination of Software Export (FY 2007/8)

(Unit: US\$ 1,000)

Country	Export	% of Total
U.S.A.	13,297	53.6
Japan	2,555	10.3
U.K.	1,977	8.0
Germany	1,898	7.6
Malaysia	955	3.8
Denmark	919	3.7
Singapore	733	3.0
Canada	442	1.8
India	380	1.5
Switzerland	356	1.4
Netherlands	324	1.3
Hongkong	171	0.7
France	155	0.6
Sweden	88	0.4
Bhutan	75	0.3
Norway	71	0.3
Cyprus	68	0.3
Austraria	58	0.2
U.A.E.	50	0.2
New Zealand	47	0.2
Others	202	0.8
Total	24,821	100.0

Source: Bangladesh Bank

³ Based on receipt of the computer service account in the Bangladesh Bank's international balance of payment statistics.

As for export destination, the USA accounts for more than half of the total value of software exports in FY2007/8. Other major export destinations are Japan, the United Kingdom, and Germany. Also, Table 6.1-3 indicates that many countries importing software services from Bangladesh are English-speaking countries.

(2) Export capacity and competitiveness

This section describes the industry's export capacity and competitiveness in terms of technology and quality levels, availability of human resources, labor cost, and export promotion activity.

1) Technology and quality levels

With growth of international business, software companies in Bangladesh have been building up quality and process management systems pursuant to international standards. According to the BASIS, more than 20 member companies have already obtained ISO certification on quality management. Of all the companies that participated in the Pilot Project, one fourth has obtained ISO9001: 2000 certification. Meanwhile, as of October 2008, one Bangladeshi local software company was awarded of CMMI (Capacity Maturity Model Integration) Level 3 appraisal. Five more companies were expected to receive the Level 3 by the end of 2008 through a pilot project to support the CMMI appraisal, called "Local Enterprise Investment Centre (LEIC)," which was conducted by Canadian International Development Agency (CIDA). Furthermore, many companies are certified partners of multinational IT companies including Microsoft and Oracle.

In terms of skill levels, twenty-one out of 38 companies that participated in the Pilot Project have engineers who have received certification from Microsoft, Oracle, Sun Microsystems or Cisco Systems. Of 1,926 employees of all these participating companies, 204 are these certified engineers (who may obtain certification from two or more companies).

2) Availability of human resources

According to the World Bank's estimates in 2005, Bangladesh had population of around 140 million. The Census 2001 indicates that the total population was around 124 million, of which young productive age groups between 15 and 34 years old accounted for 33.74%. As for potential workforce available to the software industry, 59 out of 78 universities in the country have IT-related departments/courses (computer science, engineering, etc.) according to the University Grants Commission of Bangladesh (UGC). In terms of enrollment, there were 16,381 students majoring in IT-related fields as of 2006.

Although detailed data are not available, if all the enrollments is divided by 4 academic years, over 4,000 students on average graduate with IT-related degree annually.

In addition, according to the BASIS, there are approximately 300 technical schools that teach IT technology and skills. Graduates from these schools provide rich labor supply particularly to ITES industries such as graphics design, DTP, web design, web publishing, and network maintenance and management.

3) Labor cost

According to a study conducted by the Ministry of Foreign Affairs of Denmark in 2006, monthly salary of programmers working at Bangladeshi local IT companies is in the range between US\$ 75 and US\$ 400, system analysts between US\$ 380 and US\$ 600, and project managers between US\$ 300 and US\$ 750⁴.

In terms of man-month price charged in actual projects, the JICA Study Team collected data on the lowest and highest average rates charged by 24 companies that have participated in the Pilot Project and have made data available before December 31, 2007. The results indicate that the average monthly charge for programmers ranges between US\$ 753 and US\$ 1,102, system engineers between US\$ 1,076 and US\$ 1,556, and project managers between US\$ 1,571 and US\$ 2,239. Note that further variations must be taken into account according to individual projects and companies.

Finally, international comparison is available from a handout material distributed at the “JETRO Outsourcing Fair for IT Software 2005/J-OFIS 2005” held by JETRO in 2005, which presents IT-related labor cost levels in East and Southwest Asian countries in the form of self-assessment by the professionals. Aside from variation among companies, the average cost in India is one half of that in Japan, and that in Pakistan and Sri Lanka (US\$ 80 - US\$ 100 per day) is at the same level as or slightly below India. The cost in China remains one third of that in Japan, and that in Viet Nam is further lower (one half of that in India and two thirds of that in China). Finally, the average cost in Bangladesh is in the range between US\$ 1.5 and US\$ 2.0 per hour (US\$ 12 - US\$ 16 per day for 8-hour work), far below other countries.

⁴ Ministry of Foreign Affairs of Denmark, “Business Opportunity Study within IT and Telecommunication Industry in Bangladesh,” November 2006

4) Export support activity

The BASIS has an export promotion arm called the Standing Committee on Export Facilitation⁵. The committee convenes a several times per year to discuss on overseas market development strategy and make proposals and recommendations to the executive committee. Since the establishment in June 2006, the standing committee had held eight meetings up to November 2007. A few times each year, the BASIS arranges for exhibition and participation in foreign trade shows by its member companies under financial assistance from the EPB and other organizations.

Another program to provide direct export-related support is the Export Promotion Fund (EPF) managed by the EPB. The EPF makes low interest loans to software and handicraft companies to supply export-related working capital. The Janata Bank is responsible for fund management. Of the total fund of TK. 50 million, TK. 40 million is earmarked for software companies. The maximum amount of loan per company is set at TK. 5 million. The nominal interest rate is 4.5% but a 2.5% service fee must be added to make the actual rate of 7%. The first loan was made in 2002 and loans totaling around TK. 20 million have been executed to five companies up to May 2008. The EPF requires borrowers to present the certificate of contract award from customers abroad, which needs to be verified through the Bangladesh foreign mission in countries to which export is made.

As for support by international donor organizations, the Danish International Development Assistance (DANIDA) is carrying out the B2B Programme. Carried out in 15 developing countries, the programme is designed to promote business matchmaking between Danish and local companies. In Bangladesh, 57 joint ventures and alliances have been formed and operated under the programme as of April 29, 2008. They include 18 joint ventures/alliances in the field of software/ITES, which contribute to the country's software/ITES exports in the form of offshore development center and outsourcing contracts.

6.1.3 Conclusion (SWOT Analysis)

To conclude the current state analysis of the software industry of Bangladesh in foregone sections, a SWOT analysis is conducted as follows. Its results are highlighted for each of the four elements (strengths, weaknesses, opportunities and threats) in order of importance.

⁵ Originally established as the Standing Committee on International Market Development, it was renamed to the Standing Committee on Export Facilitation in July 2008 in order to express its focus on export promotion.

(1) Strengths

1) Availability of high quality and low cost workforce

As discussed earlier, the labor cost of software companies in Bangladesh remains at a very low level in comparison to other countries where the IT industry is emerging. At the same time, there are a large number of software engineers who have international level skills, including those officially certified by multinational IT companies. According to the results of interview surveys of more than 40 local software companies conducted by the IT expert of the JICA Study Team during the Pilot Project period, it was concluded that Bangladeshi software companies have achieved the level of technology that is demanded by foreign customers. Furthermore, the fact that a large number of Bangladesh engineers can perform their job in English is considered to be a major strength of the software industry of Bangladesh in consideration of strong outsourcing demand.

2) Eligibility for government support as priority sector

The software industry is designated as one of the Highest Priority Sectors in the government's Export Policy 2006 – 2009. In fact, the industry receives a wide range of public support, including exemption of corporate income tax, eligibility for a special loan scheme, priority access to basic infrastructure, support for marketing activity, and support for human resource development activity. In addition, many industrial promotion projects are originated under the leadership of ICT Task Force chaired by the Prime Minister and the SICT as implementation body.

3) Large demand for business automation by other local industries

The Bangladeshi economy steadily grows at an annual rate of 6% or over in the past years. Rapidly growing industries include garment and knitwear, finance, and telecom. As discussed earlier, there is large demand for business automation by these industries, which contributes greatly to growth of the software industry.

4) Large Non-Resident Bangladeshi (NRB) population living overseas

A large number of Bangladeshis live in many countries including the USA, the United Kingdom, the Middle East, and Japan, among others. They facilitate the development of overseas business networks. For instance, the Bangladesh ICT Business Center (BIBC) was established in the USA as a counterpart office of the IBPC for the purpose of shared marketing office for Bangladesh software companies in cooperation of a Bangladeshi organization in the USA, which was closed in December 2005. In addition, under the Pilot

Project of the current Study, the organization for business intermediation (Bridge SE system) was organized by three IT companies of Bangladeshis living in Japan.

5) Presence of an active trade association (BASIS)

BASIS is a leading trade association representing software companies in the country. It is actively engaged in the industry's promotion activity. In particular, it conducts a range of field-based support activities, including human resource development for member companies, support relating to participation in foreign trade shows, and coordination of support programs by donor organizations. It participated in the Pilot Project under the Study as the counterpart, mainly focusing on the establishment of the supply system in Bangladesh.

(2) Weaknesses

1) Unstable electricity supply

Stable supply of electricity is critical for smooth operation of software companies because their business operation relies heavily on servers and other computer systems. In particular, they have to use electricity heavily, night and day, as they perform work outsourced by foreign customers in different time zones. In fact, many companies install uninterrupted power supply and power generation systems within their premises, creating additional financial burdens.

2) Lack of financial access

As already pointed out, software companies often lack sufficient loan collateral (fixed property). At the same time, lenders generally do not have expertise to assess the value of intellectual property accurately, which is a major asset of software companies. As a result, most software companies have difficulty in obtaining loans. The lack of financial access prevents them from securing funds for capital investment and day-to-day operation, particularly making it difficult to carry out a large project.

3) Lack of overseas marketing capability

The Bangladeshi software industry is still obscure in the world market. The results of a questionnaire survey covering Japanese companies (54 responded), which was conducted as part of the Pilot Project, 89% of respondents did not know that the software industry existed in Bangladesh. This is confirmed by the problem analysis workshop in June 2007, under attendance of persons relating to the software industry, where various problems relating to overseas marketing, such as the lack of promotional activity and the shortage of export

market information, were raised. In fact, the lack of marketing capability prevents the industry from taking advantage of its strengths, i.e., low-cost labor force and international level technology and skills.

4) Problems relating to human resource

While software engineers in Bangladesh generally have high levels of technology and skill, there are various problems relating to the industry's human resources in general. From the industry's standpoint, the lack of practical skill among new employees, the lack of a formal system to promote academia-industry cooperation, high turnover of new employees, and the shortage of training facilities that can be used by the industry. These problems increase the investment risk relating to training and education of new employees. Also, many point out that the shortage of middle managers adversely affects project or process management capability of individual companies. Furthermore, most software companies cannot perform work in a language other than English and Bengali, which is an obstacle in export expansion in non-English speaking markets.

5) Lack of industrial maturity

In Bangladesh, there are no national IT-related technical standards or skill certification and testing systems. As a result, it is difficult for companies, both local and foreign, to evaluate and assess quality of software engineers accurately. Also, local software companies do not have enough experience in large projects partly due to the difficulty in securing working capital, and partly due to the small size of companies and domestic market.

6) Insufficiency of ICT policy implementation

While the Bangladesh government has effectuated the comprehensive ICT policy, many policy directives in it have not been effectively implemented. According to the National ICT Policy Review Committee, only 8 out of 103 policy directive items set forth under the National ICT Policy 2002 have been implemented fully. The results of interview surveys by the JICA Study Team and the problem analysis workshop held in June 2007 indicate that a major factor for failure of policy implementation is the lack of knowledge on the IT industry among government officials.

(3) Opportunities

1) Long-term prospect for large potential workforce on account of large young population

As discussed in 6.1.2, younger age groups dominate the country's population exceeding 140 million. This suggests long-term availability of potential workforce for the software

industry, representing a significant opportunity in consideration of the fact that most industrialized countries face the shortage of IT engineers due to the aging population and the decline in the industry's attractiveness to young workers.

2) High potential for becoming a major provider of outsourcing service

The EU recognizes Bangladesh as one of the most attractive twenty countries for business outsourcing. Also, the Goldman Sachs announced that Bangladesh was one of the highly growing markets, or, "Next 11," next to BRICs. As the software industry in India is increasingly facing the shortage of its IT engineers, together with the rise in their salary, there is an increasing opportunity for Bangladesh to emerge as a major outsourcing service provider in the world market. Furthermore, the labor cost in middle income countries (including Southeast Asia and Latin America) is expected to rise further, thereby creating outsourcing demand in general.

3) Establishment of action plans under the new National ICT policy

The final proposal for the new National ICT policy sets forth the comprehensive action plan including 306 action items. Clearly defined action plan will ensure effective policy implementation. In addition, as discussed earlier, the Bangladesh Awami League, a ruling party of the new government that came into power in January 2009, stated in its election manifesto that Bangladesh will be made digital in 2021. The manifesto makes a public statement that software industry and IT services will be developed by providing all possible assistance to talented young people and interested entrepreneurs.

4) Prospect for further expansion of domestic demand

At present, there is increasing demand for the software services by the telecom industry (cellular phone applications), financial institution (financial service), and the garment and knitwear industries (business automation). The industry can expect continuous business growth if the current demand remains robust for a fairly long period of time. Also, additional demand is expected to come from the increase in government's IT projects in terms of expenditure, as well as the increase in public investment relating to e-government.

5) Improvement of the business environment surrounding the industry

As shown in the case of the IDCOL (see 6.1.1), there is possibility that the non-collateral loan scheme for software companies is to expand in several organizations. This would lead to the improvement of business environment for the software industry in terms of availability of fund for capital investment and day-to-day operation. One of the major benefits from this will be the growth of individual software companies in size and the

improvement of the ability to handle a large project. Meanwhile, if Bangladesh is to successfully establish a national standard for IT skill training and certification (as planned as “IPSAEP” by BCC), there will be unified standards to evaluate and assess quality of software engineers. Furthermore, if the national standard is accepted in other countries in the form of mutual certification, the transaction cost relating to technical assessment will be reduced for foreign companies.

(4) Threats

1) Continued decrease in the number of students who want to work for software companies

At present, around 4,000 students study ICT-related fields at universities each grade year but not all of them attempt to find a job with software companies. Rather, these potential IT experts tend to go to telecom companies and financial institutions that raise salary at higher rates. Also, graduates from topflight universities such as the University of Dhaka and the BUET opt to seek job opportunities abroad. If these conditions continue, the Bangladeshi software industry will lose its strength in terms of high quality and low cost workforce.

2) Abolition of policy incentives

If ongoing support measures, such as tax incentive, preferential loan scheme, support for improvement of access to infrastructure, marketing support, and human resource development, are discontinued before the software industry reaches the stage where public support is no longer required, it will work as an impediment to the industry’s sustainable development.

3) Further deterioration of infrastructure (especially power supply)

If construction of infrastructure facilities cannot keep up with industrial development, electricity supply to the software industry will further deteriorate. In this connection, if the government fails to provide effective support measures such as the construction of infrastructure sharing facilities such as the ICT Incubator, software companies will have to bear higher costs to deal with insufficient infrastructure.

4) To fall behind other countries having the emerging IT industry

If countries having the emerging IT industry, such as Egypt, Pakistan, the Philippines, Sri Lanka and Viet Nam, among many others, start to gain big presence in the priority target markets for the Bangladeshi software industry (the USA, the United Kingdom, Scandinavian countries, and Japan), these markets will become too competitive. Another threat is that IT

engineers in non-English speaking emerging countries, such as China and Viet Nam, gain English proficiency, thereby becoming major competitors for Bangladesh in English speaking markets. Also, if medium- and small-sized IT companies in India change management policy and shift from subcontractors for large enterprises in India to primary contractors for overseas customers, the outsourcing market will be overcrowded. Finally, if industrialized countries step up policy to regulate overseas outsourcing in an attempt to protect local employment, it will threaten the outsourcing market.

6.2 Development Vision, Purpose and Strategy

On June 25, 2007, a one-day workshop was held under attendance of 42 persons representing software companies and related organizations in Bangladesh. Its aim was to discuss the problems faced by the computer software industry and to agree on the core problem and its direct causes. To do so, the participatory problem analysis was performed. It is one type of the PCM (Project Cycle Management) technique, under which participants write down their opinion on a specific topic in a card, and then the opinions are arranged and characterized under unanimous agreement by the participants. Figure 6.2-1 shows the results of the problem analysis, which is called a simplified problem tree. Based on the problem tree, a development purpose for the action program was established, followed by a development vision and a general framework for development strategies.

Development purpose:

Software industry attains sustainable growth through export expansion.

Development vision:

Bangladesh is a major software supplier in Asia.

Strategy 1 Recommendation on policy related issues

Strategy 2 Intensive marketing to priority economies and countries

Strategy 3 Capacity building of software industry

Strategy 4 Human resource development competitive in the export market

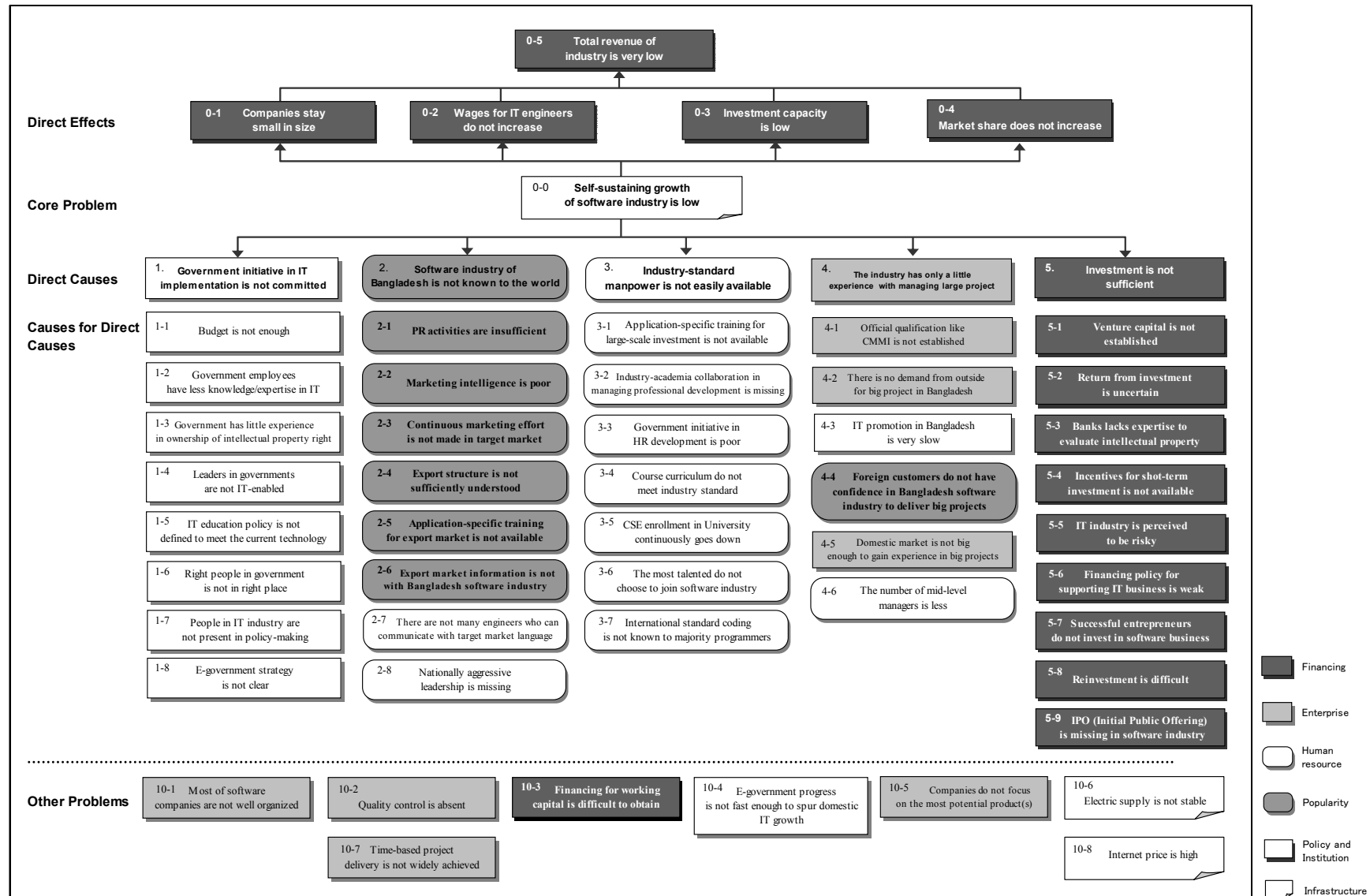


Figure 6.2-1 Problem Tree for Computer Software Sub-sector (Result of Problem Analysis at the Second Workshop on June 25, 2007)

6.3 Action Program Proposals

Objectives of the strategies described in the previous section can be achieved if more detailed activity plans for these strategies are implemented. The current Study terms these activity plans “programs.” The action program is constituted by the development purpose under which some strategies are set to achieve it, and the programs which are designed to achieve objectives of the strategies. In other words, the logic of the action program is that if all the programs were to be successfully implemented, then objectives of all the strategies would be achieved, which in turn would lead to accomplishment of the development purpose and further to realization of the development vision. Note that the action program does not necessarily encompass all the necessary methods to achieve the development vision, that is, there are many ideas that can substitute for or add to the current ideas proposed in the development purpose, the strategies and the programs.

6.3.1 Summary and Constitution of Action Program

Table 6.3-1 shows the development vision, the development purpose, the strategies and programs that the current Report proposes. A total of nine programs are proposed under the four strategies. The JICA Study Team developed and finalized proposals for these programs by taking account of the followings:

- 1) Problems raised at the problem analysis workshop held in June 2007;
- 2) Results of the questionnaire survey conducted with twenty companies in software sub-sector;
- 3) Lessons and experiences obtained by implementing the Pilot Project;
- 4) Results of interview surveys with the related organizations and data/literature reviews; and
- 5) Results of the workshop with the industry stakeholders held in August 2008 where the action program proposals were presented.

Table 6.3-2 shows the summary of the proposed programs, while Figure 6.3-1 is a schematic diagram of the whole action program. Although the number of the proposed programs (9) is not very large, every one of the programs was designed for easy implementation. If more than half of the proposed programs were to be implemented, conditions for sustainable growth of the software industry of Bangladesh would largely be improved.

Table 6.3-1 Action Program on Export Promotion of Software Industry

Development Vision:

Bangladesh is a major software supplier in Asia.

Development purpose:

Software Industry attains sustainable growth through export expansion.

(Strategy 1) Recommendation on policy related issues

Program 1-1 Improvement of execution and monitoring system for incentives in Export Policy

Program 1-2 Provision of financial support system to promote software export

Program 1-3 Basic IT education program for government officers

(Strategy 2) Intensive marketing to priority economies and countries

Program 2-1 Reinforcement of basis for IT marketing in the target market

Program 2-2 Establishment of business bridging system in the target market

Program 2-3 Package Program for penetrating to the software market in Japan

(Strategy 3) Capacity building of the software industry

Program 3-1 Facilitation of construction of Software Park (Building)

(Strategy 4) Human resource development competitive in the export market

Program 4-1 Introduction of ITSS (IT Skill Standard) to Bangladesh

Program 4-2 Placement service and practical training for university graduates

Table 6.3-2 Summary of Program Proposals for the Software Industry (1/2)

Program name	Target group	Output	Major activities	Executing body
Strategy 1 Recommendation on policy related issues				
Program 1-1 Improvement of execution and monitoring system for incentives in Export Policy	Software industry in general	Description of the incentives to be listed in the next Export Policy will be concretized and clarified.	Review and amendment on methods of description of incentives.	MOC and EPB
Program 1-2 Provision of financial support system to promote software export	Software industry in general	1. A government credit guarantee system will be established for working capital loans that are provided for software/ITES companies. 2. EPF management will be improved to meet the needs of the software/ITES industry.	1. Establishment of credit guarantee system. 2. Review and amendment on management of the EPF.	1. BCC/MOSICT, Development financial institutions under MOF 2. EPB, Janata Bank
Program 1-3 Basic IT education program for government officers	About 3,000 Class-I government officers	Class-I government officers will acquire adequate IT industry/business knowledge	Development of the curriculum/certification exam for the IT industry/business education program; Promotion of the program to a compulsory program for government officers.	BCC/MOSICT, Ministry of Establishment
Strategy 2 Intensive marketing to priority economies and countries				
Program 2-1 Reinforcement of basis for IT marketing in the target market	Software industry in general	The ICT Promotion Desk will be established at the Bangladesh embassy in each priority country	Selection of priority countries and establishment of ICT Promotion Desk in Bangladesh embassies in the priority countries.	BASIS, EPB/MOC, MOFA
Program 2-2 Establishment of business bridging system in the target market	Software industry in general	Business bridging systems to mediate software industries between Bangladesh and the priority countries will be established.	Establishment of business bridging system.	BASIS, EPB/MOC
Program 2-3 Package Program for penetrating to the software market in Japan	BASIS member companies which participate in the program.	Access to Japanese offshore markets will be improved.	Modification and continuation of the Pilot Project.	BASIS, EPB/MOC

Table 6.3-2 Summary of Program Proposals for the Software Industry (2/2)

Program name	Target group	Output	Major activities	Executing body
Strategy 3 Capacity building of the software industry				
Program 3-1 Facilitation of construction of Software Park (Building)	About 200 software/ITES companies	Two buildings will be constructed to serve as the software park	Construction of Two buildings to serve as the software park	BASIS
Strategy 4 Human resource development competitive in the export market				
Program 4-1 Introduction of ITSS (IT Skill Standard) to Bangladesh	IT engineers, CSE-major students, IT-related companies.	1) Education curriculum based upon ITSS will be developed; 2) National certification exam will be developed based on the curriculum developed in 1); 3) Mutual certification will be systemized between the national exam developed in 2) and those in other Asian countries; and 4) Japanese language education program will be developed.	1) Development of ITSS education program; 2) Development of national certification exam; 3) Establishment of mutual certification system with other countries; and 4) Development of Japanese language education program.	BCC/MOSICT, UGC/MOE, BASIS, Donors
Program 4-2 Placement service and practical training for university graduates	CSE-major students/graduates in search of job, IT engineers, middle-management officers in IT companies	Recruitment of CSE-students in software companies will be promoted; Practical training centre for OJT (with actual project assignment) will be established.	Establishment of placement service center and implementation of placement service; Establishment of practical training center and implementation of the trainings.	BCC/MOSICT, UGC/MOE, BASIS (including member companies)

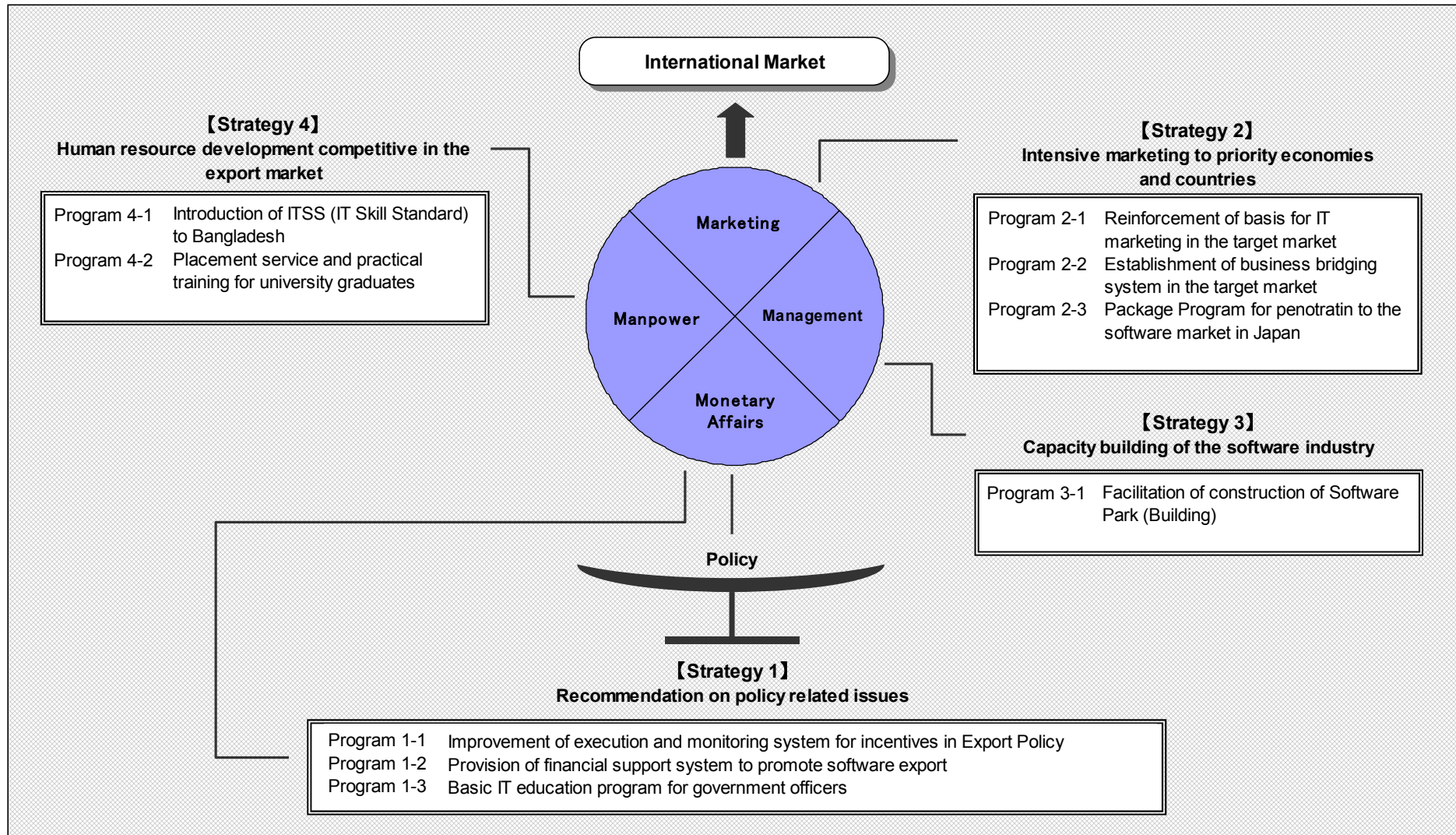


Figure 6.3-1 Schematic Diagram Showing the Program Structure (Software)

6.3.2 Priority Setting for Program Implementation

The proposed nine programs are scored for the priority of implementation both by the level of contribution to accomplishment of the development purpose, on one hand, and by the program feasibility, or level of difficulty to be realized, on the other. The level of contribution is weighed more (twice) than the feasibility, i.e., 100-20 points (Levels 1-4) are assigned to the former, and 50-10 points (Levels 1-4) to the latter. The scores representing the level of contribution to the accomplishment of the development purpose as well as program feasibility are added up to obtain the overall score, and scores for all the programs are classified into three ranks. The result is shown in Table 6.3-3.

Highest priority group: 4 programs

Second priority group: 3 programs

Third priority group: 2 programs

6.3.3 Five Year Implementation Plan and Schedule

The implementation schedule for the nine proposed programs is shown in Figure 6.3-2. Essentially, detailed examination of the action program proposals is assumed to start after the submission of this Report and the formal preparation work will start in July 2009 when the new fiscal year commences. It is assumed that the start of Programs 2-2 will be postponed by one and half years in order to wait for the Program 2-1 to produce necessary effects, while other programs will be concurrently started at the beginning of the first year.

Table 6.3-3 Priority Rating for the Proposed Programs

Program name	Level of contribution	Feasibility	Total	Priority
(Strategy 1) Recommendation on policy related issues				
Program 1-1 Improvement of execution and monitoring system for incentives in Export Policy	40	50	90	■■■■
Program 1-2 Provision of financial support system to promote software export	40	10	50	■
Program 1-3 Basic IT education program for government officers	20	30	50	■
(Strategy 2) Intensive marketing to priority economies and countries				
Program 2-1 Reinforcement of basis for IT marketing in the target market	100	20	120	■■■■■■
Program 2-2 Establishment of business bridging system in the target market	100	20	120	■■■■■■
Program 2-3 Package Program for penetrating to the software market in Japan	100	30	130	■■■■■■
(Strategy 3) Capacity building of the software industry				
Program 3-1 Facilitation of construction of Software Park (Building)	40	30	70	■■■■
(Strategy 4) Human resource development competitive in the export market				
Program 4-1 Introduction of ITSS (IT Skill Standard) to Bangladesh	100	20	120	■■■■■■
Program 4-2 Placement service and practical training for university graduates	60	30	90	■■■■

Note: Highest priority group ■■■■■■ (100 points or higher)
 Second priority group ■■■■ (50 points - less than 100 points)
 Third priority group ■ (Less than 50 points)

Source: JICA Study Team

	1st Year (2009.07~)	2nd Year (2010.07~)	3rd Year (2011.07~)	4th Year (2012.07~)	5th Year (2013.07~)	Mode of Continu- ation	Output in 5 years	Key Points in Implementation			
Strategy 1 Recommendation on policy related issues											
Program 1-1 Improvement of execution and monitoring system for incentives in Export Policy	Review Enactment	Implementation/Monitoring	Review	Implementation/Monitoring		▶	Concretization and clarification of incentives in Export Policy	* Approval from the cabinet			
Program 1-2 Provision of financial support system to promote software export	Review Planning/Budgetizing	New guideline Establishment	Operation on new guideline and monitoring			▷	Increase in working capital loans to software/ITES companies	* Allocation of government budget and approval from EPB executive board			
Program 1-3 Basic IT education program for government officers	Budgetizing/Mandatory clause Curriculum development	Continuation in reduced frequency for newly targeted officers like the newly recruited Training in 132 batches for 11 months				▶	Increase in IT business/industry knowledge among government officers	* Viability of effecting mandatory clause for the participation			
Strategy 2 Intensive marketing to priority economies and countries											
Program 2-1 Reinforcement of basis for IT marketing in the target market	Budgetizing Country selection	Establishment	Branding/recognition improvement activities			▷	Improvement of recognition of Bangladeshi software industry in the priority countries.	* Allocation of the government resources to the program			
Program 2-2 Establishment of business bridging system in the target market		Monitoring on effects of Program 2-1/Budgetizing	Agreement with bridging organizations			▷	Improvement of access to markets in priority countries.	* Availability of credible bridging organization in each country			
Program 2-3 Package Program for penetrating to the software market in Japan	Monitoring on effects of Program 2-1 Company Recruitment/Marketing tools		Selection of bridging organizations	Sales/marketing by bridging organizations		▷	Improvement of access to Japanese market.	* Japan will be selected as one of target countries in Program 2-1			
Strategy 3 Capacity building of the software industry											
Program 3-1 Facilitation of construction of Software Park (Building)	Acquirement of land Fund collection	Construction				■	Many software/ITES companies will share necessary infrastructure.	* Land availability for free and low-interest loan availability			
Strategy 4 Human resource development competitive in the export market											
Program 4-1 Introduction of ITSS (IT Skill Standard) to Bangladesh	ToT Development Planning	Implementation of Japanese education with 200 trainees in 2 batches (10 month course)	Implementation of ITSS-based IT education with 400 trainees (20 classes) in 4 batches (6 month course)			▶	Development of ITSS-based national certification exam, which is mutually certified with those of other countries.	* Possibility of T/A			
Program 4-2 Placement service and practical training for university graduates	Budgetizing Planning	Establishment Pilot Project/FS	Career fair	Career fair	Career fair	Career fair	Career fair	Career fair	▷	Encouragement of employment of CSE graduates with practical skills in software companies.	*Collaboration of academia and industry

- ▷ Will be continued as part of routine job once the implementation plan has been decided
- ▶ Will be continued repeatedly by treating a proposed program as one batch
- Will complete in five years, provided that their results (accomplishments) will form the basis of a follow-up program or activity.

T/A : Technical Assistance
F/A: Financial Assistance

Figure 6.3-2 Five-year Implementation Plan and Schedule for the Action Program