



Government of the People's Republic of Bangladesh  
WTO Wing  
Ministry of Commerce  
Report  
on

## **IDENTIFICATION OF TRADE-RELATED GRADUATION CHALLENGES AND PREPARATION OF SECTOR-SPECIFIC TRADE ROADMAPS FOR OVERCOMING THE CHALLENGES**

DIAGNOSTIC TRADE INTEGRATION STUDY UPDATE (DTISU) OF BANGLADESH:  
TRADE ROADMAP FOR SUSTAINABLE GRADUATION (TRSG) PROJECT



Financed by:



Publication Period : **May 2023**

Publication : **WTO Wing Ministry of Commerce**

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Design & Printed by : **Printing Zone**  
141, Arambag, Motijheel  
Dhaka-1000



**Government of the People's Republic of Bangladesh**  
**WTO Wing**  
**Ministry of Commerce**



Senior Secretary  
Ministry of Commerce  
Government of the People's Republic of Bangladesh

### Message

Bangladesh is moving forward with an indomitable pace to become a developing country in 2026. It is high time to identify the graduation related challenges and to find the way forward to overcome those challenges. 'Identification of Trade-related Graduation Challenges and Preparation of Sector-Specific Trade Roadmaps for Overcoming the Challenges' is a study conducted by Bangladesh Foreign Trade Institute under the project named Diagnostic Trade Integration Study Update (DTISU) of Bangladesh: Trade Roadmap for Sustainable Graduation (TRSG) implemented by WTO wing of the Ministry of Commerce. The main target of this study is to identify and update the priority areas of DTIS 2015 with a view to contribute to the sustainable graduation from LDC, supporting the implementation of Sustainable Development Goals and to prepare sector specific trade roadmap for some important sectors such as: RMG and knitwear, Light engineering including electronics and electrical, Plastic product, Leather and leather goods, Non leather footwear, Processed food, Pharmaceutical and API, Ship building, Software and IT related services, Tourism services, Nurse and midwifery services. This roadmap will help to develop and diversify the domestic products, will enhance the capacity of the domestic industry and to address the trade related challenges after graduation from the LDC status.

I sincerely thank the Executive Director, Enhanced Integrated Framework (EIF) and his team for financing such an important project and the Chief Executive Officer of Bangladesh Foreign Trade Institute and his team for conducting the study on this. I congratulate Project Director of this project for the successful completion of the project.

I do believe that this study will be helpful for both the government and private sector organization to be prepared for the smooth graduation of Bangladesh.

**Tapan Kanti Ghosh**



Additional Secretary  
WTO Wing  
Ministry of Commerce  
Government of the People's Republic of Bangladesh

### Message

Bangladesh has been placed on the pathway to graduate from the LDC status in 2026. Bangladesh Foreign Trade Institute conducted a study titled 'Identification of Trade-related Graduation Challenges and Preparation of Sector-Specific Trade Roadmaps for Overcoming the Challenges' under Diagnostic Trade Integration Study Update (DTISU) of Bangladesh: Trade Roadmap for Sustainable Graduation (TRSG) project which is financed by the Enhanced Integrated Framework. This study covered the identification of graduation challenges and prepared a trade roadmaps for overcoming the trade related challenges in 12 important sectors such as: RMG (Knitwear and Woven), Light engineering including electronics and electrical, Plastic products, Leather and leather goods, Non-leather footwear, Agro-products and Processed food, Pharmaceuticals and API, Shipbuilding, Software and IT services, Tourism, Nursing and Midwifery services. This trade roadmap has made a mapping of a sector specific strategy that the country will need to overcome the trade related challenges including resource mobilization strategies.

I would like to convey my gratitude to the Enhanced Integrated Framework for financing the project which is very essential for Bangladesh. I sincerely thank all the persons from Bangladesh Foreign Trade Institute who were involved in this study. I must appreciate the dedication of the Project Director of this project for the successful completion of the project.

I wish this study will be very beneficial for the converting all the challenges into a opportunity regarding LDC graduation of the country.

A handwritten signature in black ink, consisting of a horizontal line with a small loop and a vertical stroke.

**Nusrat Jabeen Banu ndc**



## Preface

Bangladesh has made impressive socio-economic progress during the last decade, in particular. Bangladesh has been recommended for graduation from LDC status in 2026. As a result, Bangladesh will face a number of challenges related to trade. In this context, this study on 'Identification of Trade-related Graduation Challenges and Preparation of Sector-Specific Trade Roadmaps for Overcoming the Challenges' was conducted by Bangladesh Foreign Trade Institute (BFTI). The said study was initiated by the WTO Wing, Ministry of Commerce, Government of the People's Republic of Bangladesh under Diagnostic Trade Integration Study Update (DTISU) of Bangladesh: Trade Roadmap for Sustainable Graduation (TRSG) Project, funded by the Enhanced Integrated Framework (EIF).

The study had been undertaken to analyze trade-related graduation challenges and prospects of the 12 sectors of goods and services, including Readymade Garments (Woven and Knitwear), Pharmaceuticals and API, Leather and Leather Goods, Non-Leather Footwear, Light Engineering including Electronics and Electrical Products, Shipbuilding, Plastic Products, Agro-products and Processed foods, Fisheries and Livestock, Software & IT related Services, Tourism, Nursing and Midwifery Services. The study highlights sector-specific strengths, weaknesses, opportunities, threats, and strategies to overcome them for realizing the export potential and sustainable export-led growth. In addition, this study prepared a roadmap for enhancing the capacity of the export-oriented sectors to underpin the key opportunities and challenges and recommended concrete actions to address the challenges.

I extend my sincere gratitude to the WTO Wing, Ministry of Commerce, Government of the People's Republic of Bangladesh, key experts, consultants and the researchers who have worked relentlessly to ensure the completion of this study. Their unwavering support and commitment have been instrumental in making this study a reality. I am grateful to my BFTI team members, in particular, who extended tremendous support in this regard.

In response to the preparation of a smooth transition and sustainable graduation of the country, I hope this report will facilitate substantial improvements in the 12 sectors of Bangladesh for ensuring export diversification and improvement of trade competitiveness. This study is expected to have significant implications for the policy makers in the areas of 12 sectors in Bangladesh for overcoming LDC graduation challenges and ensuring sustainable economic growth and development.

A handwritten signature in black ink, appearing to read 'Jafar Uddin', with a stylized flourish at the end.

**Dr. Md. Jafar Uddin**  
Chief Executive Officer  
Bangladesh Foreign Trade Institute

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## List of Abbreviations

4IR	Fourth Industrial Revolution
ADB	Asian Development Bank
ADR	Alternate Dispute Resolution
AIN	Account Office Identification Number
AIT	Advanced Income Tax
API	Active pharmaceutical ingredients
ARF	ASEAN Regional Forum
ASEAN	Association of Southeast Asian Nations
B.Sc	Bachelor of Science
BAB	Bangladesh Accreditation Board
BACCO	Bangladesh Association of Contact Center and Outsourcing
BAPA	Bangladesh Agro-Processors Association
BAPI	Bangladesh Association of Pharmaceutical Industries
BARC	Bangladesh Agricultural Research Council
BARI	Bangladesh Agricultural Research Institute
BASIS	Bangladesh Association of Software and Information Services
BAU	Bangladesh Agricultural University
BB	Bangladesh Bank
BBA	Biman Bangladesh Airlines
BBA	Bachelor of Business Administration
BBS	Bangladesh Bureau of Statistics
BC	Bangladesh Customs
BCC	Bangladesh Computer Council
BCSIR	Bangladesh Council of Scientific and Industrial Research
BD	Bangladesh
BDT	Bangladeshi Taka
BEA	Bangladesh Electrical Association
BEPZA	Bangladesh Export Processing Zone Authority
BESIC	Bangladesh Small and Cottage Industries Corporation
BEZA	Bangladesh Economic Zones Authority
BFFEA	Bangladesh Frozen Foods Exporters Association
BFLLEA	Bangladesh Finished Leather, Leather Goods and Footwear Exporters' Association
BFRI	Bangladesh Fisheries Research Institute
BFSA	Bangladesh Food Safety Authority
BFTI	Bangladesh Foreign Trade Institute
BFVAEA	Bangladesh Fruits, Vegetables & Allied Product Exporter's Association
BGMEA	Bangladesh Garment Manufacturers and Exporters Association
BIDA	Bangladesh Investment Development Authority
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
BIPET	Bangladesh Institute of Plastic Engineering and Technology
BITAC	Bangladesh Industrial Technical Assistance Center
BIWTA	Bangladesh Inland Water Transport Authority
BKMEA	Bangladesh Knitwear Manufacturers and Exporters Association
BLPA	Bangladesh Land Port Authority
BLRI	Bangladesh Livestock Research Institute

BLS	Bureau of Labor Statistics (U.S)
BMET	Bureau of Manpower, Employment and Training
BMFA	Bangladesh Marine Fisheries Association
BNC	Bangladesh Nursing Council
BNMC	Bangladesh Nursing and Midwifery Council
BOESL	Bangladesh Overseas Employment and Services Limited
BoI	Board of Investment
BPC	Business Promotion Council
BPC	Bangladesh Parjatan Corporation
BPFMEA	Bangladesh Pet Flakes Manufacturers & Exporters Association
BPGMEA	Bangladesh Plastic Goods Manufacturers & Exporters Association
BPICC	Bangladesh Poultry Industry Central Council
BPO	Business Process Outsourcing
BRAC	Bangladesh Rural Advancement Committee
BRRRI	Bangladesh Rice Research Institute
BSBA	Bangladesh Ship Builders Association
BSCIC	Bangladesh Small and Cottage Industries Corporation
BSE	Bovine Spongiform Encephalopathy
BSEC	Bangladesh Steel and Engineering Corporation
BSTI	Bangladesh Standards and Testing Institution
BTA	Bangladesh Tanners Association
BTB	Bangladesh Tourism Board
BTC	Bangladesh Tariff Commission
BTEB	Bangladesh Technical Education Board
BTRC	Bangladesh Telecommunication Regulatory Commission
BTTC	Bangladesh Trade and Tariff Commission
BUET	Bangladesh University of Engineering and Technology
BUFT	BGMEA University of Fashion & Technology
BUILD	Business Initiative Leading Development
BUTEX	Bangladesh University of Textiles
BWCCI	Bangladesh Women Chamber of Commerce and Industry
BWDB	Bangladesh Water Development Board
CAAB	Civil Aviation Authority of Bangladesh
CAD	Computer-Aided Design
CAGR	Compound Annual Growth Rate
CBHC	Community-Based Health Care
CCA	Controller of Certifying Authorities
CCBDF	Central Cattle Breeding and Dairy Farm
CCI&E	Chief Controller of Imports & Exports
CCs	Community Clinics
CCT	Conditional Cash Transfer
CCTV	Closed-Circuit Television
CD	Custom Duty
CDP	Committee for Development Policy
CEPA	Comprehensive Economic Partnership Agreement

CETP	Common Effluent Treatment Plant
CFC	Common Facilities Centre
CGFNS	Commission on Graduates of Foreign Nursing Schools
CHCP	Community Health Care Providers
CIF	Cost Insurance & Freight
CIT	Corporate Income Tax
CMT	Coastal and Maritime Tourism
CNC	Computer Numerical Control
CNMs	Certified Nurse Midwives
COEL	Centre of Excellence for Leather Skill Bangladesh Limited
CPA	Chittagong Port Authority
CRNAs	Certified Registered Nurse Anesthetistsss
CRS	Computer-Related Services
DAE	Department of Agricultural Extension
DBID	Digital Business Identity
DCCI	Dhaka Chamber of Commerce & Industry
DCO	Drug Control Ordinance
DEDO	Duty Exemption and Drawback Office
DFQF	Duty-Free Quota-Free
DGDA	Directorate General of Drug Administration
DGHS	Directorate General of Health Services
DGNM	Directorate General of Nursing and Midwifery
DIFE	Department of Inspection for Factories and Establishments
DITF	Dhaka International Trade Fair
DLS	Department of Livestock
DNMC	Dhaka National Medical College
DoE	Department of Environment
DoF	Department of Fisheries
DOT	Department of Textiles
DPDT	Department of Patents, Designs and Trademarks
DTIS	Diagnostic Trade Integration Study
DTISU	Diagnostic Trade Integration Study Update
DWT	Dead Weight Tonnage
EC4J	Export Competitiveness for Jobs
e-CAB	e-Commerce Association of Bangladesh
EDB	Ease of Doing Business
EDF	Export Development Fund
EIA	Environmental Impact Assessment
EIF	Enhanced Integrated Framework
EPB	Export Promotion Bureau
ERD	Economic Relations Division
ERF	Export Risk Fund
ESQ	Environmental Social and Quality
ETP	Effluent Treatment Plant
EU	European Union

EWU	East West University
F. A. O	Food and Agriculture Organization
FAS	Foreign Agricultural Service
FBCCI	Federation of Bangladesh Chambers of Commerce & Industries
FD	Finance Division
FDI	Foreign Direct Investment
FE	Foreign Exchange
FID	Financial Institutions Division
FTA	Free Trade Agreement
FTA	Fisheries Training Academy
FY	Financial Year
FYP	Five-Year Plan
GAP	Good Agricultural Practices
GCC	Gulf Central Committee
GDP	Gross Domestic Product
GED	General Economic Division
GMP	Good Manufacturing Practice
GoB	Government of Bangladesh
GSP	Generalized System of Preferences
GT	Gross Tonnage
GTF	Green Transformation Fund
HS Code	Harmonised System Code
HSD	Health Services Division
IACS	International Association of Classified Society
IATA	International Air Transport Association
IAT-BUET	Institute of Appropriate Technology-BUET
IBAIS	International Business Administration and Information System
ICAB	Institute of Chartered Accountants of Bangladesh
ICD	Inland Container Depot
ICEAB	International Conference on Environmental Aspects of Bangladesh
ICT	Information and Communications Technology
ICT ISC	ICT Industry Skills Council
ICTD	Information and Communications Technology Division
ICU	Intensive Care Units
IELTS	International English Language Testing System
IFC	International Finance Corporation
ILET	Institute of Leather Engineering & Technology
ILO	International Labour Organization
IMF	International Monetary Fund
IMO	International Maritime Organization
IoT	Internet of Things
IPR	Intellectual Property Rights
IRD	Internal Resource Division
ISM	International Support Measures
ISP	Internet Service provider



IT	Information Technology
ITC	International Trade Centre
ITES	IT enabled Services
JMC	Joint Management Centre
KG	Kilogram
KII	Key Informant Interviews
KUET	Khulna University of Engineering & Technology
LC	Letter of Credit
LCS	Land Customs Stations
LDC	Least Development Country
LDDP	Livestock and Dairy Development Project
LE	Light Engineering
LED	Light-Emitting Diode
LEED	Leadership in Energy and Environmental Design
LEIs	LE industries
LEISC	Light Engineering Industry Skills Council
LEPBPC	Light Engineering Product Business Promotion Council
LFMEAB	Leather Goods and Footwear Manufacturers and Exporters Association, Bangladesh
LGD	Local Government Division
LGED	Local Government Engineering Department
LLMC	Low and Low Middle-Income Countries
LPAD	Legislative and Parliamentary Affairs Division
LPI	Logistics Performance Index
LPNs	Licensed Practical Nurses
LRI	Leather Research Institute
LTR	Loan Against Trust Receipt
LVNs	Licensed Vocational Nurses
LWG	Leather Working Group
M&E	Monitoring and Evaluation
M.Sc	Master of Science
M2M	Machine to Machine
MBA	Master of Business Administration
MC	Ministerial Conference
MC12	12 Ministerial Conference
MDG	Millennium Development Goal
MEFWD	Medical Education and Family Welfare Division
MFN	Most Favored Nation
MHRA	Medicines and Healthcare products Regulatory Agency
MIC	Middle-Income Country
MLJPA	Ministry of Law, Justice and Parliamentary Affairs
MMF	Man-Made Fibre
MNCs	Multinational Corporations
MoC	Ministry of Commerce
MoCAT	Ministry of Civil Aviation and Tourism
MoE	Ministry of Education

MoEFC	Ministry of Environment, Forest and Climate Change
MoEWOE	Ministry of Expatriates' Welfare and Overseas Employment
MoF	Ministry of Finance
MoFA	Ministry of Foreign Affairs
MoFood	Ministry of Food
MoH	Ministry of Health
MoHA	Ministry of Home Affairs
MoH&FW	Ministry of Health and Family Welfare
MoHFW	Ministry of Health and Family Welfare
MoIB	Ministry of Information and Broadcasting
MoIND	Ministry of Industry
MoLE	Ministry of Labour and Employment
MoPEMR	Ministry of Power, Energy and Mineral Resource
MoS	Ministry of Shipping
MoTJ	Ministry of Textiles and Jute
MoU	Memorandum of Understanding
MoWCA	Ministry of Women and Children Affairs
MoWR	Ministry of Water Resources
MoYS	Ministry of Youth and Sports
MPH	Master of Public Health
MPV	Multi-Purpose Vessel
MRA	Mutual Recognition Agreement
MRC	Migrant Resource Centre
MT	Metric Ton
NAB	NGO Affairs Bureau
NAP	National Adaptation Plan
NBFI	Non-Bank Financial Institution
NBR	National Board of Revenue
NCDs	Non-communicable Diseases
NCG	National Committee on LDC Graduation
NCLEX	National Council Licensure Examination
NDB	New Development Bank
NDC	Nationally Determined Contributions
NDDDB	National Dairy Development Board
NDP	National Drug Policy
NFIS-B	National Financial Inclusion Strategy of Bangladesh
NGO	Non-governmental Organization
NHTTI	National Hotel & Tourism Training Institute
NPO	National Productivity Organization
NPs	Nurse Practitioners
NRA	National Regulatory Authority
NRB	Non-Resident Bangladeshi
NSDA	National Skills Development Authority
NSDC	National Skills Development Council
NSP	National Skills Portal

NTTN	Nationwide Telecommunication Transmission Network
ODA	Official Development Assistance
ODM	Original Design Manufacturing
OECD	Organisation for Economic Co-operation and Development
OEM	Original Equipment Manufacturing
OHS	Occupational Safety and Health
PATA	Pacific Asia Travel Association
PCB	Printed Circuit Board
PCB	Pharmacy Council of Bangladesh
PCBA	Printed Circuit Board Assembly
PET	Polyethylene Terephthalate
pH	Potential of Hydrogen
PhD	Doctor of Philosophy
PMO	Prime Minister's Office
PPE	Personal Protective Equipment
PQP	Prequalification of Medicines Programme
PQW	Plant Quarantine Wing
PSC	Public Service Commission
PSTN	Public switched telephone network
PTA	Preferential Trade Arrangements
PU	Polyurethane
PVC	Polyvinyl Chloride
R&D	Research and development
RDCD	Rural Development and Cooperative Division
RHD	Roads and Highways Department
RJSC	Registrar of Joint Stock Companies and Firms
RMG	Ready-Made Garment
RN	Registered Nurse
RoO	Rules of Origin
RTA	Regional Trade Agreement
SAARC	South Asian Association for Regional Cooperation
SANEM	South Asian Network on Economic Modelling
SAU	Sher-e-Bangla Agricultural University
SBW	Special Bonded-Warehouse
SDG	Sustainable Development Goals
SEIP	Skills for Employment Investment Program
SHED	Secondary and Higher Education Division
SMEF	Small & Medium Enterprise Foundation
SMEs	Small and Medium-Sized Enterprises
SOP	Standard Operating Procedure
SPS	Sanitary and Phytosanitary
SRO	Statutory Regulatory Order
SSC	South South Cooperation
SSD	SecurityServiceDivision
SWOT	Strength Weakness Opportunities Threats

TAO	Tariff Analysis Online
TCs	Technology Centers
TDAB	Tourism Developers Association of Bangladesh
TGA	Therapeutic Goods Administration
TMED	Technical and Madrasa Education Division
TOAB	Tour Operators Association of Bangladesh
ToT	Training of Trainers
TRIPS	The Agreement on Trade-Related Aspects of Intellectual Property Rights
TRSG	Trade Roadmap for Sustainable Graduation
TSE	Transmissible Spongiform Encephalopathy
TSP	Triple Superphosphate
U.S.	United States
UAE	United Arab Emirates
UGC	University Grants Commission
UHC	Upazila Health Care
UK	United Kingdom
UN	United Nations
UN-CDP	United Nations-Committee for Development Policy
UNCTAD	United Nations Conference on Trade and Development
UNDESA	United Nations Department of Economic and Social Affairs
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nation Population Fund
UP	Utilization Permission
UPS	Uninterruptible Power Supply
USA	United States of America
USB	Universal Serial Bus
USD	US Dollar
USDA	United States Department of Agriculture
USFDA	United States Food and Drug Administration
USGBC	U.S. Green Building Council
VAT	Value-Added Tax
VOC	Volatile Organic Compound
VoA	Visa on Arrival
WB	World Bank
WHO	World Health Organizations
WIFI	Women ICT Frontier Initiative
WIP	Women in Parliaments
WIPO	World Intellectual Property Organization
WTO	World Trade Organization
WTTC	World Travel and Tourism Council

## নির্বাহী সারসংক্ষেপ

জাতিসংঘের কমিটি ফর ডেভেলপমেন্ট পলিসির (সিডিপি) উদ্যোগে স্বল্পোন্নত দেশসমূহের স্বল্পোন্নত পর্যায়ে থেকে উত্তরণের সক্ষমতা যাচাই করতে ইতিমধ্যে দুটি ত্রিবার্ষিক পর্যালোচনা করা হয়েছে। প্রথম পর্যালোচনা করা হয় ২০১৮ সালে এবং দ্বিতীয়টি ২০২১ সালে। উভয় ত্রিবার্ষিক পর্যালোচনায় বাংলাদেশ তিনটি মানদণ্ড সফলভাবে পূরণ করতে পেরেছে। এর ফলে বাংলাদেশ ২০২৬ সালে উন্নয়নশীল দেশ হিসেবে স্বীকৃতি পাওয়ার অপেক্ষায় আছে। এই স্বীকৃতি গত এক দশকে দেশে চমকপ্রদ অর্থনৈতিক প্রবৃদ্ধির গতিপথকেই নির্দেশ করে। পাশাপাশি এ অর্জন দেশকে কিছু চ্যালেঞ্জের সম্মুখীন করবে। এসব চ্যালেঞ্জের মধ্যে উল্লেখযোগ্য-বাজার প্রবেশাধিকার, অগ্রাধিকারভিত্তিক সুবিধা হ্রাস, ডব্লিউটিওর চুক্তি অনুযায়ী ভর্তুকি প্রদানে বিধিনিষেধ, বিভিন্ন আঞ্চলিক ও দ্বিপাক্ষিক চুক্তিগুলোয় অগ্রাধিকারমূলক সুবিধা হ্রাস, মূল্য সংযোজনের শর্ত যোগ এবং অতিরিক্ত শুল্ক আরোপ ইত্যাদি।

তবে সবচেয়ে বেশি প্রভাবিত হবে দেশের রপ্তানি খাত। কারণ মোট রপ্তানির ৭১ শতাংশই সম্পন্ন হয় উন্নত এবং উন্নয়নশীল দেশের অগ্রাধিকারমূলক ক্ষিমের আওতায়। এই প্রেক্ষাপটে চ্যালেঞ্জ মোকাবেলার জন্য রপ্তানিমুখী শিল্পগুলোর সক্ষমতা বাড়াতে বাংলাদেশকে প্রয়োজনীয় পদক্ষেপ গ্রহণ করতে হবে। একটি সমন্বিত বাণিজ্য রোডম্যাপ বেসরকারি খাতসহ নীতিনির্ধারক ও অন্যান্য স্টেকহোল্ডারদের প্রয়োজনীয় পদক্ষেপ সম্পর্কে অবহিত করতে পারে।

বিশ্ব বাণিজ্য সংস্থার Enhanced Integrated Framework (EIF)-এর সহায়তায় বাংলাদেশ ২০১৬ সালে Diagnostic Trade Integration Study (DTIS) সম্পন্ন করেছে। এ গবেষণায় বাংলাদেশের রপ্তানি খাতের প্রতিযোগিতা সক্ষমতা বৃদ্ধি করতে ৪ টি পিলার সমন্বিত কৌশল সুপারিশ করা হয়েছিল। ১. নতুন বাজারে প্রবেশ করা ২. নতুন পণ্য প্রচলন করা ৩. শ্রমিক ও ভোক্তাদের কল্যাণে গুরুত্ব দেয়া ৪. সহায়ক পরিবেশ বজায় রাখা। DTIS ২০১৬ পরিচালনা করার সময় বাংলাদেশের এলডিসি গ্র্যাজুয়েশন পরিস্থিতি স্পষ্ট ছিল না বিধায় বিবেচনায় নেওয়া যায়নি। এরই ধারাবাহিকতায়, বাণিজ্য মন্ত্রণালয়ের উদ্যোগে EIF এর অর্থায়নে বাংলাদেশ ফরেন ট্রেড ইনস্টিটিউট LDC Graduation এর প্রেক্ষিতে বাণিজ্য-সম্পর্কিত চ্যালেঞ্জগুলির সনাক্তকরণ এবং চ্যালেঞ্জগুলি অতিক্রম করার লক্ষ্যে ১২টি সেক্টরের ট্রেড রোডম্যাপ তৈরি করার জন্যে উক্ত গবেষণাটি পরিচালনা করেছে। গবেষণাটিতে DTIS ২০১৬ এর ৪টি পিলারভিত্তিক যে অ্যাকশন ম্যাট্রিক্স বা কর্মপরিকল্পনা প্রস্তাব করা হয়েছিল তার পর্যালোচনা ও হালনাগাদ তথ্য সন্নিবেশ করা হয়েছে। পাশাপাশি, বাণিজ্য খাতসমূহের উপর কোভিড-১৯ এর প্রভাব বিশ্লেষণ করা হয়েছে। উপরন্তু, DTIS এর যে বিষয়গুলো টেকসই উন্নয়ন লক্ষ্যমাত্রা অর্জনে ভূমিকা রাখতে পারে তা চিহ্নিত করা হয়েছে।

এই গবেষণাটি রপ্তানিমুখী পণ্য ও সেবার মোট ১২টি খাত: তৈরি পোশাক বা আরএমজি (ওভেন ও নিটওয়ার), ঔষধ শিল্প ওএপিআই, চামড়া ও চামড়াজাত পণ্য, নন-লেদার ফুটওয়ার, হালকা প্রকৌশল (লাইট ইঞ্জিনিয়ারিং), ইলেক্ট্রনিকস ও ইলেক্ট্রিক্যাল পণ্য, জাহাজ নির্মাণ, প্লাস্টিক পণ্য, কৃষিপণ্য এবং প্রক্রিয়াজাতকৃত খাবার, মৎস্য ও প্রাণীসম্পদ, পর্যটন, সফটওয়ার এবং আইটি সার্ভিস, নার্সিং ও ধাত্রীসেবার (মিডওয়াইফারি) উপর সম্পন্ন করা হয়েছে। এই গবেষণায় খাতসমূহের strengths, weaknesses, opportunities, threats (SWOT) বিশ্লেষণ করা হয়েছে। পাশাপাশি দুর্বলতাগুলো নিরসন করতে এবং হুমকিসমূহ মোকাবিলায় খাতসমূহের সক্ষমতা বৃদ্ধিতে একটি রোডম্যাপ তৈরি করা হয়েছে। গবেষণা প্রতিবেদনটি বিস্তৃত Literature review, key informant interviews (KIIs) এবং Stakeholder consultations থেকে তৈরি করা হয়েছে। বাংলাদেশ সরকারের বাণিজ্য মন্ত্রণালয় কর্তৃক গঠিত committee of experts প্রতিবেদনটি পর্যালোচনা করে এবং সবশেষে ১২টি খাতের অংশীজনদের কাছ থেকে প্রতিবেদনটি যাচাই করার জন্য একটি validation workshop আয়োজন করা হয়।

### তৈরি পোশাক (নিটওয়্যার এবং ওভেন)

তৈরি পোশাক শিল্পে বাংলাদেশ সরকারের বিশেষ গুরুত্ব রয়েছে। অষ্টম পঞ্চবার্ষিক পরিকল্পনা, ২০২১-২৪ রপ্তানি নীতি এবং জাতীয় শিল্প নীতি ২০২২এ এই শিল্পকে অগ্রাধিকারমূলক খাত হিসেবে ঘোষণা করা হয়েছে। এছাড়াও সরকার এ খাতে বিভিন্ন আর্থিক ও অর্থবহির্ভূত প্রণোদনা দিয়েছে। গবেষণায় দেখা গিয়েছে যে এখানে শ্রমশক্তি বেশ সহজলভ্য, শ্রমব্যয়কম, সামাজিক ও পরিবেশগত কমপ্লায়েন্ট কারখানার পরিস্থিতি এ খাতের গুরুত্বপূর্ণ শক্তি হিসেবে কাজ করে। এছাড়া এ খাতের প্রধান দুর্বলতাগুলো হচ্ছে- আমদানিকৃত কাঁচামালের ওপর অতিনির্ভরশীলতা, অপরিপূর্ণ ট্রেড লজিস্টিক ও এর উচ্চমূল্য, স্থানীয়ভাবে উদ্ভাবনমূলক ডিজাইনের অনুপস্থিতি, স্বল্প শ্রম উৎপাদনশীলতা, পণ্যের বহুমুখিতার অভাব ইত্যাদি।

তবে বাংলাদেশের তৈরি পোশাকশিল্পের বেশ কিছু সম্ভাবনা রয়েছে যা এ খাত কাজে লাগাতে পারে। সরকারের থেকে নীতিগত সহায়তা (নগদ অর্থ প্রণোদনা, শুল্ক ও কর ফেরত নেয়ার সুবিধা, বন্ডেড ওয়্যারহাউজ সুবিধা) গ্রহণ, শুল্কমুক্ত কোটামুক্ত বাজার প্রবেশাধিকার সুবিধা, চীন থেকে কারখানা স্থানান্তর, ম্যান মেড ফাইবার ভিত্তিক পোশাক উৎপাদন, ইউরোপীয় ইউনিয়ন (ইইউ) থেকে পাওয়া জিএসপি সুবিধা বর্ধিতকরণের মতো সুযোগগুলো কাজে লাগিয়ে নিজেদের চ্যালেঞ্জ মোকাবিলা করতে পারে শিল্পকারখানাগুলো। পাশাপাশি এই খাত কিছু ঝুঁকির সম্মুখীন হতে পারে। এসব ঝুঁকি মধ্যে উল্লেখযোগ্য ২০২৬ সালের পর এলডিসি থেকে উত্তরণের পর অগ্রাধিকারমূলক সুবিধা হ্রাস, চলমান বৈশ্বিক অর্থনৈতিক মন্দার স্বল্প ও দীর্ঘমেয়াদি প্রভাব, নিরবিচ্ছিন্ন বিদ্যুৎ ও গ্যাস অপরিপূর্ণতা ইত্যাদি।

গবেষণাটিতে এলডিসিভুক্ত দেশ হতে উত্তরণের পর বাংলাদেশের তৈরি পোশাক খাত যেসব চ্যালেঞ্জের সম্মুখীন হবে তা থেকে উত্তরণের জন্য বেশ কিছু সুপারিশ সম্বলিত একটি রোডম্যাপ যুক্ত করা হয়েছে। সম্ভাবনাময় দেশ ও বাজারগুলোর সাথে বাণিজ্যচুক্তি সম্পন্ন করা, ম্যান মেড ফাইবার ভিত্তিক পোশাক উৎপাদনে সক্ষমতা বৃদ্ধি করা, ইইউ এর থেকে পাওয়া জিএসপি সুবিধা ২০৩০ সাল পর্যন্ত বর্ধিত করার পাশাপাশি জিএসপিপ্লাস এর জন্য ফলপ্রসূ আলোচনা করা, নতুন নতুন বাজার অনুসন্ধান, স্থানীয় ব্র্যান্ডগুলোর আন্তর্জাতিকীকরণে সাহায্য করা এসব সুপারিশের মধ্যে অন্যতম।

### ঔষধ ও এপিআই ইন্ডাস্ট্রি

বাংলাদেশের ঔষধ ইন্ডাস্ট্রি বিগত কয়েক বছর ধরে উল্লেখযোগ্য প্রবৃদ্ধি অর্জন করেছে। স্থানীয় চাহিদার প্রায় ৯৮ শতাংশই মিটিয়ে থাকে দেশের ঔষধ শিল্প। এছাড়া যুক্তরাষ্ট্র, যুক্তরাজ্য, কানাডা, অস্ট্রেলিয়া ও ইউরোপীয় ইউনিয়নসহ (ইইউ) বিশ্বের ১৫০ টিরও বেশি দেশে বাংলাদেশের ঔষধ রপ্তানি হয়। তবে এলডিসিভুক্ত দেশগুলোর কাতার থেকে উত্তরণের ফলে বাংলাদেশের ঔষধ শিল্পের ওপরও নানামুখী চাপ সৃষ্টি হবে। ঔষধ খাত মূল্য সংযোজন, পেটেন্ট পরিশোধ এবং ঔষধ উৎপাদনের জন্য লাইসেন্স পেমেন্টের মতো চ্যালেঞ্জের সম্মুখীন হবে। অধিকন্তু এইচএস কোড বিশ্লেষণে দেখা গিয়েছে এ খাতের মোট রপ্তানি আয়ের ৬৭ শতাংশ আসে একটি পণ্য (HS-300490: Other medicaments of mixed or unmixed products, for retail sale) থেকে। আরো অনেক দেশে রপ্তানি বৃদ্ধিতে বাংলাদেশ খুবই সম্ভাবনাময়। গবেষণায় দেখা গিয়েছে যে, শক্তিশালী শিল্প ভিত্তি, প্রতিযোগিতামূলক শ্রমশক্তি, আমদানি বিকল্প ঔষধের জন্য উৎপাদন সুবিধা, সাশ্রয়ী মূল্যে মানসম্পন্ন ঔষধের প্রাপ্যতা ইত্যাদি এই খাতের গুরুত্বপূর্ণ শক্তি হিসেবে কাজ করছে। বিশ্ব বাজারে প্রবেশের বিশাল সুযোগ, এপিআই-এর জন্য করমুক্তি এবং প্রণোদনা, বিশ্বব্যাপী এপিআই বাজারে রপ্তানি সম্ভাবনা ইত্যাদির মতো সুযোগগুলো এই খাতের অন্যতম সম্ভাবনা হিসেবে কাজ করছে। এছাড়া এপিআই আমদানির ওপর অতিনির্ভরশীলতা, এপিআই উৎপাদন সংক্রান্ত বিভিন্ন চ্যালেঞ্জ, জুড এবং ল্যাব টেস্টিং কেন্দ্রের স্বল্পতা, এপিআই পার্কগুলোয় গ্যাস সংযোগ পাওয়া নিয়ে অনিশ্চয়তা, শিল্প পুট প্রদান বিষয়ক চ্যালেঞ্জ, bioequivalence test-এর অভাবের মতো সমস্যা এখানে রয়েছে।



মধ্যে গ্রাজুয়েশনের পূর্বে পাবলিক ডোমেনে যতটা সম্ভব উদ্ভাবন এবং known molecule-গুলো নিশ্চিত করা, পেটেন্ট মূল্য পরিশোধ এড়াতে পেটেন্টযোগ্য molecule-এ স্বনির্ভরতা অর্জন করা, এবং API উৎপাদনে R&D এবং API molecule synthesis-এ বিনিয়োগ বৃদ্ধি করা উল্লেখযোগ্য।

### চামড়া এবং চামড়াজাত পণ্য

চামড়া এবং চামড়াজাত পণ্যশিল্পকে রপ্তানি বহুমুখীকরণের একটি সম্ভাবনাময় খাত হিসেবে চিহ্নিত করা হয়েছে। চল্লিশের দশকের দিকে এই খাতটির যাত্রা শুরু হয়। বর্তমানে বাংলাদেশের চামড়া শিল্প দেশের জিডিপিতে দশমিক ৬ শতাংশ এবং শিল্প উৎপাদনে প্রায় ২ শতাংশ অবদান রাখছে। ২০২১-২২ অর্থবছরে মোট রপ্তানিকৃত পণ্যের ২.৪ শতাংশ ছিল চামড়াজাত পণ্য; সেদিক থেকে এটি এখন বাংলাদেশের দ্বিতীয় বৃহত্তম রপ্তানি খাত। এই সেক্টরের SWOT বিশ্লেষণে এই খাতটির যেসব শক্তিমন্তর দিক প্রকাশিত হয়েছে তা হচ্ছে- প্রতিযোগিতামূলক শ্রম ব্যয়, সহজলভ্য শ্রমিক, কাঁচামালের স্থানীয় উৎস, উদ্যোক্তাদের সক্ষমতা, তৎপরতা, পরিবর্তনশীল পরিস্থিতিতে মানিয়ে নেয়ার মানসিকতা এবং ক্রেতাদের চাহিদা মেটানোর সক্ষমতা। কারখানাগুলোর পরিবেশগত, সামাজিক ও নিরাপত্তা মানরক্ষার ক্ষেত্রে আন্তর্জাতিক নীতিমালাসমূহ পালনে সক্ষমতার অভাব, আমদানিকৃত কাঁচামালের ওপর নির্ভরশীলতা, আর্থিক সীমাবদ্ধতা, সহযোগী শিল্পের ঘাটতিসহ নানা ধরনের দুর্বলতাও রয়েছে খাতটিতে।

সাভার ট্যানারি এস্টেটে একটি ট্যানারি ক্লাস্টার স্থাপন করা গুরুত্বপূর্ণ পদক্ষেপ হলেও কার্যকর বজ্য শোষণাগারের (সিইটিপি) অভাব আন্তর্জাতিক মানদণ্ড রক্ষা এবং লেদার ওয়ার্কিং গ্রুপের সার্টিফিকেট পাওয়ার ক্ষেত্রে বড় বাঁধা হয়ে রয়েছে।

ক্রমবর্ধনশীল আন্তর্জাতিক রপ্তানি বাজার, ২০২১-২০২৪ রপ্তানি নীতিতে সর্বোচ্চ অগ্রাধিকারমূলক খাত হিসেবে স্বীকৃতি পাওয়া, স্থানীয় বাজারে চাহিদা বৃদ্ধি, দেশে এবং বিদেশে বিনিয়োগের সুযোগ, সরকারের নীতি সমর্থন, উন্নত ও উন্নয়নশীল দেশগুলো থেকে উৎপাদন স্থানান্তরের মতো বেশকিছু সুযোগ এ খাতকে সম্ভাবনাময় করে তুলেছে। কঠোর আন্তর্জাতিক মান ও শর্তের সমস্যা, ভিয়েতনাম ও ভারতের মতো এশিয়ার দেশগুলোর সঙ্গে তীব্র প্রতিযোগিতা, আন্তর্জাতিক বাজারে অগ্রাধিকারভিত্তিক প্রবেশের সুবিধা ও গুরুত্বপূর্ণ কোটামুক্ত সুবিধা হারানো এবং লজিস্টিক সমস্যা এ খাতের প্রধান ঝুঁকি হিসেবে বিবেচিত হচ্ছে।

সরকার চামড়া ও চামড়াজাত পণ্য থেকে বর্তমানের বার্ষিক ১ বিলিয়ন মার্কিন ডলার রপ্তানি আয়কে ২০৩০ সালের মধ্যে ১০ বিলিয়ন মার্কিন ডলারে উন্নীত করার লক্ষ্যে কাজ করছে। এলডিসিভুক্ত দেশ থেকে উত্তরণের পর প্রতিকূলতা প্রশমিত করার জন্য বেশকিছু পদক্ষেপ নিতে হবে। এলডিসি থেকে উত্তরণের সম্ভাব্য বাণিজ্য লোকসান কাটিয়ে উঠতে বিদ্যমান প্রণোদনাগুলো কাজে লাগিয়ে উৎপাদনশীলতা বাড়াতে হবে।

স্থানীয় কাঁচামালের ব্যবহার, ব্যাকওয়ার্ড লিংকেজ ব্যবহার এক্ষেত্রে বেশ গঠনমূলক কাজ হবে। সবচেয়ে গুরুত্বপূর্ণ বিষয় হচ্ছে পরিবেশগত, সামাজিক এবং মান সংশ্লিষ্ট কমপ্লায়েন্স নিশ্চিত করা, এলডরিউজি সার্টিফিকেশন পেতে সক্ষমতা বাড়ানো। এলডিসি সংক্রান্ত চ্যালেঞ্জগুলো মোকাবিলা করে এ খাতের রপ্তানি বৃদ্ধির কৌশল সম্বলিত একটি রোডম্যাপ প্রস্তাব করা হয়েছে গবেষণাটিতে।

### নন-লেদার ফুটওয়্যার

২০২৭ সাল নাগাদ নন-লেদার ফুটওয়্যারের বৈশ্বিক বাজারের আকার দাঁড়াবে ৩৬৫.৩০ বিলিয়ন মার্কিন ডলার। বিশ্ববাজারে জুতার সবচেয়ে বড় আমদানিকারক যুক্তরাষ্ট্র। ২০২১-২২ অর্থবছরে বাংলাদেশের নন-লেদার ফুটওয়্যার রপ্তানি ৪৫০ মিলিয়ন মার্কিন ডলারে পৌঁছেছে। বিশ্বের রপ্তানি হওয়া বেশিরভাগ ফুটওয়্যার এশিয়ার দেশগুলো সরবরাহ করে; এর মধ্যে চীন ও ভিয়েতনাম শীর্ষ রপ্তানিকারক। জুতা উৎপাদনে বাংলাদেশ বিশ্বব্যাপী ৮ম স্থানে রয়েছে এবং ২০১৬ থেকে ২০২১ সাল পর্যন্ত বাংলাদেশের জুতা উৎপাদন প্রতিবছর গড়ে ৬ শতাংশ হারে বৃদ্ধি পেয়েছে। অন্যদিকে ২০২১-২০২২ অর্থবছরে এ খাতের রপ্তানি বৃদ্ধির হার ছিলো ৩০ শতাংশ।

নন-লেদার বা সিনথেটিক ফুটওয়্যার রপ্তানি বৃদ্ধির পাশাপাশি PUMA, H&M এবং Skechers এর মতো আন্তর্জাতিক ব্র্যান্ডগুলোর সাথে অংশীদারিত্বের সুবাদে এই প্রবৃদ্ধি বেড়েছে।

বাংলাদেশের নন-লেদার ফুটওয়্যার খাত নিয়ে SWOT বিশ্লেষণে প্রতীয়মান হয় স্বল্পমূল্যে শ্রমিক পাওয়া ও কাঁচামালের সহজলভ্যতা এ খাতের অন্যতম শক্তি। তবে আমদানি নির্ভরশীলতা, বিদ্যুতের ঘাটতি এবং অরিজিনাল ইকুইপমেন্ট ম্যানুফ্যাকচারিং (ওইএম) থেকে অরিজিনাল ডিজাইন ম্যানুফ্যাকচারিং (ওডিএম) এ স্থানান্তরের ধীরগতি, উচ্চ বৈশ্বিক চাহিদা ও বিনিয়োগ সম্ভাবনার সুযোগ, এশিয়ার অন্যান্য দেশ থেকে সৃষ্ট প্রতিযোগিতা, এসএমইর জন্য তহবিল ঘাটতি এবং এফডিআই অনুমোদন বিলম্বিত করার মতো দুর্বলতাও রয়েছে খাতটিতে। গবেষণাটিতে শিল্পউৎপাদন বৃদ্ধি, ওডিএম সক্ষমতা বৃদ্ধি, ব্যাকওয়ার্ড লিংকেজ উন্নত করা, বিদ্যমান প্রণোদনার ব্যবহার, আন্তর্জাতিক গুণগতমানের শর্ত নিশ্চিত করা, বাজার প্রবেশাধিকার বৃদ্ধি, নতুন বিনিয়োগ আকর্ষণ এবং এলডিসিভুক্ত দেশ হতে উত্তরণের পর সম্ভাব্য চ্যালেঞ্জ মোকবিলায় প্রণোদনা স্কিম গ্রহণ এবং রপ্তানি প্রবৃদ্ধি বাড়াতে একটি রোডম্যাপ প্রণয়ন করা হয়েছে।

### লাইট ইঞ্জিনিয়ারিং, ইলেক্ট্রনিকস এবং ইলেক্ট্রিক্যাল পণ্য

বাংলাদেশের অর্থনীতিতে লাইট ইঞ্জিনিয়ারিং, ইলেক্ট্রনিকস এবং ইলেক্ট্রিক্যাল খাত উল্লেখযোগ্য অবদান রেখে চলেছে। দেশের ৪০ হাজার সক্রিয় লাইট ইঞ্জিনিয়ারিং কোম্পানিতে ছয় থেকে আট লাখ কর্মী কর্মরত আছে। SWOT বিশ্লেষণে দেখা গিয়েছে, ইলেক্ট্রনিকস এবং ইলেক্ট্রিক্যাল পণ্যসহ হালকা প্রকৌশল খাতে যেমন শ্রমশক্তি ও অবকাঠামোর (সড়ক, রেল ও নদীপথে পরিবহন) সহজলভ্যতা রয়েছে তেমনি মানবপুঁজিরও সহজপ্রাপ্যতা রয়েছে, এগুলো এ খাতের অন্যতম শক্তি। পুঁজিসহজলভ্য না হওয়া, দক্ষ মানবসম্পদের অভাব, আন্তর্জাতিক মানসম্পন্ন পরীক্ষা ও সার্টিফিকেট প্রদানকারী কেন্দ্রের অনুপস্থিতি, ব্যবসার অধিক খরচ, নিরবিচ্ছিন্ন বিদ্যুৎ সংযোগ না থাকা, সুপারভাইজার, ম্যানেজার ও শিল্প শ্রমিকদের প্রয়োজনীয় প্রশিক্ষণের অভাব এবং স্থানীয়ভাবে নকল ইলেক্ট্রনিক পণ্যগুলো এ খাতের অন্যতম দুর্বলতা। শুদ্ধমুক্ত বাজার সুবিধা, সহায়ক নীতিমালা ও প্রণোদনা, রপ্তানি গন্তব্যের দেশগুলোর সাথে মুক্ত বাণিজ্য চুক্তি অথবা কমপ্রিহেনসিভ ইকোনমিক পার্টনারশিপ এগ্রিমেন্ট এর সম্ভাবনা, বর্ধনশীল মধ্যম আয়ের জনগোষ্ঠী নিয়ে বৃহৎ স্থানীয় বাজারের মতো নানাবিধ সুবিধাও রয়েছে খাতটির।

২০২৬ সালে এলডিসি থেকে উত্তরণের পর অগ্রাধিকারমূলক সুবিধা কমে যাওয়ার মতো কিছু সমস্যা সৃষ্টি হবে। এর সাথে নিরবিচ্ছিন্ন গ্যাস ও বিদ্যুৎ সরবরাহের সংকট, দীর্ঘমেয়াদী ঋণ সুবিধা না

পাওয়া, পরিবেশগত দূষণ, ট্রেড লজিস্টিকের উচ্চমূল্য এ খাতের প্রবৃদ্ধির অন্যতম অন্তরায়। এ গবেষণায় এলডিসি থেকে উত্তরণের পর এ খাতে যেসব সমস্যা হবে তা মোকাবেলার জন্য প্রস্তাবিত রোডম্যাপে কিছু সুপারিশ করা হয়েছে। সুপারিশসমূহের মধ্যে শক্তিশালী ব্যাকওয়ার্ড লিংকেজ ইন্ডাস্ট্রি প্রতিষ্ঠা, কমন ফ্যাসিলিটি সেন্টার (সিএফসি) স্থাপন, রপ্তানি বাজারে বৈচিত্র্য আনা এবং এক্সপোর্ট রিস্ক ফান্ড (ইআরএফ) গঠন করা উল্লেখযোগ্য।

### প্লাস্টিক

স্থানীয় ও আন্তর্জাতিক বাজারে প্লাস্টিক পণ্যের চাহিদা বেড়েই চলেছে। বিশ্বে মাথাপিছু ৫০ কেজি করে প্লাস্টিক ব্যবহৃত হয়। ২০২১ সালে সারা বিশ্বে ৮০৬ বিলিয়ন ডলার মূল্যমানের প্লাস্টিক পণ্য রপ্তানি হয়েছে; আর এ সময় রপ্তানিতে শীর্ষে ছিল চীন। বর্তমানে বাংলাদেশের জিডিপিতে প্লাস্টিক খাতের অবদান ১ শতাংশ। ২০২১-২২ অর্থবছরে বাংলাদেশ ১৬৬.২৫ মিলিয়ন ডলার মূল্যমানের প্লাস্টিক পণ্য রপ্তানি করেছে। SWOT বিশ্লেষণে প্রতীয়মান হয়েছে তৈরি পোশাক, প্রক্রিয়াজাতকৃত খাবার, স্বাস্থ্যসেবা, খেলনার মতো শিল্পগুলোর সাথে প্লাস্টিক খাত প্রত্যক্ষ এবং পরোক্ষভাবে জড়িত। এছাড়া এ খাতে নারী কর্মসংস্থান বৃদ্ধিকে শক্তি হিসেবে দেখা হয়। তবে আমদানিকৃত কাঁচামালের ওপর অতিনির্ভরশীলতা, টেস্টিং ল্যাবের অভাব, অপরিপূর্ণ ওয়ারাহাউস না থাকা এবং শিল্প হাতিয়ার হিসেবে হাঁচ শিল্প না

থাকাকে এ খাতের দুর্বলতা হিসেবে দেখা হয়েছে। আন্তর্জাতিক ও স্থানীয় বাজারে প্লাস্টিক পণ্যের চাহিদা বৃদ্ধি, ক্রমবর্ধমান কমপ্লায়েন্ট কারখানায় উচ্চমানসম্পন্ন আরএমজি সংশ্লিষ্ট প্লাস্টিক Accessories তৈরির মতো বিষয়গুলো প্লাস্টিক খাত সম্প্রসারণের অন্যতম সুযোগ। গবেষণায় আধুনিক প্রযুক্তির অভাব, রপ্তানির ক্ষেত্রে দীর্ঘ ট্রানজিট টাইম, অস্বাভাবিক পরিবহন ব্যয় এবং অপরিপূর্ণ তহবিলকে এ খাতের প্রধান হুমকি হিসেবে চিহ্নিত করা হয়েছে।

উক্ত সমস্যাসমূহ সমাধানের জন্য গবেষণায় প্রস্তুত রোডম্যাপে পরিবেশগত, সামাজিক ও গুণগত মান সম্পর্কিত কমপ্লায়েন্স উন্নত করা, পুঁজির যোগান, প্রযুক্তিগত দক্ষতা বৃদ্ধি, বিভিন্ন মোল্ড এবং ডাই এর টুলিং প্রক্রিয়া উন্নয়ন করা এবং গবেষণা ও উন্নয়নে আরো বিনিয়োগ করার পরামর্শ দেয়া হয়েছে।

### জাহাজনির্মাণ খাত

একসময় বাংলাদেশ জাহাজভাঙা শিল্পের দেশ হিসেবে পরিচিত থাকলেও এখন নিজেদেরকে জাহাজনির্মাণকারী দেশ হিসেবে রূপান্তর করেছে। ছোট ও মাঝারি আকারের জাহাজের পাশাপাশি ডেনমার্ক, জার্মানি, ফিনল্যান্ড, নরওয়ের মতো ইউরোপীয় দেশের উত্তর সাগর এবং বাল্টিক সাগরের জন্য সমুদ্রগামী বহুমুখী জাহাজও তৈরি হচ্ছে বাংলাদেশে। তবে শীর্ষস্থানীয় জাহাজনির্মাণকারী দেশগুলোর তুলনায় বাংলাদেশের জাহাজশিল্প অনেক ক্ষুদ্র। বাংলাদেশের দক্ষ মানবশক্তি এবং কম খরচে শ্রমশক্তি পাওয়ার মতো সুবিধা রয়েছে। বৈশ্বিক জাহাজশিল্পের বর্তমান আকার ২০০ বিলিয়ন মার্কিন ডলার। অবকাঠামো উন্নয়ন এবং গবেষণায় আরো বিনিয়োগের মাধ্যমে বৈশ্বিকজাহাজ নির্মাণবাজারে নিজেদের সম্ভাবনাকে কাজে লাগাতে পারে বাংলাদেশ।

রপ্তানিকৃত পণ্যের সম্প্রসারণে জাহাজনির্মাণ খাতকে গুরুত্বপূর্ণ মাধ্যম হিসেবে দেখা হচ্ছে। SWOT বিশ্লেষণে প্রতিযোগিতাসক্ষম ও সহজলভ্য শ্রমশক্তি এবং যুদ্ধজাহাজ ও স্বল্প খরচে জাহাজ নির্মাণের সক্ষমতাকে এ শিল্পের শক্তি হিসেবে উল্লেখ করা হয়েছে। তবে খরচ, ঋণের উচ্চ সুদহার, সভরেন গ্যারান্টির অভাব, ব্যাংক গ্যারান্টির উচ্চ ফি, উচ্চ করপোরেট কর এ খাতের প্রতিবন্ধকতা হিসেবে চিহ্নিত করা হয়েছে। দেশের রপ্তানি ও অর্থনৈতিক প্রবৃদ্ধি সম্প্রসারণের জন্য এই সমস্যাগুলোর সমাধান জরুরী বলে উল্লেখ করা হয়েছে।

এই প্রেক্ষাপটে প্রস্তুত রোডম্যাপে স্টেকহোল্ডাররা জাহাজ নির্মাণ শিল্প উন্নয়ন নীতিমালা ২০২১ বাস্তবায়নের ওপর জোর দিয়েছেন। এই নীতিমালায় আর্থিক সহায়তা, ব্যাংক গ্যারান্টি এবং সভরেন ক্রেডিট গ্যারান্টির পাশাপাশি এনবিআর থেকে প্রণোদনা ও করমুক্তির স্পষ্ট নির্দেশনা দেয়া হয়েছে।

### কৃষি পণ্য ও প্রক্রিয়াজাত খাবার

কৃষি খাত বাংলাদেশের প্রবৃদ্ধি ও গ্রামীণ উন্নয়নের প্রধান পরিচালক। ২০২১-২২ অর্থবছরে বাংলাদেশের জিডিপিতে কৃষিখাতের অবদান ছিল প্রায় ১৩ দশমিক ২ শতাংশ। মোট জনশক্তির ৪০ দশমিক ৬০ শতাংশই এখানে কর্মরত। ২০২১ সালে সারা বিশ্বে ২১৬২ বিলিয়ন ডলার মূল্যের কৃষিপণ্য রপ্তানি হয়েছে। SWOT বিশ্লেষণে বহুমুখী ও বিভিন্ন ধরনের ফসল উৎপাদন, নারীসহ শ্রমশক্তির সহজলভ্যতা, অনুকূল জলবায়ু এবং উর্বর জমি ও পানির মতো প্রাকৃতিক সম্পদের সহজপ্রাপ্যতা এখাতের অন্যতম শক্তি হিসেবে উল্লেখ করা হয়েছে। অন্যদিকে পর্যাপ্ত অবকাঠামোর অভাব ও উচ্চ প্রযুক্তির ব্যবহার না হওয়া অথবা উন্নত কৃষি প্রযুক্তি না থাকা, ফসল তোলার পর লোকসান, ম্যানুফ্যাকচারিং কন্ট্রাক্টের অনুমোদন পেতে প্রতিবন্ধকতা, দক্ষ মানবসম্পদের অভাব এবং বহুমুখী কাজে ব্যবহার উপযোগী বিশেষ কোল্ডস্টোরেজের অভাবকে এ খাতের অন্যতম দুর্বলতা হিসেবে চিহ্নিত করা হয়েছে। গবেষণায় বলা হয়েছে আন্তর্জাতিক বাজারে চাহিদা, প্রত্যক্ষ ও পরোক্ষ বিভিন্ন শিল্পের সাথে সংযোগ, সহায়ক সরকারি নীতিমালা এখাতের শক্তিশালী দিক। তবে এলডিসি থেকে উত্তরণের পর বাংলাদেশ সম্ভবত কৃষিখাতে ভতুর্কি দিতে পারবে না। এর ওপর স্বীকৃত ল্যাবরেটরির অনুপস্থিতি, ব্যাংক থেকে সহজে ঋণ না পাওয়া, প্রাকৃতিক দুর্যোগ, অতিমাত্রায় পরিবহন ব্যয়, মার্কেটিং চ্যানেলে মধ্যস্থত্বভোগীদের উপস্থিতিতে হুমকি হিসেবে চিহ্নিত করা হয়েছে।

গবেষণার প্রস্তাবিত রোডম্যাপে নিরাপদ ও ভালোমানের খাবার নিশ্চিত করতে পদক্ষেপ গ্রহণ, ফসল কর্তন পরবর্তীপ্রক্রিয়া আরো উন্নত করা, পণ্যের গুণগত মান রক্ষায় অর্থায়ন ও কমপ্লায়েন্স বজায় রাখা এবং রপ্তানিযোগ্য কৃষি পণ্যের মান ধরে রাখার মতো পরামর্শ দেয়া হয়েছে।

## মৎস্য ও প্রাণিসম্পদ খাত

### মৎস্য খাত

অভ্যন্তরীণ জলাশয় থেকে মাছ ধরায় বাংলাদেশ তৃতীয়। অন্যদিকে জলজ চাষের জন্য পঞ্চম এবং সামুদ্রিক মাছ উৎপাদনে বিশ্বেগারতম বাংলাদেশ। ২০২১-২২ অর্থবছরে মৎস্য খাতের জিডিপি প্রবৃদ্ধি ছিল ২.৮ শতাংশ এবং সামগ্রিক কৃষিখাতে মৎস্য শিল্পের অবদান ছিল ২১.৮৩ শতাংশ। স্থানীয়ভাবে যেমন মাছের চাহিদা বাড়ছে তেমনি দেশের রপ্তানি আয়ের ক্ষেত্রেও মৎস্যশিল্প গুরুত্বপূর্ণ হয়ে উঠেছে। মাছ ও মাছ থেকে তৈরি পণ্য বিশ্বের ৫২টি দেশে রপ্তানি করে থাকে বাংলাদেশ। এর মধ্যে ইউরোপীয় ইউনিয়ন (ইইউ), যুক্তরাষ্ট্র, জাপান, রাশিয়া এবং চীন প্রধান রপ্তানি বাজার। রপ্তানিকৃত মাছের মধ্যে ইলিশ, চিংড়ি, তেলাপিয়া এবং পাঙাশ অন্যতম। রপ্তানিকৃত মাছের মধ্যে পাঙাশ সম্প্রতি যুক্ত হয়েছে।

সামুদ্রিক ও মিঠা পানির বড় উৎস, সম্ভা শ্রমের সহজলভ্যতা, নতুন নতুন প্রযুক্তি গ্রহণ, মাছের অধিক চাহিদা, জলজ চাষের সম্ভাবনাকে এ খাতের ইতিবাচক দিক হিসেবে উল্লেখ করা হয়েছে SWOT বিশ্লেষণে। আর এ খাতের প্রধান প্রধান দুর্বলতাগুলো হলো, অতিরিক্ত মাছ ধরা, দুর্বল অবকাঠামো, প্রয়োজনীয় নীতিমালা ও তা প্রয়োগের অভাব, জলবায়ু পরিবর্তনের কারণে সমুদ্রপৃষ্ঠের উচ্চতা বৃদ্ধি, পানির তাপমাত্রা পরিবর্তন এবং লবণাক্ততা বেড়ে যাওয়ায় মাছের আবাসস্থলের ওপর পরিবর্তন। এছাড়াও বাজারজাতকরণের দুর্বলতা, গভীর সমুদ্র থেকে মাছ ধরার জন্য দক্ষ জনবল ও ট্রলারের অভাবের মতো সমস্যাও রয়েছে এ খাতে। পাশাপাশি নগদ অর্থ প্রণোদনা, ভালো মানের মাছের খাবারের দুস্প্রাপ্যতার এ খাতের অন্যতম চ্যালেঞ্জ।

এ খাতের উৎপাদনশীলতা ও ব্যবসায়িক সম্ভাবনা বাড়ানোর জন্য প্রতিবন্ধকতাগুলো খতিয়ে দেখে গবেষণাটিতে একটি ট্রেড রোডম্যাপ প্রস্তাব করা হয়েছে। প্রস্তাবিত রোডম্যাপে জেলে এবং মৎস্য খাতের মধ্যবর্তী পর্যায়ের কর্মকর্তাদের জন্য প্রশিক্ষণ কর্মসূচি চালুর সুপারিশ করা হয়েছে। এছাড়াও পর্যাপ্ত মৎস্য অবতরণ কেন্দ্র স্থাপন, শিক্ষা ও গবেষণা প্রতিষ্ঠানগুলোর সাথে সংযোগের মাধ্যমে গবেষণা কার্যক্রমে আরো সহযোগিতা করা, নতুন প্রযুক্তির পরীক্ষামূলক চালনার ব্যবস্থা এবং ফিশারিজ ইকোনমিক জোন গঠনেরও পরামর্শ দেয়া হয়েছে।

### প্রাণিসম্পদ খাত

বাংলাদেশের অর্থনীতিতে প্রাণিসম্পদ খাত উল্লেখযোগ্য অবদান রাখছে। খাতটি কর্মসংস্থান সৃষ্টির পাশাপাশি খাদ্য নিরাপত্তা নিশ্চিতও ভূমিকা রেখেছে। ২০২১-২২ অর্থবছরে জিডিপিতে এই খাতের অবদান ছিল ১.৯০ শতাংশ, যেখানে সামগ্রিক কৃষি খাতে এ খাতের অবদান ছিল ১৬.৫২ শতাংশ। বাংলাদেশ উন্নয়নশীল দেশে উত্তরণের পর রপ্তানিতে ভর্তুকিসুবিধা দিতে পারবে না। একটি SWOT বিশ্লেষণে খাতটির শক্তিমত্তা, দুর্বলতা, সুযোগ এবং ঝুঁকির দিকগুলো চিহ্নিত করা হয়েছে। এই খাতের মূল শক্তির মধ্যে প্রথমেই রয়েছে প্রচুর পরিমাণে পোলট্রি (হাঁস-মুরগি) ও গবাদিপশু (গরু-ছাগল) পালনের জন্য অনুকূল পরিবেশ। এছাড়াও আছে শিক্ষিত উদ্যোক্তা, উন্নত সংকর জাত উন্নয়ন সুবিধা, সম্ভাবনাময় দেশীয় জাতের উৎস এবং উচ্চ উৎপাদনশীল গরুর সহজলভ্যতা। অপরদিকে খাতটির মূল দুর্বলতার মধ্যে রয়েছে-প্রাণীখাদ্যের ঘাটতি ও উচ্চ মূল্য, সীমিত পরিমাণে দুধ সংগ্রহ এবং প্রক্রিয়াকরণ সুবিধা, পশু পালনের জন্য অপরিপািত চারণভূমি, বর্জ্য ব্যবস্থাপনা চর্চার অভাব, গবেষণা ও উন্নয়ন অবকাঠামোর সংকট, মানসম্পন্ন জাতের পশুর অভাব, দক্ষ কর্মীর অভাব, স্থানীয়পর্যায়ে বাজারের যথাযথ তথ্যের ঘাটতি। পাশাপাশি অনুন্নত কসাইখানা তথা মাংস প্রক্রিয়াকরণ সমস্যা তো রয়েছেই। উন্নতমানের লাইভস্টক পণ্যের উচ্চ চাহিদা, বাণিজ্যিক পশুর ক্ষেত্রে ক্রস ব্রিডিং অর্থাৎ সংকরায়ণের মাধ্যমে নতুন ও শক্তিশালী জাতের উদ্ভাবন,



পশুপালনে নারী ক্ষমতায়ন ও অংশগ্রহণ এবং হালাল পণ্য রপ্তানির সম্ভাবনা প্রাণিসম্পদ খাতের সুযোগ হিসেবে বিবেচিত হতে পারে। এ খাতের চ্যালেঞ্জের মধ্যে রয়েছে যোগ্যতাসম্পন্ন পশু চিকিৎসকের অভাব, অপরিপূর্ণ ঔষধ ও ভ্যাকসিন, রোগ নির্ণয়ও চিকিৎসা সরঞ্জামের সংকট, গবাদিপশুর শারীরিক সুরক্ষা ঘাটতি, ছোট আকৃতির গবাদিপশুর (যেমন: ছাগল) অতি সংবেদনশীলতা বা দুর্ঘটনাপ্রবণতা ও মৃত্যু। এছাড়া রয়েছে ব্যাংকের সীমিত ঋণসহায়তা, বিভিন্ন রোগের প্রাদুর্ভাব এবং জলবায়ু পরিবর্তনের ঝুঁকি। জলবায়ুপরিবর্তনকে বড় ঝুঁকি হিসেবে দেখা হয় কেননা এর ফলে সৃষ্টি বৃষ্টিপাতের ধরণ, তাপমাত্রা এবং আবহাওয়ায় বড় ধরনের পরিবর্তন ঘটে। গবাদিপশুর উৎপাদন, খাদ্য সুরক্ষা এবং খাদ্য ব্যয় বৃদ্ধিতে যা প্রভাবকের ভূমিকা পালন করে। এলডিসি থেকে উত্তরণের ফলে যে প্রতিকূলতা তৈরি হবে সেটি কমাতে সামগ্রিক উৎপাদন বৃদ্ধি, বিদ্যমান প্রণোদনার যথাযথ ব্যবহার, এবং মাংসের উৎপাদন বাড়াতে পোলট্রির উৎপাদন বৃদ্ধি ও দুগ্ধজাত পণ্যের উৎপাদন বাড়ানো কার্যকর ব্যবস্থা হতে পারে।

গবেষণায় প্রস্তাবিত রোডম্যাপে কমিউনিটিভিত্তিক ক্ষুদ্র দুগ্ধ উৎপাদন খামার গড়ে তুলতে ‘জাতীয় দুগ্ধ উন্নয়ন বোর্ড’ গঠন ত্বরান্বিত করার পরামর্শ দেওয়া হয়েছে। এছাড়া গবেষণাটিতে প্রত্যক্ষ ও পরোক্ষভাবে জড়িত বেসরকারি পর্যায়ে গবাদিপশু মোটাতাজাকরণের পদ্ধতি উন্নত করার পরামর্শ দেওয়া হয়েছে। একই সঙ্গে অপ্রচলিত এবং নতুন বাজারে প্রাণিসম্পদ খাতের পণ্য রপ্তানিতে প্রণোদনা চালু করার কথা বলা হয়েছে। পাশাপাশি বিদ্যমান বাজারগুলোয় নেওয়া যেতে পারে নতুন পণ্য রপ্তানির উদ্যোগ। এছাড়া বাণিজ্যসংক্রান্ত তথ্যের জন্য কৃষক নেটওয়ার্ক গড়ে তোলা এবং বাণিজ্যসংক্রান্ত তথ্য প্রচারের জন্য ইন্টারনেটভিত্তিক যোগাযোগ ব্যবস্থা জোরদার করার মাধ্যমে সরকারও বিভিন্ন পদক্ষেপ নিতে পারে।

#### সফটওয়্যার ও তথ্যপ্রযুক্তি সম্পর্কিত সেবা খাত

সফটওয়্যার ও তথ্যপ্রযুক্তি সম্পর্কিত সেবা একটি উদীয়মান খাত, যা বাংলাদেশের অর্থনীতিতে গুরুত্বপূর্ণ অবদান রাখছে। বাংলাদেশের বিশ্ববিদ্যালয়গুলোর তথ্য ও প্রযুক্তি বিভাগসমূহ থেকে প্রতিবছর প্রায় ২৫ হাজার শিক্ষার্থী পাশ করে বের হচ্ছে। এসব শিক্ষার্থীদের যদি ইন্টারনেট অব থিংস বা আইওটি, কৃত্রিম বুদ্ধিমত্তা বা এআইয়ের মতো সর্বাধুনিক প্রযুক্তি খাতে যুক্ত করা যায় তবে বাংলাদেশও খাতটিতে প্রতিযোগিতাসক্ষম হয়ে উঠবে। বিশ্ববিদ্যালয় ও আইটি শিল্প খাতের দুর্বল সম্পর্ক, সাইবার নিরাপত্তা ঝুঁকি, অর্থায়নের অভাব ইত্যাদি খাতটির কয়েকটি চ্যালেঞ্জ হিসেবে হাজির রয়েছে। তথাপি, ডেমোগ্রাফিক ডিভিডেন্ড বা জনমিতিক সুবিধা, আইটি ভিলেজ প্রতিষ্ঠা, দেশব্যাপী যোগাযোগ ব্যবস্থা গড়ে তোলা, অনুকূল নীতিগত কাঠামো (প্রণোদনা প্রদানের ক্ষেত্রে রপ্তানি নীতি ২০২১-২৪’এ শীর্ষ অগ্রাধিকারমূলক খাত), সরকারের স্মার্ট বাংলাদেশ নীতি, রপ্তানির মূল্যের ওপর নগদ প্রণোদনা, ভ্যাট কমানো এবং করপোরেট আয়কর মওকুফের মতো বিষয়গুলো খাতটির প্রসারে সহায়ক ভূমিকা পালন করছে। অপরদিকে, ২০২৬ সালের পর এলডিসি উত্তরণের কারণে Intellectual Property Rights (IPR) বা মেধাস্বত্ত্ব অধিকার নীতি কঠোরভাবে আরোপ, স্থানীয় তথ্যপ্রযুক্তি মানবসম্পদ (এইচআর) সংগ্রহের জন্য বাংলাদেশে বিদেশী সংস্থাগুলোর অনিয়ন্ত্রিত প্রবেশ, ব্যবসা পরিচালনার ক্ষেত্রে উচ্চ ব্যয়, বিদেশে মেধা পাচার, ব্যবসাবান্ধব পরিবেশের অভাবএবং ভাষাগত প্রতিবন্ধকতা খাতটির টেকসই বৃদ্ধির ক্ষেত্রে সবচেয়ে বড় বাধা।

এ গবেষণায়, এলডিসি উত্তরণের চ্যালেঞ্জ মোকাবেলায় বাংলাদেশের সফটওয়্যার ও তথ্যপ্রযুক্তি-সংক্রান্ত সেবা খাতের জন্য প্রণীত রোডম্যাপে বেশ কয়েকটি সুপারিশ করা হয়েছে। এর মধ্যে রয়েছে, সারা দেশে নিরবিচ্ছিন্ন ইন্টারনেট সংযোগ সুবিধার প্রসার, আরো অধিক তথ্যপ্রযুক্তি প্রশিক্ষণ ও ভোকেশনাল বা কর্মমুখী প্রতিষ্ঠান গড়ে তোলা। এছাড়া রয়েছে উদ্ভাবনী পণ্য উৎপাদনের জন্য উদ্ভাবনী সংস্কৃতিকে প্রাতিষ্ঠানিক রূপান্তরে প্রচার ও অনুপ্রেরণা দেওয়া। একই সঙ্গে প্রযুক্তি পণ্যকে বৈচিত্র্যময় করতে আন্তর্জাতিক মানের অবকাঠামো ও কারখানার সঙ্গে বৃহৎ পরিসরে হাই-টেক পার্ক/সফটওয়্যার টেকনোলজি পার্ক/আইটি প্রশিক্ষণ ও ইনকিউবেশন সেন্টার গড়ে তোলার বিষয়েও সুপারিশ করা হয়েছে।

## পর্যটন খাত

সাম্প্রতিক বছরগুলোতে বাংলাদেশের পর্যটন খাত একটি সম্ভাবনাময় খাত হিসেবে আবির্ভূত হয়েছে। ২০২০-২১ অর্থবছরে এ খাতটির মাধ্যমে বাংলাদেশের রপ্তানি হয়েছে ২১৮.১৩ মিলিয়ন মার্কিন ডলার যা পূর্ববর্তী অর্থবছরে ছিল ৩১৮.৫০ মিলিয়ন মার্কিন ডলার। বৈশ্বিকজিডিপিতে পর্যটন ও ভ্রমণ খাতের অবদান ১০.৩ শতাংশ। ২০২১ সালে বৈশ্বিক পর্যটন ও ভ্রমণ খাতের আকার ছিল ৯.৬ ট্রিলিয়ন ডলার। জাতীয় পর্যটন নীতিমালা ২০১০ এবং বাংলাদেশ পর্যটন বোর্ড আইন ২০১০-এর আওতায় এদেশের পর্যটন খাত নিয়ন্ত্রিত এবং পরিচালিত হয়। রপ্তানি নীতিও এ আইনের আওতাভুক্ত। পর্যটন খাত সংশ্লিষ্ট সরকারি ও বেসরকারি খাতের অংশীজনদের অংশগ্রহণে এ খাতের একটি SWOT (সক্ষমতা, দুর্বলতা, সুযোগ ও ঝুঁকি) বিশ্লেষণে দেখা গেছে, বাংলাদেশের পর্যটন খাতের অবকাঠামো যথাযথ উন্নত নয়। চিত্তবিনোদনমূলক ও অবকাশযাপন উভয় ক্ষেত্রেই পর্যাপ্ত সুযোগ সুবিধা নেই। অপরিপূর্ণ নতুন বিনিয়োগ ও প্রত্যক্ষ বিদেশী বিনিয়োগের (এফডিআই) অভাব, দক্ষ জনশক্তির ঘাটতি, অত্যধিক পণ্য ও পরিষেবা ব্যয় এবং ই-ভিসা প্রক্রিয়ার সমস্যা তো রয়েছেই। এছাড়া বিদেশী মুদ্রায় পেমেটসংক্রান্ত জটিলতা খাতটির সম্প্রসারণে সবচেয়ে বড় প্রতিবন্ধকতা হিসেবে চিহ্নিত হয়েছে। চ্যালেঞ্জ সত্ত্বেও, এই খাতে কর্মসংস্থানের সুযোগ সৃষ্টির পাশাপাশি সামাজিক ও সাংস্কৃতিক বিপুল সম্ভাবনা রয়েছে। কোভিড-১৯ মহামারীর কারণে পর্যটন খাত তীব্র সংকটের মুখে পড়ে। এর পরে খাতটি ধীরে ধীরে পূর্বের অবস্থায় ফিরে আসছে।

গবেষণায় প্রস্তাবিত রোডম্যাপে কর মওকুফ, নীতিগত সহায়তা, বিশেষ করে বাজেট সহায়তা এবং কম সুদের ঋণ প্রদানের প্রস্তাব করা হয়েছে যা স্থানীয় উদ্যোক্তা ও ব্যবস্থাপকদের উৎসাহিত করতে পারে। এছাড়া পর্যটন পণ্য বা আকর্ষণ কার্যক্রমে মনোযোগ খাতটির প্রসারণে অবদান রাখতে পারে। এর পাশাপাশি প্রয়োজনীয় অবকাঠামো উন্নয়ন, দক্ষ জনশক্তি গড়ে তোলা এবং পর্যটনবান্ধব ওয়েবসাইট বাংলাদেশের প্রাকৃতিক ও সাংস্কৃতিক ঐতিহ্য পরিদর্শনে স্থানীয় ও আন্তর্জাতিক পর্যটকদের উদ্বুদ্ধ করতে পারে।

## নার্সিং ও ধাত্রীসেবা খাত

সার্বজনীন স্বাস্থ্যসেবা, রোগীর নিরাপত্তা ও দুর্যোগ প্রস্তুতিসহ জাতীয় ও আন্তর্জাতিক স্বাস্থ্য সুরক্ষার লক্ষ্যমাত্রা অর্জনে অত্যন্ত গুরুত্বপূর্ণ খাত নার্সিং ও ধাত্রীসেবা। বিশ্বব্যাপী প্রতি ১০ হাজার জনসংখ্যার মধ্যে নার্সের সংখ্যা ৩৬.৯ জন। ২০৩০ সালের মধ্যে ১৫.৫ মিলিয়ন স্বাস্থ্যসেবা পেশাজীবীর চাহিদা তৈরি হবে বলে আশা করা হচ্ছে। অন্যদিকে বর্তমানে বিশ্বব্যাপী ৯ লাখ ধাত্রীর ঘাটতি রয়েছে, যা ২০৩০ সালের মধ্যে ৭ লাখ ৫০ হাজারে নেমে আসবে বলে ধারণা করা হচ্ছে। রেজিস্টার্ড বা নিবন্ধিত নার্সদের বৃহত্তম সরবরাহকারী দেশ ফিলিপাইন। দ্বিতীয়স্থানে রয়েছে আমাদেরপ্রতিবেশী দেশ ভারত। বিশ্বেনার্স ও স্বাস্থ্যসেবা কর্মী আমদানিতে শীর্ষে রয়েছে যুক্তরাষ্ট্র ও যুক্তরাজ্য। ১৯৮৫ থেকে ২০২২ সালের মধ্যে বাংলাদেশমোট ৪ হাজার ২৪৫ জন নার্স রপ্তানিতথা বিদেশে পাঠিয়েছে। দেশে বর্তমানে স্নাতক ও স্নাতকোত্তর ডিগ্রির পাশাপাশি নার্সিং, মিডওয়াইফারি এবং অর্থোপেডিক ডিপ্লোমাসহ প্রতি বছর ৩০ হাজারের অধিক নার্স ও মিডওয়াইফ তৈরির সক্ষমতা রয়েছে। বাংলাদেশের নার্সিং ও মিডওয়াইফারি খাতের শক্তির দিক হলো- মানসম্মত শিক্ষা ও বার্ষিক ৩৫ হাজার নার্স ভর্তির সক্ষমতা। খাতটির দুর্বল দিক হলো-লাইসেন্সিং পরীক্ষার জন্য সুনির্দিষ্ট জ্ঞান ও পাঠ্যক্রম কার্যকরে দক্ষতার ঘাটতি এবং ভাষাগত প্রতিবন্ধকতা। সুযোগের মধ্যে রয়েছে, কর্মসংস্থানের উচ্চ চাহিদা এবং সরকারী নীতিগত সহায়তা। অন্যদিকে চ্যালেঞ্জের মধ্যে রয়েছে, বিশ্ব স্বাস্থ্য সংস্থার (ডব্লিউএইচও) সেইফগার্ড কর্মসূচি, তীব্র প্রতিযোগিতা ও এ পেশার প্রতি নেতিবাচক সামাজিক দৃষ্টিভঙ্গি।

বাংলাদেশের নার্সিং ও ধাত্রীসেবা খাত থেকে বিদেশে কর্মী পাঠানো তথা রপ্তানি বৃদ্ধির সুযোগ রয়েছে। সেক্ষেত্রে নার্সিং শিক্ষকদের ঘাটতি পূরণ এবং এই সম্ভাবনাময় খাতটিকে কাজে লাগাতে কিছু প্রস্তাব রোডম্যাপে অন্তর্ভুক্ত করা হয়েছে। এর মধ্যে রয়েছে-উন্নত শিক্ষা ও পাঠ্যক্রম বিকাশের জন্য সুযোগ তৈরি করা, শিক্ষকদের জন্য প্রশিক্ষণ ইনস্টিটিউট স্থাপন করা ও বৈশ্বিকস্বাস্থ্যখাতে প্রবেশের সুযোগ বৃদ্ধি করা ইত্যাদি।



LDC গ্রাজুয়েশনের পরে উল্লিখিত ১২টি সেক্টর যেসকল চ্যালেঞ্জের সম্মুখীন হবে তার মধ্যে; অগ্রাধিকারভিত্তিক শুল্ক সুবিধা বিলোপ, কঠোরতর রুলস অব অরিজিন এবং প্রগোদনা প্রদানে বিধিনিষেধ অন্যতম। প্রাথমিক রপ্তানি খাত হিসেবে, তৈরি পোষাক খাত ইইউ, কানাডা এবং অস্ট্রেলিয়া, যুক্তরাজ্য, জাপান, দক্ষিণ কোরিয়া ইত্যাদিতে অগ্রাধিকারমূলক শুল্ক সুবিধা হারানোর কারণে রপ্তানি উল্লেখযোগ্যভাবে হ্রাসের সম্মুখীন হতে পারে। ঔষধ শিল্প উল্লেখযোগ্য প্রতিবন্ধকতার মুখোমুখি হতে পারে কারণ এটি মূলত WTO-এর TRIPS এর উপর নির্ভরশীল, যা ১ জানুয়ারী ২০৩৩ পর্যন্ত LDC-এর ফার্মাসিউটিক্যাল পণ্যগুলির পেটেন্ট সুরক্ষা এবং লাইসেন্সিং বাধ্যবাধকতায় বিশেষ ছাড় প্রদান করে। LDC থেকে উত্তরণের পরে চামড়া ও চামড়াজাত পণ্য, নন-ল্যেদার ফুটওয়্যার, হালকা প্রকৌশল, প্লাস্টিক, জাহাজ নির্মাণ, কৃষি পণ্য এবং কৃষি প্রক্রিয়াজাত খাদ্য খাতের জন্য বিদ্যমান অগ্রাধিকারমূলক শুল্ক সুবিধা, রপ্তানি ভর্তুকি এবং নগদ প্রগোদনা বন্ধ হয়ে যাবে। এতে পণ্যের দাম বেড়ে যাবে এবং বিদ্যমান বাজারে প্রতিযোগিতার সক্ষমতা হারাতে পারে। এই চ্যালেঞ্জগুলি ছাড়াও, দেশটি আর উন্নত দেশগুলি থেকে Official Development Assistance এর অধীনে অনুদান এবং স্বল্প সুদে ঋণের জন্য যোগ্য বিবেচিত হবে না যা মৎস্য ও প্রাণিসম্পদ খাতের প্রবৃদ্ধির উপর বিরূপ প্রভাব ফেলতে পারে। সফটওয়্যার এবং আইটি সম্পর্কিত পরিষেবা খাত TRIPS চুক্তির অধীনে কমপ্লায়েন্স জটিলতার সম্মুখীন হতে পারে তবে পর্যটন এবং নার্সিং ও ধাত্রী সেবার মতো খাতগুলি LDC গ্রাজুয়েশনের পর বিপাকে পড়ার কম ঝুঁকিতে থাকবে। অন্যদিকে, এলডিসি থেকে উত্তরণ নতুন সুযোগ নিয়ে আসবে। এটা আমাদের ক্রেডিট রেটিং উন্নত করা, FDI আকৃষ্ট করা, দেশের ব্র্যান্ড ইমেজ উন্নত করা, প্রতিযোগিতামূলক বৈশ্বিক বাজারে টিকিয়ে রাখার জন্য বেসরকারি খাতের উৎপাদনশীলতা বৃদ্ধি, উদ্ভাবনের উন্নত পরিবেশ এবং মেধাসম্পদ স্বত্ব সুরক্ষায় ভূমিকা রাখবে। এছাড়া ভর্তুকি হ্রাস ও কর সংস্কারের মাধ্যমে সরকারের রাজস্ব ব্যবস্থাপনা উন্নতকরণের মাধ্যমে খাতওয়ারি প্রবৃদ্ধি নিশ্চিত সহায়তা করবে।

## Executive Summary

Bangladesh met thresholds for all three criteria in the 1<sup>st</sup> and 2<sup>nd</sup> United Nations-Committee for Development Policy (UN-CDP) triennial review in 2018 and 2021 consecutively and is on the pathway to LDC Graduation in 2026. While the graduation demonstrates Bangladesh's impressive growth trajectory over the years, this will also pose multifaceted challenges with regard to market access, preference erosion, subsidies under WTO agreements, preferential benefits in the regional and bilateral agreements, value addition conditions, additional tariff. Export is expected to be affected the most as 71% of total export is done under preferential schemes of developed and developing countries. Given the context, this is imperative for Bangladesh to take measures for enhancing the capacity of the export-oriented industries to address the graduation challenges. To that end, a comprehensive trade roadmap may inform policymakers and all other stakeholders including the private sector about the measures that need to be implemented.

In 2016, Bangladesh completed its Diagnostic Trade Integration Study (DTIS) with the support of Enhanced Integrated Framework (EIF) under World Trade Organization (WTO). The DTIS identified a four-pillar strategy comprising pillars titled 1) Breaking into new markets; 2) Breaking into new products; 3) Improving worker and consumer welfare; and 4) Building a supportive environment that may help accelerate the growth of the export sector and open up new sources of competitiveness. However, the graduation scenario was not evident and could not be taken into consideration while conducting the DTIS 2016. In this context, Bangladesh Foreign Trade Institute conducted this study to identify trade-related graduation challenges and prepare trade roadmaps for 12 sectors to overcome the challenges. The study included a review and update of the DTIS 2016 action matrix or action plan that was proposed based on the 4 pillars. Also, the impact of Covid-19 on the identified sectors has been analyzed in the study. Additionally, aspects of DTIS that can contribute to the achievement of the Sustainable Development Goals have been elucidated.

The study covers 12 sectors of goods and services, RMG (Woven and Knitwear), Pharmaceuticals and API, Leather and Leather Goods, Non-Leather Footwear, Light Engineering including Electronics and Electrical, Shipbuilding, Plastic Products, Agro-products and Processed foods, Fisheries and Livestock, Tourism, Software and IT service, Nursing and Midwifery service. The study illustrates sector-specific strengths, weaknesses, opportunities, threats, and strategies to overcome them to realize the export potential and sustain an export-led growth. The study also proposed roadmap for enhancing the capacity of the export-oriented sectors to underpin the key opportunities and challenges and recommend concrete actions to address the challenges. The findings of the study have been generated from an extensive literature review, key informant interviews (KIIs) and stakeholder consultations. The committee of experts formed by the Ministry of Commerce, the government of Bangladesh reviewed the key findings of the report, and lastly, a validation workshop was organized to validate the findings of the study from the key stakeholders of the 12 sectors.

**Readymade Garments (Knitwear and Woven):** Bangladesh government has given special attention to the Readymade Garments (RMG) by declaring it a priority sector in the 8<sup>th</sup> Five Year Plan, Export Policy 2021-24, National Industrial Policy 2022 and provided various fiscal and non-fiscal incentives. The study found availability of labor force, less labor cost, competitive price, strong backward linkage industries, socially and environmentally compliant

factories, etc. as the key strengths of the sector. The sector faces challenges in terms of improving productivity, moving up the value chain and diversify to high-value products, adopting state-of-the-art technologies, further strengthening backward and forward linkages, attracting FDIs and many more. High dependency on raw materials imports, inadequacy and high costs of trade logistics, long lead-time and absence of local innovative design services are the key weaknesses of this sector. The sector can leverage the opportunities such as policy support from the government (cash incentives, duty drawback, bonded warehouse facilities, etc.), DFQF market access facilities, extension of EU GSP facility, relocation of factories from China, production of MMF based apparel items, etc. The sector's external threats include: preference erosion due to LDC graduation after 2026, current global economic recession and its short-term and long-term impacts, lack of uninterrupted quality power and gas supply, etc.

A set of actions are put forward in a roadmap with a view to addressing the graduation challenges of Bangladesh's RMG sector. Signing trade-agreements with potential countries/markets, effective negotiation for extending EU-GSP facilities until 2030 and for GSP+, exploring new markets, increasing capacity of manufacturing MMF-based RMG products, supporting home-grown brands or internationalization of home-grown brands are some of the recommendations made in this chapter.

**Pharmaceuticals & API Industry:** Bangladesh's pharmaceutical industry has witnessed phenomenal growth over the years catering to 98% of local demand and exporting to 150+ countries including the USA, UK, Canada, Australia, EU. Given the graduation context, the pharmaceutical sector may face challenges regarding value addition, patent payment and license payment for pharmaceutical production. Moreover, in HS code analysis, it was found that export earnings from a single product (HS-300490; Other medicaments of mixed or unmixed products, for retail sale) contributes 67% of the total export of the pharmaceutical sector. Bangladesh has the potential to expand its export base to many more countries as Bangladeshi pharmaceuticals products maintain standards in quality and are cost-effective. The study identified that, robust industrial base, competitive workforce, manufacturing facilities for import substitute drugs, availability of quality medicine at affordable prices, etc. as strengths of this sector. The sector may leverage opportunities like huge scope to further penetrate into the world market, tax holidays and incentives for API, export potential in the global API market, etc. The study revealed that over-dependence on API import, challenges related to API production, lack of R&D and lab testing facilities, lack of uncertainty in gas connection in API park, challenges regarding the payment of industrial plots, lack of bioequivalence test facility, and having less patentable molecules create challenges for the sector.

The study proposed a roadmap for the sector which includes proposed actions like ensuring as many innovations and known molecules in the public domain as possible before graduation, avoiding implications of enforcement of the patent regime, as the sector lacks patentable molecules, becoming self-reliance in API production enhancing investment in R&D and API molecule synthesis etc.

**Leather and Leather goods:** The leather and leather goods sector has been identified as one of the potential sectors for export diversification. The sector started its journey in the 1940s, and presently contributing about 0.6% of the nation's GDP and around 2% of industrial production. The sector is the second-largest export industry in the country as in FY2021-22 it accounted for 2.4% of the total export of goods. SWOT analysis of the study revealed the major strengths of this sector are competitive labor cost, availability of labor force, local source of raw materials, entrepreneur's resilience, agility, and mindset to adapt to changes, and capacity of meeting buyers' demand. This sector has many inherent weaknesses like lack of compliance with international environmental, social, and safety standards in the factories and manufacturing premises, dependency on the import of raw materials, access to finance constraints, lack of backward linkage, etc. Establishment of a cluster of tanneries at Savar Tannery Estate was a significant step forward, but for lack of a well-functional central effluent treatment plant (CETP) remains a serious constraint to production of leather for meeting international compliance standards and getting Leather Working Group (LWG) certification. Opportunities like growing global leather export market, designation as the highest priority sector in export policy 2021-2024, rising demand in the domestic market, local and foreign direct investment scopes, government policy support, relocation of manufacturing from developing and developed countries, etc. make this sector quite prospective. However, stricter international standards and compliance issues, stiff competition from other Asian economies like Vietnam, India, preference erosion of special & differential treatment and DFQF facilities, and logistic problems, pose challenges to realize the sector's huge potential. The government is working to increase the existing \$1 billion yearly export revenue from leather and leather goods to \$10 billion by 2030. As a key manufacturing sector, the leather sector has substantial opportunities to contribute to export diversification and growth.

In order to mitigate the LDC graduation adversities, the study proposed a trade road map to enhance the export potential of this sector by circumventing the ramifications of the LDC graduation challenges. The roadmap outlines interventions for increasing the productivity to tackle potential trade loss after LDC graduation, utilizing existing incentives, utilizing of local raw material (rawhide), and developing backward linkages. Importantly, creating awareness of compliances, ensuring ESQ and ESG compliance, and building capacity for LWG certification are also suggested in the roadmap.

**Non-Leather Footwear:** The global market for non-leather footwear is projected to reach USD365.3 billion by 2027. The US is the largest global importer of footwear. Bangladesh's non-leather footwear exports reached USD450 million in FY2021-22. Asian countries export the most footwear globally, with China and Vietnam being the top exporters. Bangladesh ranks 8th globally in footwear manufacturing and saw a 6% increase in footwear production from 2016 to 2021, and 30% exports growth rate in FY 2021-22. This growth is fueled by non-leather/synthetic footwear exports and partnerships with international brands like PUMA, H&M, and Skechers. The study conducted a SWOT analysis of the non-leather footwear sector in Bangladesh, revealing strengths such as low-cost labor and availability of raw materials, weaknesses such as import dependency, power supply shortages, and slow OEM-to-ODM transformation, opportunities such as high global demand and investment potential, and threats such as competition from other Asian economies, lack of funds for SMEs, and delays in FDIs approvals.

In the proposed roadmap, the study recommended increasing industrial productivity, building capacity in ODM, developing backward linkages, utilizing existing incentives, ensuring international quality compliance, enhancing market access, attracting fresh investment, and introducing incentive schemes for value addition to alleviate LDC graduation and sectoral challenges in the non-leather footwear industry.

**Light Engineering Sector including Electronics and Electrical Products:** The light engineering (LE) sector including electronics and electrical products is making a significant contribution to the economy of Bangladesh by employing more or less 6,00,000-8,00,000 people in 40 thousand active light engineering companies. A SWOT analysis of the study on light engineering including electronics and electrical sector found that the availability of workforce, infrastructure (road, rail and river transportation), availability of globally cost-competitive human capital, etc. are the key strengths of sector. High cost of capital, lack of skilled human resources, absence of international-standard testing and certification facilities, higher cost of doing business, interruptible power supply, lack of proper training for industrial workers, supervisors, and managers and locally counterfeit electronic products are weaknesses of the sector. The sector has opportunities like duty-free market access, favorable policy and incentives, potential Free Trade Agreement/CEPA with export destination countries, large domestic market with a growing middle-income class, etc. However, factors like preference erosion due to LDC graduation after 2026, interrupted supply of gas and power, lack of access to low cost, long term financial resources, environmental pollution issues, high costs of trade logistics, are serious impediments to the sector's growth.

In the proposed roadmap, a set of recommendations are put forward with a view to addressing the graduation challenges of the light engineering sector. Creating strong backward and forward linkages, establishing Common Facility Centers (CFCs), diversifying the market base, and introducing Export Risk Fund (ERF) are some of the recommendations made for the sector's growth and diversified market.

**Plastic:** The plastic sector is witnessing increasing demand both in domestic and international markets. The average per capita global usage of plastic is 50 kg. In 2021, the world export value of plastic products was a staggering \$806 billion having China as the top exporter. Currently, the Plastics sector contributes to 1 percent of the GDP in Bangladesh. In FY 2021-22, Bangladesh exported plastic products worth USD166.25 million. SWOT analysis of the sector suggested that Plastic's contribution to forward and backward linkage industries of other sectors such as ready-made garments, processed food, healthcare, toys and increasing female participation can be regarded as the strengths of the sector. On the other hand, high dependency on imported raw materials, absence of testing labs, lack of adequate warehouses, absence of the art tool mould industries etc. have been identified as some of the key weaknesses. Increasing demand in the global and domestic market, increasing compliant factories producing high quality RMG related plastic accessories are some of the key opportunities of this sector. Lastly, lack of modern technology, longer lead time in export, higher freight cost, inadequate access to funds have been identified as threats.

In the roadmap, the study recommended interventions for improving compliance, increasing access to finance, development of technical skills, improving the tooling (e.g. mould and die manufacturing), developing R&D, etc. for increasing competitiveness of this sector.



**Shipbuilding Sector:** Once known as a shipbreaking nation, Bangladesh has transitioned itself to a shipbuilding country, exporting small and medium-sized ships as well as ocean-going multi-purpose vessels including for icy waters of the North Sea and Baltic Sea for highly competitive European countries such as Denmark, Germany, Finland, Norway, etc. While the industry is still small compared to major shipbuilding countries, Bangladesh has advantages such as skilled manpower and lower labor costs. Bangladesh shows the potential to capitalize the global shipbuilding market, which is worth around \$200 billion, by improving its infrastructure and investing in research and development. The country sees its shipbuilding industry as a key element in expanding its range of export goods. A SWOT analysis of the industry identified strengths such as a cheap and available workforce and the capability of making warships and low-cost ships. However, the sector faces hindrances such as high financing costs, high interest rates on loans, lack of sovereign guarantees at minimal cost, higher bank guarantee fees and higher corporate taxes, which need to be addressed to expand the industry's export and economic growth potential. Given the context, the roadmap stressed on the implementation of the Shipbuilding Industry Development Policy 2021. The policy has clear guidelines for providing financial support, bank guarantee, and sovereign credit guarantee along with incentives and tax breaks from NBR.

**Agro Products and Processed Foods:** The agriculture sector has been a predominant driver of growth and rural development in Bangladesh, accounting for almost 13.02 percent of the gross domestic product (GDP) in FY 2020-21 and providing employment for more than 40.60 percent of the total workforce. Globally, agricultural products worth of USD2162 billion were exported in 2021. A SWOT analysis of the sector identified diversified and high yielding crop, availability of labor force including women, extension services to farmers, favourable climatic condition, availability of natural resources including fertile land and water as the strengths of the sector. On the other hand, lack of infrastructure facilities and access to high-tech or enhanced farming technology, post-harvest losses, constraint in getting permission for contract manufacturing, lack of skilled human resources and lack of multipurpose specialized cold storage have been identified as weaknesses of the sector. The study identified demand in the international market, presence of forward and backward linkage industries, favourable government policies, as the key opportunities of the sector. Moreover, after LDC graduation, Bangladesh may not be allowed to provide subsidies in the agriculture sector. In addition to this, lack of accredited laboratory, lack of access to loans from Banks, natural disaster, high transportation cost, presence of middlemen in marketing channel have been identified as the threats.

In the proposed roadmap, the study recommended interventions in ensuring safe and quality food products, improving post-harvesting process, access to finance and compliance with product quality requirements, maintaining traceability of exportable agro products etc.

**Fisheries Sector:** Bangladesh ranks third in fish production from inland waterbodies, fifth for producing fish for aquaculture, and eleventh for producing marine fish in the world. The GDP growth in the fisheries sector was 2.08 percent and the contribution of the fisheries sector in the overall agriculture sector was 21.83 percent in FY 2021-22. While there is a growing local demand for fish, fisheries have also become important for the country's

export earnings. Bangladesh exports fish and fish products to 52 countries of which main markets are European Union, the USA, Japan, Russia, and China. Major export items are shrimps, hilsha, tilapia and pangas. The SWOT analysis identified some of the sector's strengths which are: large marine and freshwater resources, high demand for fish, aquaculture potential, availability of competitive labor, adoption of new technologies and practices, contribution to food security, etc. while the main weaknesses are: overfishing, poor infrastructure, lack of regulation and enforcement, climate change resulting in rising sea levels and changes in water temperature and salinity impacting fish habitats, poor market access, shortage of qualified personnel and fishing trawlers for the deep sea fishing, etc. Challenges regarding cash incentives, scarcity of high-quality feed, seed are the potential threats for this sector.

The proposed roadmap of this sector recommended developing and implementing training programs for fishermen, and intermediate-level officials of the fisheries sector in response to industry needs, setting up adequate fish landing centers, collaborating on research through connecting with academic institutions and think tanks, leveraging marine fisheries resources, creating a fisheries economic zone, etc.

**Livestock Sector:** Bangladesh's livestock sector is a significant contributor to the country's economy, providing employment opportunities for millions of people and contributing to food security. The contribution of the sector to the GDP in FY 2021-22 is 1.90 percent and overall agricultural sector is 16.52 percent. SWOT analysis revealed that major strengths of the sector include abundance of poultry and livestock, favorable environment for rearing, educated entrepreneurs, improved cross breed development, availability of potential Indigenous genetic resource and availability of high yielding cow. Major weaknesses of the sector include low availability and high price of feed and fodder, limited milk collection and processing facility, limited grazing space for animal resources, lack of waste management practices, lack of R&D facilities, absence of quality livestock breed, lack of skilled labour and qualified personnel, absence of market information for smallholders and poor quality of slaughter houses. High demand for quality livestock products, emergence of newer & stronger varieties through crossbreeding of commercial livestock, women's empowerment and involvement in the livestock, and export potential of halal products can be regarded as the opportunities of the livestock sector. The threats of the livestock sector include, absence of disease diagnosis and treatment facilities, lack of physical security of animal resources, small livestock (e.g., goat) susceptible to water related injuries and death, limited credit support from banks, disease outbreaks, climate change resulting in changes in rainfall patterns, temperature, and extreme weather events affecting livestock production and food security, increasing feed costs. In order to mitigate the LDC graduation adversities, increasing the productivity, utilizing existing incentives, developing meat, poultry and dairy production can be effective measures.

The study proposed a trade road map for sectoral export growth which illustrates these measures more vividly with in-depth action plans. The study recommended introducing the 'National Dairy Development Board' for the development of community-based smallholder dairy farms. The study also recommended the improvement of the existing cattle fattening system by strengthening private enterprises' backward and forward linkage system. Incentives for exporting livestock products to non-traditional markets and exporting new products in existing markets may be introduced. The government may also undertake several steps including establishment of farmers' networks for trade related information and strengthening internet-based communication systems for disseminating trade related information.



**Software & IT related Services Sector:** The software and IT-related services is an emerging sector making a significant contribution to the economy of Bangladesh. Universities of Bangladesh produce 25000 IT graduates annually and if they could be productively engaged in the latest disruptive technologies such as IOT, AI, etc. Bangladesh would turn into a major player. SWOT analysis found cost-competitive young workforce, low infrastructure cost (i.e., internet cost, electricity, hardware, etc.), setup of Hi-Tech Parks, capacity to adapt new technology etc. as some of the key strengths of this sector. Weak relationship between universities and the IT industry, cyber security threats, lack of access to finance, etc. remain some of the weaknesses of this sector. However, factors like demographic dividend, establishment of IT village, nationwide connectivity, favorable policy structure (top priority sector in Export Policy 2021-2024, incentives etc.), government's policy on SMART Bangladesh, cash incentive on export value, reduction of VAT and exemption from corporate income tax provide the sector with growth opportunities. On the contrary, stringent imposition of IPR (intellectual property rights) due to LDC graduation after 2026, unregulated entry of foreign firms in Bangladesh to source local IT human resource (HR), high cost of doing business, brain drain to foreign countries, lack of business-friendly ecosystem, language barrier, etc. threaten the sustained growth of the sector.

Spreading seamless internet connectivity nationwide, establishing more IT training and vocational institutes, promoting and inspiring to institutionalize an innovation culture for generating innovative products and services generation to diversify IT products, full functioning Hi-Tech Parks /Software Technology Parks /IT Training and Incubation Centers with international standard infrastructure and facilities are some of the interventions proposed in the roadmap.

**Tourism sector:** Tourism sector of Bangladesh has emerged as a promising sector in the recent years. In FY2020-21, the export of the travel sector was amounting USD 218.13 million which was USD 318.50 million in the previous year. Globally, the sector comprises 10.3% of global GDP amounting US\$9.6 trillion in 2021. The tourism sector is regulated and governed under Bangladesh Tourism Policy 2010 & Bangladesh Tourism Board Act 2010 including export policy. SWOT analysis of this sector identified that underdeveloped tourism infrastructure, lack of entertainment facilities both physical and recreational facilities, insufficient new investment and FDI, inadequate skilled human resources and higher cost of products and services and E-Visa Procedures and lack of facilities in the payment system for foreign currency are the key challenges for the expansion of the sector. Despite challenges, this sector has huge potential with employment opportunities as well as social and cultural benefits. Due to Covid-19, the tourism sector faced challenges, however, the sector is gradually recovering.

In the roadmap, the study recommended that providing tax holidays, policy support, especially budgetary support, and low-interest loans may encourage local entrepreneurship, management, and operation of tourist products that can contribute to expanding the sector. Along with this, necessary infrastructure development, ensuring the security of the tourists, development of skilled manpower and a tourism-friendly website can encourage national and international tourists to visit the natural and cultural heritage of Bangladesh.

**Nursing and Midwifery Services:** Nursing and midwifery are crucial for achieving national and international health goals, including universal health coverage, patient safety, and disaster preparedness. The global nursing density is

36.9 nurses per 10,000 population, but there is a projected need for 15.5 million more healthcare professionals by 2030. Additionally, there is a shortage of 900,000 midwives globally, which is projected to fall to 750,000 by 2030. The Philippines is the largest exporter of registered nurses, with India in second place. The USA and UK are the largest importers of nurses and health professionals in the world. Bangladesh has exported a total of 4,245 nurses between 1985 and 2022. Currently, Bangladesh has the capacity to produce more than 30,000 nurses and midwives generated from Bachelor's and Master's degrees, as well as diplomas in nursing, midwifery, and orthopedic nursing. The nursing and midwifery sector in Bangladesh has strengths such as high-quality education and capacity to enroll 35,000 nurses annually. Weaknesses include inadequate number of faculties in implementing specific curriculum, lack of knowledge for licensing exams, language barrier, etc. Key opportunities include high demand for job placement and government policy support, while key threats include WHO safeguard measures, competition from other Asian countries, and social restrictions. The nursing and midwifery sector in Bangladesh has opportunities for export growth.

The study proposed a trade roadmap with a comprehensive action plan to achieve sectoral export growth. Increasing knowledge on second/foreign language and communication skills, improving teaching methodology, and curriculum, harmonizing the education standards and licensure examination, enhancing market access in export destinations country, and creating a country-wide collaborative effort to advance nursing education are some of the key recommended actions reflected in the roadmap of the study.

Preference erosion, stringent rules of origin and loss of incentives are the key challenges the 12 sectors are most likely to encounter after LDC graduation. As a primary export sector, RMG sector may face significant decrease in export to the EU, Canada and Australia, UK, Japan, South Korea etc. due to loss of preferential tariff. The Pharmaceuticals sector may experience significant hurdle as it mainly depends on the Trade-Related Aspects of Intellectual Property Rights (TRIPS) of WTO which provides special exemption in patent protection and licensing requirements for pharmaceutical products of LDCs till 1 January 2033. After the graduation, preferential tariff, export subsidy and cash incentives will cease to exist for leather & leather goods, non-leather footwear, light engineering, plastic, shipbuilding and agro products & processed foods sectors which may increase the product price decaying the appeal to current markets. Apart from these usual challenges, the country will no longer be eligible for grants and low-interest loans under official development assistance (ODA) from developed nations which may adversely impact fishery and livestock sector's growth and global competitiveness. Software & IT related Services Sector may come across complications from computer and related services (CRS) related compliance required under the TRIPS agreement but tourism and nursing & midwifery services sectors are less like to face any graduation adversities directly. However, Graduation will offer new opportunities in terms of improving the credit rating, attracting FDI, improving country brand image, enhancing the productivity of the private sector to sustain in the competitive global market, better environment for innovation and protection of intellectual property rights, improving the government revenue regime by reducing subsidies and tax reforms which will also help expedite sectoral growth.

## Introduction

Bangladesh is on course to graduation from a Least Developed Country in 2026 having fulfilled all the three criteria in 2018 and 2nd triennial review in 2021. Bangladesh aspires to become a developed country by 2041. Strong GDP growth over the past decade with an average of over 6.3% has resulted in GDP per capita growing to around US\$ 2462 in FY2020-21. Bangladesh was also elevated into a lower-middle-income country in 2015 as per the World Bank criteria. Growth has also resulted in a decline in poverty levels, which fell to 20.5% of headcount poverty and 10.5% of hardcore poverty in FY 2020-21 and an improvement in other social indicators such as infant mortality, universal primary education, maternal health, malaria and other disease, gender equality and women empowerment and life expectancy.

Under the 8<sup>th</sup> Five-year Plan (8<sup>th</sup> FYP) the Government sees private sector as central to the country's future prosperity. The Government also envisages trade as a vital ingredient in Bangladesh achieving economic development, poverty reduction, job creation and improving productivity and competitiveness. According to the IMF, to boost private investment and potential growth over the medium term and make the growth processes more inclusive, Bangladesh needs wide-ranging structural reforms. This will require enhancing productive investments, which would address key bottlenecks in the economy. The government has adopted National Financial Inclusion Strategy of Bangladesh (NFIS-B) covering the period 2017-2021 to help inclusive growth followed by medium term goals for achieving SDGs by 2030 and the long-term phase for emerging as developed country by 2041. In 2016, Bangladesh completed its Diagnostic Trade Integration Study (DTIS) with the aid of the EIF fund. The DTIS identified a four-pillar strategy that may help accelerate the growth of the export sector; a priority for jobs and growth, improve consumer and worker welfare, and open up sources of competitiveness beyond low-wage labor. The DTIS 2016 suggested the four-pillar strategy to address Bangladesh's trade-related difficulties. However, the graduation scenario was not evident and could not be taken into consideration while conducting the DTIS 2016.

As Bangladesh has been placed on the pathway to graduate from the LDC status, the next three years will be vital to further increase and sustain its current development pace in order to serve as a springboard for the graduation of Bangladesh in 2026. It is considered that the ensuing graduation from LDC status will mostly affect the trade of Bangladesh. It will lose the preferential market access in the potential export markets which may badly affect the overall export basket of the country. Incentivizing the export led domestic industry will also face WTO binding rules to limit the support that may make the industries less competitive in the world market. Trade being considered as the main engine of growth and socio-economic development needs proper attention and strategic focus to overcome the graduation challenges.

According to a WTO study, Bangladesh may lose 14.4% of its export volume just after graduation from the LDC status. Trade may be affected the most as 71% of total export is done under preferential schemes of developed and developing countries. Bangladesh will also not be eligible to provide export subsidies after graduation. Thus, Bangladeshi products may lose their competitiveness in the international markets. Thus, initiatives are to be taken to enhance the capacity of the export sectors. Therefore, preparation of roadmaps for potential export sectors within the purview of this study will inform the policymakers and other stakeholders including the private sector the post-graduation challenges and ways forward to address them.

## **Objectives of the study**

The specific objectives of the study are:

- The specific objectives of the study are:
- Identify and update the priority areas of DTIS 2016 with a view to contribute to the sustainable graduation from LDC, supporting the implementation of Sustainable Development Goals taking into account of the effect of COVID-19 pandemic.
- Identify the trade related key challenges of sustainable graduation of Bangladesh from the LDC status considering effect of COVID-19 pandemic.
- Prepare a sector specific “Trade Roadmap for Sustainable Graduation (TRSG)” to overcome the trade related challenges including resource mobilization strategy for sustainable graduation from LDC.

## **Scope of the study**

Bangladesh has been placed on the pathway to graduate from the LDC status in 2026. Therefore, this study will cover the identification of graduation challenges and prepare a roadmap for overcoming the trade related challenges. The possible loss of preferential access in the world market of Bangladeshi product and services, loss of preferential Rules of Origin facilities, TRIPS transition in general and in the pharmaceutical sector, subsidies under WTO Agreements, other WTO related Special and Differential Rights, Preferential benefits in the regional and bilateral agreements the country is involved, possible effect on Official Development Assistance (ODA) and FDI etc. It will also be focused on sector-based trade related challenges. The sectors are RMG (Woven and Knitwear), Pharmaceuticals and API, Leather and Leather Goods, Non-Leather Footwear, Light Engineering including Electronics and Electrical, Shipbuilding, Plastic Products, Agro-products and Processed foods, Fisheries and Livestock, Tourism, Software and IT service, Nursing and Midwifery service. The unfinished activities of the Action Matrix of the DTIS 2016 and its updates will also be the area of study of this DTIS Update.

The DTIS Update study will also include a “Trade Roadmap for Sustainable Graduation (TRSG)” which will make a mapping of a sector specific strategy that the country will need to overcome the trade related challenges including resource mobilization strategies.

## **Methodology of the study**

The methodology of this study applied a mixed approach. The data are analyzed using both qualitative and quantitative methods. The methodology of collecting information and data included literature review, Key Informant Interviews (KII), stakeholder consultation as well as different secondary sources.

**Desk Review:** Multiple methods of data gathering are used covering both quantitative and qualitative data. Available data from acceptable national agencies such as Export Promotion Bureau (EBP), Bangladesh Bank (BB), National Board of Revenue (NBR), etc. and international agencies such as UN Comtrade, International Trade Centre (ITC), UNCTAD, World Bank (WB), etc. sources are used for a reasonable time frame of the most recent years. In the same fashion, available literatures were collected and reviewed to develop a general idea of various aspects of the targeted sectors. Several industry related plan, policies, such as National Industrial Policy 2022, Export Policy

2021-24, 8th Five-Year plan, Import Policy Order 2021-24, RMG Business Expansion and Simplification Policy Guidelines 2020, Leather and Leather Goods Development Policy 2019, etc. published research papers from the internet were used as study tools.

**Key Informant Interviews (KII):** Semi-structured questionnaires for each sector were developed and applied as the instrument for conducting the interviews. The participants for the interview were policy-level officials, think tanks, academia and trade-related agencies.

**Stakeholder Consultation:** 12 stakeholder consultations on "Trade related Graduation Challenges and Preparation of Sector Specific Trade Roadmaps" were held for each of the sector to generate valuable insights from the relevant stakeholders. The stakeholder consultation revealed more information on the industry's inherent issues and potentials.

**Review by the Committee of Experts:** Ministry of Commerce, Government of the People's Republic of Bangladesh formed a Committee of Experts to review the study report of DTIS Update and the Trade Roadmap for Sustainable Graduation (TRSG). The Committee of Experts included experts representing all relevant Ministries, Divisions, and private sector associations. The committee of experts reviewed the final draft report in a meeting presided over by the Senior Secretary, Ministry of Commerce, Government of the People's Republic of Bangladesh.

**Validation Workshop:** A validation workshop was organized to validate the study after review by the Committee of Experts. Key stakeholders related to the 12 sectors presented their opinions and validated the findings of the report at the validation workshop.

**Data Analysis:** Statistical analysis was conducted through Microsoft Excel while analyzing quantitative data. SWOT analysis method has been used to identify major sectoral strengths, opportunities, weaknesses and threats. Initially, existing literature, conducted KIIs and opinions from the stakeholder consultations were analyzed for sorting out relevant data/information, insights and perspectives.



**Implementation of Bangladesh 2016 DTIS: An update**

Bangladesh with the help of EIF fund completed its Diagnostic Trade Integration Study (DTIS) in 2016. The DTIS identified a four-pillar strategy that could contribute to accelerated development of the export sector, a priority for jobs and growth; enhance worker and consumer welfare; and enable sources of competitiveness beyond low-wage labor. The DTIS 2016 recommended four-pillar strategy to address the trade related challenges of Bangladesh.

The first pillar is breaking into new markets through (a) better trade logistics to reduce delivery lags, as world markets become more competitive and newer products demand shorter lead times, to generate new sources of competitiveness and thereby to enable market diversification and (b) better exploitation of regional trading opportunities in nearby growing and dynamic markets, especially East Asia and South Asia.

The second pillar is breaking into new products through (a) more neutral and rational trade policy and taxation and bonded warehouse schemes; (b) concerted efforts to spur domestic investment and attract foreign direct investment and to contribute to export promotion and diversification, including easing of the energy and land constraints; (c) strategic development and promotional efforts for trade in service.

The third pillar is about improving worker and consumer welfare by (a) improving skills and literacy, (b) implementing labor and work safety guidelines, and (c) making safety nets more effective in dealing with trade shocks.

The fourth pillar is building a supportive environment, including (a) sustaining sound macroeconomic fundamentals and (b) strengthening the institutional capacity for strategic policymaking aimed at the objective of international competitiveness to help bring focus and coherence to the government's reform efforts.

The study also endeavored to cover a number of growing export sectors like shipbuilding, pharmaceutical products, IT-enabled Services etc. Some of the areas such as the macroeconomic environment, skills development, energy constraint, and creation of effective safety nets, are not explored in the study. Implementation updates of the DTIS 2016 are presented as follows:

**Pillar 1: Breaking into new markets**

**A. Improving trade facilitation**

- National Trade Facilitation Committee has been established for the coordination of trade, transport, and logistics strategies across different sectors and modes of transport.
- To address the issue of unloading containers in the port or immediate vicinity of the port, a coordinated strategy was adopted to improve the performance of Dhaka-Chattagram corridor including a new inland container depot (ICD) near Dhirasram Railway Station, Gazipur, Dhaka-Chattogram four-lane highway, Pyra deep sea port. Ministry of Civil Aviation and Tourism has drafted a policy which will allow private investment in cargo handling at airport.
- For reducing customs clearance times, Bangladesh extends Authorized Economic Operators facilities to 12 companies, Time release study has been conducted on Benapole land port in 2022, ASYCUDA world has been implemented in all Land Customs Stations (LCS) and NBR signed MoU with 38 ministries, agencies to implement National Single Window.
- To address the trade finance gaps Bangladesh Bank has approved guidelines for setting up and operating digital platform for facilitating the financing of trade receivables of MSMEs.
- Ministry of Commerce is already working on facilitating trade as yearly licensee renewal has been increased to at least five years instead of a one-year renewal culture. Moreover, the new Import Policy Order 2021-2024 has also simplified processes for traders.

## **B. Promoting Economic Integration with Asia**

- Motor Vehicle Agreement was signed between Bangladesh, Bhutan, India, and Nepal in June 2015.
- Bangladesh and Bhutan signed the “Agreement on movement of traffic-in-transit and protocol”.
- Three joint working groups between Bangladesh and India on Trade, Customs, and Inland Water Protocol meet periodically for discussing bilateral issues.
- Bangladesh and India have established seven border haats while nine more new border haats are in pipeline.
- Agreement was signed between BSTI and Bureau of Indian Standards for mutual recognition of food-related and other test certificates.
- Initiative taken to start negotiation with Indian counterpart regarding a Comprehensive Economic Partnership Agreement (CEPA).
- Initiatives taken to sign Free Trade Agreement, Japan and Singapore.
- Steps taken to conduct feasibility studies for Concluding FTA with China
- Regional trade agreement policy 2022 has been formulated to provide guideline to negotiate, sign and implement trade treaty.
- National Tariff Policy 2023 has been drafted to rationalize tariff to enhance competitiveness of domestic industries.

## **Pillar 2: Breaking into new products**

### **A. Rationalizing trade policy to level the playing field:**

- Initiatives taken for removing anti-export bias of trade taxes and the trade policy regime to encourage diversification.
- The Value-Added Tax and Supplementary Duty Act 2012 has been effective from July 2019 which is expected to promote compliant traders, close tax loopholes, and ensure better collection of legitimate revenue.
- The BTC Act 1992 has been reviewed in 2020 and BTC has been replaced by BTTC-Bangladesh Trade and Tariff Commission.
- The Draft Customs Act 2014 incorporates new provisions for extending bonded warehouse facility to a wider range of exporters and their supply chain members.
- MoC has reviewed the existing programs related to the fiscal incentives and tax holidays.
- National quality policy 2015 has been formulated for streamlining quality standards.
- For facilitating trade, BSTI has rolled out implementation of the e-certification mark program.
- For enhancing clarity in the Plant quarantine act 2011, plant quarantine rules 2018 has been drafted.

### **B. Improving the environment for domestic and foreign investment**

- BIDA was formed on September 1, 2016 through the enactment of the Bangladesh Investment Development Authority Act 2016, merging Board of Investment (BOI) and then Privatization Commission.
- BIDA has already signed MoUs with 39 organizations, 19 of which are providing 58 services from their One Stop Service platform.
- Prequalification license has been given to establish 21 private economic zones out of which 12 private economic zones received license finally.



### **Pillar 3: Improving worker and consumer welfare**

#### **A. Improving skills and literacy**

- A National Skills Development Authority (NSDA) was established in 2018 to plan and coordinate all skill development activities of the country.
- In addition, National skills development policy 2021 and National skills development plan 2022-2027 was formulated to meet the demand of local and international labor market.
- A National Skills Portal (NSP) has been developed with a total of 16 modules including real time data on employment demand and supply, online registration with graduate tracking, training evaluation, trainee assessment and certification opportunities.

#### **B. Implementing labor and work safety guidelines**

- Under the agreements with European and American retailers, inspections of most factories have been completed following workplace safety standards.
- These factories need regular monitoring, and the government has taken initiatives to strengthen its monitoring capacity by recruiting adequate staffs.
- 178 Leadership in Energy and Environmental Design (LEED) certified companies and 550 companies are in the pipeline to be green or certified.

### **Pillar 4: Building a supportive environment**

#### **A. Sustainable macroeconomic framework**

- Bangladesh has been able to successfully overcome the catastrophic situation created by the COVID-19 pandemic.
- The effective implementation of various fiscal and financial incentive packages brought back the vitality of the economy in the shortest possible time.
- Continuing its record of sound macroeconomic management will help Bangladesh tackle two major challenges which include usual price hikes in the international market and secondly, controlling imported inflation in the local market originating from the price hike in the international market.

#### **B. Building institutions for trade policy coherence and implementation**

- The Draft Customs Act 2014 has incorporated mandatory consultation with related stakeholders including BTTC before enactment of any new legislation, rules, orders, tariff rates according to the provision of WTO TFA.
- The “Modernization and Strengthening of BSTI” project is being implemented by the government.
- A modern energy efficient testing laboratory has been established in the BSTI head office and BSTI is taking steps to get its Product Certification Systems fully accredited.
- Several BSTI laboratories have already been awarded accreditation from the National Accreditation Board for Testing and Calibration Laboratories, India in the field of chemical, mechanical and biological testing.
- Government is considering more effective involvement of the private sector to liberalize the market for testing and certification.

### **Supporting implementation of sustainable development goals: Priority areas of DTIS**

The Government of Bangladesh is striving towards the ambitious goal of reaching the furthest behind first, through adopting the 'whole-of-society' approach and implementing the 'leaving no one behind' agenda. Since 2020, the challenge of achieving the SDGs has been magnified by an increase in the frequency and intensity of human-made crises and natural disasters in the global economy, as well as the challenges of responding to the Covid-19 pandemic. Although the economy started to rebound in 2021, it slowed down again towards the end of the year due to new

Covid-19 variants and continued global vaccine inequity, along with rising inflation, supply chain disruptions, policy uncertainties, and the global impact of the Russia-Ukraine war. According to the Sustainable Development Report 2022, Bangladesh has made remarkable progress in implementing SDGs. Bangladesh has ranked 104 among 163 countries in 2022 whereas its ranking was 116 in 2019. In accordance to the same report, East and South Asia has progressed on the SDGs more than any other region since their adoption in 2015, Bangladesh along with Cambodia showing the most progress of all countries.

The Sustainable Development Goal 8 aims to develop decent work and economic growth through promoting sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all. Pillar 3 and 4 of the DTIS 2016 outlined proposals for improving worker and consumer welfare and building a supportive environment that embeds the SDG 8 meticulously. By developing National Skills Development Authority (NSDA), National skills development policy 2021 and National skills development plan 2022-2027 as well as National Skills Portal (NSP), the country is improving skills and literacy of the workforce. Moreover, following the international workplace safety standards, adopting Leadership in Energy and Environmental Design (LEED) and green certification the country is implementing labor and work safety guidelines for ensuring decent work for all. Effective implementation of various fiscal and financial incentive packages to bring back the vitality of the economy in the shortest possible time has been ensured. In addition, initiatives for drafting customs act for mandatory consultation with related stakeholders before enactment of any new legislation, rules, orders, tariff rates have been taken. Through these, the country has exhibited robust and sustainable macroeconomic framework along with building institutions for trade policy coherence and implementation. Progress of SDG 8: Decent Work and Economic Growth implied that the shift of the average annual growth rate of real GDP per capita of Bangladesh to 5.74 percent in FY2020-21 from 5.34 percent in the baseline FY 2016-17 is remarkable, especially because of the Covid-19 shock after the pandemic, GDP per capita based on PPP is reported at USD 6,613 in 2021 and USD 5,995 in 2020, according to the World Bank. The unemployment rate does not show any noticeable change during the period. Along with a fluctuating trend from 1999 to 2012. Bangladesh's long-term unemployment rate has been steady at around 4.4 percent. In addition to other challenges, Covid-19 has been a big blow to the core principles of the concept of sustainable development: inclusiveness and leaving no one behind. Increasing labor productivity, reducing the unemployment rate especially for young people and women, and improving access to financial services and benefits are essential components of sustained and inclusive economic growth in Bangladesh.

SDG 9 narrates building resilient infrastructure, promoting sustainable industrialization, and fostering innovation. Pillar 1 and 2 of DTIS 2016 prioritize interventions for achieving SDG-9 relevant goals. Following Pillar 1, improving trade facilitation through customs modernization, developing ports and supporting infrastructures like roads, waterways, ICDs, and developing a National Trade Facilitation Committee for the coordination of trade, transport, and logistics strategies across different sectors and modes of transport, initiative of implementing national single window have enabled the country to build resilient infrastructure and promote sustainable industrialization. Pillar 2 suggested rationalizing trade policy to level the playing field and improve the environment for domestic and foreign investment. In this regard, the country has taken initiatives for removing the anti-export bias of trade taxes and the trade policy regime to encourage diversification as well as revised relevant VAT, customs, BTC, quarantine etc. acts for policy coherence. Also, through the one-stop service system for investment facilitation and providing licenses for private economic zones, industrialization, technology transfer and innovation are fostered. In order to achieve SDG9, the government has been prioritizing the building of resilient infrastructure, promoting inclusive sustainable industrialization, and fostering innovation in its overall policy framework. The Road Sector Master Plan (2010-2030) guides investments in the road sector with the objectives of protecting the value of RHD assets, increasing connectivity, and improving road safety, among others. To maintain an uninterrupted road network, initiatives have been taken to build new bridges at different locations. The improvement of rail communication and transport services has been included as a priority sector in the national document on the 8th Five-Year Plan and Perspective Plan, Vision 2041 and more budgets have been provided for the development of the railways than at any time in the past. Bangladesh is

developing a National Adaptation Plan (NAP) under UNFCCC to formulate an integrated adaptation strategy and activities to meet the long-term impact of climate change. Meanwhile, a NAP Road Map has also been prepared. In addition, Bangladesh has prepared a Nationally Determined Contribution (NDC) Plan to manage growing emissions without compromising the required development. The government has also developed the NDC Implementation Road Map. The policies aim to ensure a developed and efficient transport and communication system that will connect Bangladesh with international and regional road networks as well as with other ICT networks. From this point of view, Padma Bridge, Metro-rail, Mass Rapid Transit, Dhaka Elevated Expressway, Karnaphuli Tunnel, and some other mega-projects are being implemented which are contributing to the trade and GDP growth of the country. Also, several measures have been undertaken for the development and maintenance of navigability of different river routes, ensuring the safe movement of watercraft, development of inland river ports, creating infrastructure facilities to carry container goods in inland waterways, etc.

SDG 17 suggests strengthening the means of implementation and revitalizing the global partnership for sustainable development. From the trade perspective, Pillar 1 of DTIS 2016 suggested promoting economic integration with Asia and Bangladesh has adopted several measures like signing motor vehicle agreement with Bhutan, India, and Nepal, signing the agreement on the movement of traffic-in-transit and protocol with Bhutan, starting negotiations with Indian counterpart regarding a Comprehensive Economic Partnership Agreement (CEPA), taking steps to conduct feasibility studies for concluding Free Trade Agreement with China, Japan and Singapore, formulating regional trade agreement policy and so on. The government has also adopted various measures for smooth and sustainable graduation from LDC which will complement SDGs implementation and has established the South-South Cooperation Cell to harness the potential of SSC and Triangular Cooperation. Measures have been adopted to reinforce green and circular economy by facilitating increased financing for renewable energy including solar home system and solar irrigation programs. South-South cooperation has been a crucial part of this, as is Bangladesh's membership and leadership in institutions like ASEAN Regional Forum, BIMSTEC, New Development Bank, and SAARC, as well as with UN agencies and programs around the world. The country is well on its way to building global partnerships for sustainable development.<sup>1</sup>

In recognition of Bangladesh's steady progress in achieving the Sustainable Development Goals (SDGs). Sheikh Hasina, the Honourable Prime Minister of Bangladesh was conferred with the SDG Progress Award in September 2021 by the UN-sponsored Sustainable Development Solutions Network (SDSN). This award is an international recognition of Bangladesh's success in spearheading the SDGs. Bangladesh's efforts for sustainable development have been apparent even before 2015 when SDGs were adopted, for instance, the success of Bangladesh in achieving the targets of MDGs is acclaimed globally when the Honourable Prime Minister was awarded with 'UN MDG Awards 2010' and South-South Award 'Digital Health for Digital Development' in 2011 for her innovative idea to use the Information and Communication Technology to accelerate the progress of the health of women and children. In addition, in June 2013, Bangladesh received the 'Diploma Award' from Food and Agriculture Organization for achieving the MDG-1 target of halving poverty well ahead of the deadline set by the world community. Besides this, Bangladesh was honoured with 'special recognition' for its outstanding progress in fighting hunger and poverty. In September 2013, Honorable Prime Minister was awarded with 'South South Award' for her government's achievements in alleviating poverty. She was awarded 'UNESCO Peace Tree Award' in 2014 for her commitment to women's empowerment and girls' education. In 2015, Bangladesh was awarded the prestigious Women in Parliaments Global Forum Award, known as WIP award, for its outstanding success in closing gender gap in the political sphere.<sup>2</sup>

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<sup>1</sup> General Economic Division (2022) Sustainable Development Goals: Bangladesh Progress Report 2022

<sup>2</sup> General Economics Division (2015) Millennium Development Goals (MDGs): End-Period Stocktaking and Final Evaluation (2000-2015)

## Review of Bangladesh's trade performance

Securing its ten-year economic journey with growth of more than six percent, Bangladesh has made outstanding progress in all areas of economic, social, and human development. Despite the COVID-19 epidemic, Bangladesh's GDP grew by 3.45 percent in FY2019–20 compared to 7.88 percent in FY2018–19. According to a rough projection, Bangladesh can achieve 7.25 percent GDP growth in FY2021–22<sup>3</sup>, demonstrating the economy's robustness. GDP was US\$464.98 billion, with a US\$2824 GNI per capita in FY2021–22, up from US\$2,591 in FY2020–21.

Bangladesh's economy has benefited greatly from foreign trade, which accounts for 28% of its GDP.<sup>4</sup> The government of Bangladesh developed a strategy for the development of the manufacturing sector in the eighth five-year plan, making the export sector one of the main drivers of development with an export led growth strategy. The following table shows the import-export statistics of Bangladesh signifying the growth of trade over the years:

Table 1: Export-import statistics of Bangladesh

FY	Total Export (Value in Million US\$)	Export Growth Rate (in %)	Total Imports (Value in Million US\$)	Import Growth Rate (in %)
2016-17	38,500		48,212	
2017-18	41,254	7.15	59,027	22.4
2018-19	47,028	13.99	62,884	6.5
2019-20	39,755	-15.46	55,635	-11.5
2020-21	45,367	14.12	61,609	10.7
2021-22	60,971	34.40	91932	49.2

Source: EPB pocket export statistics FY2021-2022

Since the volume of foreign trade is increasing over the years, and the country is on the way to graduate from LDC status, for sustaining the growth trend the government of Bangladesh is focusing on trade diversification for developing competitiveness.

Bangladesh's foreign trade has started to return to a positive trend confronting the adverse effect of the COVID-19 pandemic. In FY 2019-20, total export earnings decreased by 15.46 percent to US\$39.76 billion compared to the previous FY2018-19 earning amounting to US\$ 47.03 billion. Export earnings stood at US\$45.37 billion during FY2020-21, which was 14.12 percent higher than the export earnings in the same period of FY2019-20. Likewise, the previous fiscal year, the incremental growth rate of the goods and services reaches US\$60.97 billion in FY2021-22 which is 34.40 percent higher than that of the previous year. Total merchandise export in FY2021-22 increased by 34.38 percent to US\$52.08 billion in contrast to US\$38.76 billion in FY2020-21. Service export increased by 34.49 percent and reached US\$8.89 billion in FY2021-22 which was US\$6.61 billion in FY2020-21. In FY2021-22, RMG export experienced 35.47 percent growth compared to the previous fiscal year. Export of Home textile, Leather & Leather products, Agricultural Products, Engineering Products and Chemical Products (including Pharmaceuticals) increased by 43.28 percent, 32.23 percent, 13.04 percent, 50.40 percent and 29.76 (for pharmaceuticals 11.69%) percent respectively. However, the export of Jute and Jute goods decreased by 2.91 percent.

A review of major commodity-wise exports shows that total 8 commodity sectors during July-June in FY 2021-2022 are: Woven Garments (62), Knitwear (61), Home Textiles (63), Frozen and Live Fish (01-03), Agricultural Products Commodities (04-24), jute and jute products (53, 630510), leather and leather goods and footwear (41-43, 6403) and engineering goods (71-88) earned USD 49,098.71 million which was 94.27% of total export earnings.

<sup>3</sup> Bangladesh Bureau of Statistics (BBS 2021-22)

<sup>4</sup> The World Bank- World Bank national accounts data, and OECD National Accounts data files

The total merchandise Import Payments of Bangladesh during FY2021-2022 and FY2020-2021 amounted to US\$82.49 billion<sup>13</sup> and US\$54.40 billion respectively, reflecting a 51.64 percent increase in dollar terms<sup>1</sup>. In FY2019-20, total merchandise Import Payments of Bangladesh was US\$48.70 billion which was 11.71% lower than that of the FY2020-2021.

Bangladesh's export economy is dominated by RMG manufacturing as the RMG sector contributes around 83 percent of all export earnings for the country. Bangladesh has one of the lowest wage rates in the world, which has fueled an expanding industrial base led by the RMG industry. It is well-positioned, however, to diversify its exports and move up the value chain. The country also has large pharmaceutical, footwear, and agricultural-processing industries. Other important sectors include construction, information, and communication technology (ICT) and business process outsourcing, light engineering, ship building, leather products, jute products, and ceramic products. Moreover, services like tourism, software and IT and nursing and midwifery also present the country with new avenues to explore for enhancing export earnings.

#### **Trade related key challenges of sustainable graduation of Bangladesh**

Bangladesh has come a long way in terms of development since it gained independence. Improvements in income, poverty, and human development are remarkable. Since 2009 the development progress has been extremely swift, especially in terms of acceleration of GDP growth. Consistent with this upward trend, in FY 2019 the per capita income was \$1909, which is more than 20 times the per capita income at independence. As of 2015, Bangladesh is officially considered a lower middle-income country (LMIC), as defined by the World Bank. In 2018, it also met the criteria to be removed from the United Nations' list of Least Developed Countries (LDC). After going through the usual UN system clearance and notification processes, the likely date for formally graduating out of LDC designation is 01 January 2026. However, the graduation and its consequences have their own challenges that need to be addressed judiciously and effectively, as Bangladesh aspires to move forward further and become a developed country within next two decades. Bangladesh's successful progress towards LDC graduation implies that the special and differential benefits in the areas of international trade and financial relations with the other countries and the global community in general will be changed and terms and conditions of further engagement will be altered. It has been evident that some of the benefits Bangladesh has been enjoying as an LDC, particularly in areas of preferential market access, and relaxed conditions of trade, investments, and finance, have been very helpful and have enabled Bangladesh to reach the juncture for graduation. The rapid expansion on the trade-oriented manufacturing sector, and the rise of service sector to support the manufacturing industries, largely owe to the easy and preferential access to the markets of the developed world. Such growth in the manufacturing and service sectors have created substantial employment opportunities and contributed to poverty reduction, higher per capita income, and myriads of other socio-economic developments, which are reflected in high achievements towards the Millennium Development Goals, and now towards fulfilling the Sustainable Development Goals. In short, Bangladesh has been able to gain from the benefits offered by S&D treatments, and the International Support Measures including those specifically meant for the LDCs, towards her journey to end the LDC status and graduate into a Middle-Income Country (MIC).

Serving as a double edge sword, LDC graduation can present both opportunities and challenges for Bangladesh. From the trade perspective, potential challenges of LDC graduation are:

- Bangladesh will lose Duty-free market access in different countries like EU, UK, Japan, Canada, Russia, and Australia etc. According to a study, due to graduation, trade is expected to be affected the most as 71% of total export is done under preferential schemes of developed and developing countries. The biggest risk or challenge of LDC graduation will be loss of preferential market access but Bangladesh is already working for mitigating this risk as persuasion is ongoing with Japan, Australia, EU, and other export destination countries for keeping the seamless



market access. Bangladeshi export products will be less competitive in the international markets as currently due to preferential treatment Bangladesh products have tariff benefits in many markets. However, after the LDC graduation as the export incentives will be gone, cost of production will go high and exported goods may lose appeal to foreign markets.

- Bangladesh will not be eligible to provide export subsidies after graduation. Since the country is providing various cash incentives to the exporters now, after the LDC graduation, this facility will not be available, which may reduce export earnings for the current firms and entrepreneurs. This may lead to slow growth of some of the export sectors, since the sectors still requires government support.

- The country will face more stringent Rules of Origin which are a powerful trade policy instrument arbitrating the market access of goods and guiding firms' outsourcing, export, and investment decisions around the world. As a least developed country (LDC) Bangladesh is granted preferential tariff treatment in the markets of developed and developing countries under several schemes and arrangements of RoO. Since the industry now uses raw materials for exporting various goods, after graduation the country is likely to face higher tariff rates in its exporting countries.

### **Preparedness of Bangladesh regarding LDC graduation**

The government of Bangladesh started focusing on ensuring smooth and sustainable graduation immediately after receiving the CDP's recommendation for graduation in February 2021. A National Committee on LDC Graduation (NCG) was formed on 27 April 2021 under the Chairmanship of the Principal Secretary to the Hon'ble Prime Minister. A well-structured institutional arrangement has also been developed and relevant key stakeholders are playing their roles within this structural framework- an inclusive approach is applied for outlining action plans for priority areas.

The NCG has been providing an effective platform to support sustainable graduation involving all the relevant stakeholders on board since its inception. The NCG has identified the broad impacted sectors or issues following the GED's impact assessment to dent the potential losses due to the erosion of ISMs, particularly trade-related ISMs beyond graduation. Seven thematic subcommittees have been formed under the guidance of the NCG to address various core issues.

**Table 2: Seven thematic sub-committees and their key role**

SI	Subcommittee	Lead	Key Role
1.	Preferential Market Access & Trade Agreement	Ministry of Commerce	Continue LDC-specific preferential market access and negotiate FTA/ PTA/CEPA
2.	Intellectual Property Rights (IPR)	Ministry of Industries	Identify challenges and opportunities of graduation-related IP issues
3.	WTO Issues (Other than market access & TRIPS)	Ministry Of Commerce	Identify WTO inconsistent measures and devise negotiating strategies for safeguarding newly graduating LDCs, etc.
4.	Investment, Domestic Market Development & Export Diversification	Prime Minister's Office	Identify challenges and opportunities in the areas of investment, market development & export diversification
5.	Internal Resource Mobilization & Tariff Rationalization	Finance Division, M/O Finance	Identify measures for tariff rationalization and resource mobilization
6.	Smooth Transition Strategy	ERD, M/O Finance	Support research and prepare a detailed roadmap for a smooth transition strategy
7.	Branding Bangladesh Abroad	BIDA	Attract foreign investment and prepare a strategy for branding Bangladesh abroad

*Source: National Committee on LDC Graduation, Prime Minister's Office, Government of Bangladesh (February, 2023)*

The Seven thematic sub-committees have developed timebound action plans for sustainable graduation. The NCG will closely monitor the progress of the implementation of the action plans identified and apprise time to time to the Honorable Prime Minister for her strategic policy direction.



## Identification of sector specific trade-related graduation challenges: 12 sectors of Bangladesh

The study covers 12 sectors of goods and services, including RMG (Woven and Knitwear), Pharmaceuticals and API, Leather and Leather Goods, Non-Leather Footwear, Light Engineering including Electronics and Electrical, Shipbuilding, Plastic Products, Agro-products and Processed foods, Fisheries and Livestock, Tourism, Software and IT service, Nursing and Midwifery service. In this section, synopses of the sectors, SWOT analysis and sector-specific trade-related graduation challenges of the 12 sectors are explored.

### Ready Made Garments (Knitwear and Woven)

#### Overview of the sector

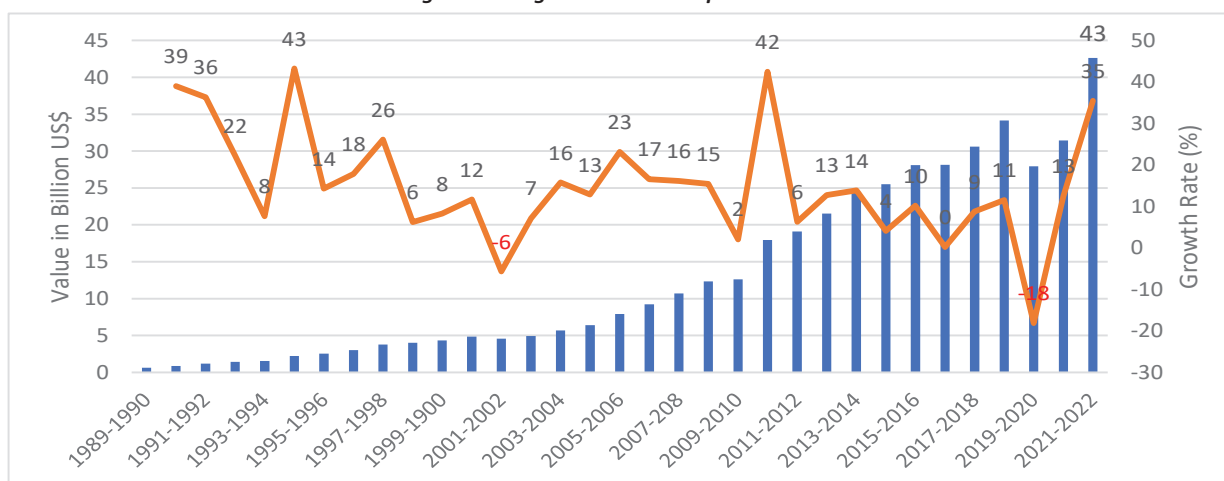
The readymade garment (RMG) is an export-oriented labor-intensive manufacturing sector which consists of knitwear and woven garments and is a key pillar of Bangladesh's economy, making significant contribution to create employment opportunities and poverty reduction and foreign currency earnings. It contributes 81.82% (USD 42.61 billion) of the national export and experienced 35.47% growth in FY 2021-22 (EPB, 2022). The sector created some 4 million jobs mostly for women.<sup>5</sup> The contribution of the sector to overall GDP is around 11-12 percent. About 220 RMG products were -exported to more than 160 countries (EPB, 2022). The RMG sector in Bangladesh comprises a wide variety of clothing including T-shirts, singlets, vests, trousers, breeches, jerseys, pullovers, briefs, shirts, anoraks, wind-cheaters, babies' garments, etc. This sector has been progressively growing over the years.

#### Global demand for RMG

The world import demand for RMG amounted to about US\$506 billion in 2021 where Bangladesh's contribution is 8.8 per cent - the second position after China claiming 31 per cent (ITC) In terms of export, the global RMG export grew annual average rate (CAGR) by 2.52% from 2012 to 2021. In export value, knitwear exports increased from US\$211.20 billion to US\$271.48 billion and woven wear exports increased from US\$193.12 to US\$234.24 billion in 2012 to 2021 respectively. The sector comprised 2.28% of total world export in 2021 where knitwear 1.24% (world ranked 16th in export value), and woven wear 1.07% (18th).<sup>6</sup>

#### Export and import status of RMG sector

Figure 1: Bangladesh's RMG export trend



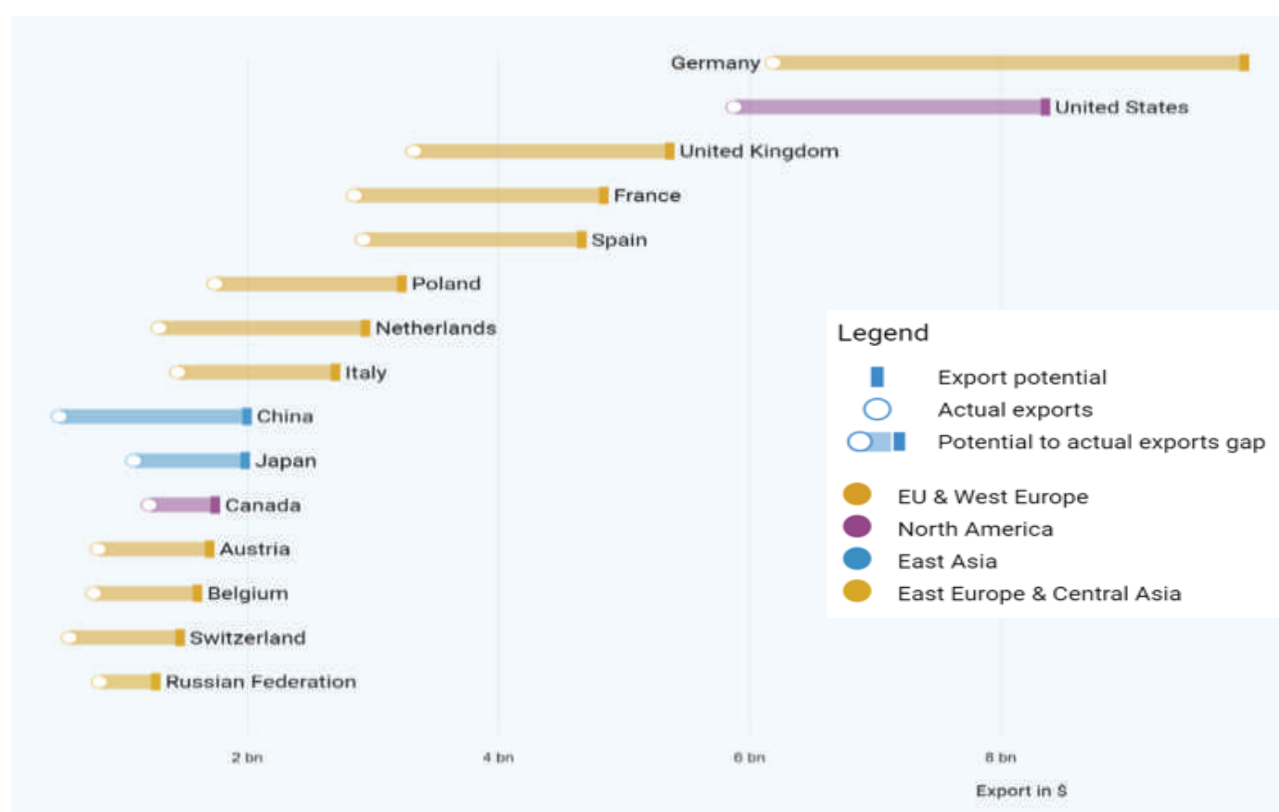
Data source: Export Promotion Bureau (EPB)

<sup>5</sup> 8<sup>th</sup> Five Year Plan, 2020, Bangladesh, Page-8

<sup>6</sup> ITC trade map

The RMG sector has been experiencing positive growth trends since FY 1989-90 to FY 2021-22. The major importers of Bangladeshi RMG are EU (50.22%), USA (21.15%), U.K (10.55%), Canada (3.11%), Japan (2.58%), Australia (1.91%), India (1.68%) and so on in FY 2021-22 (data source: EPB).

**Figure 2: Markets with potential for Bangladesh's exports of apparel & textile products including RMG**



Source: ITC Export Potential Map

According to the ITC export potential map, the suppliers with greatest potential to export RMG products are China, Bangladesh and Viet Nam. The sector has in value terms, leaving room to realize additional exports worth \$303 billion. The markets with greatest potential for Bangladesh's exports are Germany, United States and France. Germany shows the largest absolute difference between potential and actual exports in value terms, leaving room to realize additional exports worth \$3.4 billion. Bangladesh has negligible RMG import demand which was about US\$609 million and 1.12% share of total imports in FY 2020-21.

### Market access

Bangladesh's RMG exports have been concentrated in two major destinations – EU and North America. Currently, Bangladesh enjoys duty free access in 52 countries which includes the EU, Australia, New Zealand, Norway, Switzerland, Japan, Iceland, Russia, South Korea, Canada, Chile, India, Turkey, China.<sup>7</sup> After graduation, Bangladesh may face certain tariff in the destination countries. Existing and MFN tariff in major destinations of Bangladesh is shown in Table 3.

<sup>7</sup> Bangladesh Investment Handbook (2020), page-103, Bangladesh Investment Development Authority (BIDA)

**Table 3: Existing and MFN tariff applied by major destination (%)**

S.L.	Countries	Tariff currently Bangladesh export faces		MFN Tariff Rate (2022-2023)	
		Knitwear (61)	Woven Garments (62)	Knitwear (61)	Woven Garments (62)
1	European Union	0.00	0.00	11.60	11.54
2	USA*	11.80	9.91	11.80	9.91
3	UK	0.00	0.00	11.55	11.51
4	Canada	0.00	0.00	16.81	15.32
5	Japan	0.00	0.00	8.63	9.13
6	Australia	0.00	0.00	4.49	4.39
7	India	0.00	0.00	25.0	25.0
8	China	0.00	0.00	6.83	6.72
9	Saudi Arabia	5.06	5.03	5.06	5.03
10	Africa (South Africa)	41.32	40.11	41.32	40.11

Source: WTO Tariff Analysis Online (TAO)

The clothing sector including RMG will face certain tariffs on importation. Except for USA, Saudi Arabia, South Africa Bangladesh gets GSP facility for export to the EU and other countries. After LDC graduation, exporters will have to pay MFN tariff rates as applicable after the year of graduation. The current MFN tariff rates are mentioned in the table-3 that indicates that in major destinations like the EU and Canada, an 11 to 16% MFN tariff can be applied after LDC graduation.

#### **Investment including FDI**

It is imperative for Bangladesh to diversify into high value products moving up the value chain that requires new, large investments. An enabling business environment can also attract entrepreneurs from China willing to relocate their factories. Since 1990s, Bangladesh has adopted a number of policies to support private sector growth and increase the inflow of foreign direct investment (FDI). Entrepreneurs are now stepping up with fresh investments in the RMG sector that is currently on a roll with an excellent flow of work orders. The larger share about 55% of manufacturing sector captured by textile and wearing FDI inflows (Net) in 2021. According to Bangladesh Bank data, FDI in textile & wearing including RMG sector attracted 9.26% of total FDI inflows to Bangladesh during 2012-2022 calendar years.

#### **Gender perspective in RMG Sector**

Women in the Ready-Made Garments (RMG) industry in Bangladesh holds various jobs, including workers, sewing operators, and quality controllers. The ILO-UN Women survey reveals that although the percentage of women has decreased to 60.5% in 2018 from 63.4 per cent in 2010, they still make up the majority of workers in Bangladesh's RMG industry. The proportion of women in managerial and supervisory positions is around 9.1 percent.<sup>8</sup> According to a survey by South Asian Network on Economic Modelling (SANEM), the pay disparity for Bangladesh's female garment workers ranges from 51% to 60%, depending on the location and the living wage benchmark in the country's five major industrial zones, including Dhaka. However, it also found that the pay disparity for male employees still ranges from 45% to 54%. According to ILO Study, the average monthly wage of men workers was higher than women workers<sup>9</sup>. Another study found that female workers are affected by a consistently high gender pay gap, earning 25% lower average wages per month compared to male workers.<sup>10</sup>

<sup>8</sup> ILO and UN Women, "Enterprise level survey", Study on the Ready-made Garment Sector in Bangladesh, 2018.

<sup>9</sup> Improving Working Conditions in the RMG Sector Phase-II: Baseline Study Report (2017)

<sup>10</sup> Future of Work for Female Garment Workers in Bangladesh, 2022

### **Environment perspective: green industry initiatives**

The green industry calls for a shift to cut down carbon emissions and less natural resources-based production as a part of its response to global environmental challenges. This way, installing green buildings is a vital component of the green industry. Bangladesh's RMG sector is embarking on green production methods by installing USGBC LEED (Leadership in Energy and Environmental Design) certified green buildings, adopting energy and water-efficient technology. Currently, Bangladesh has 178 LEED-certified green garment factories, while another 550 factories are in the pipeline to be green or certified (USGBC directory). The RMG industry has indeed matured with some of the world's greenest factories (the top 3 eco-friendly and 8 of the top 10 garment factories in the world are in Bangladesh).<sup>11</sup> This green building not only ensures energy and water efficiency and structural safety but also serves the health and well-being of the workers by maintaining a healthy work environment by controlling noise levels, ensuring proper ventilation, sufficient sunlight exposure, etc. European Green Deal policy might be encouraged by the initiative.

### **Policies governing the sector**

**8th Five Year Plan:** To counter the effects of tariffs on inputs and ensure supply of inputs at international prices, the Government in its 8<sup>th</sup> Five Year Plan has put in place two mechanisms: (a) The special bonded-warehouse (SBW) scheme used largely by the RMG sector and occasionally by others, and (b) the Duty Exemption and Drawback (DEDO) scheme, both managed by the Bangladesh Customs.

**Export Policy 2021-24:** High-value added readymade garment (RMG) and denim, manmade fibre and garments accessories are among top prioritized areas in export policy 2021-24. These sectors can avail the facilities including supply of investment credit at a reduced rate of interest on a high priority basis; reduced corporate tax rate; moratorium on income tax; various cash incentives in electricity, water, gas, etc. utility services. 100% export-oriented RMG factories can import raw materials duty-free. VAT exemption has been given on supply of goods under sub-contract between the manufacturing units when both are enjoying the bonded facility.

**Industrial Policy 2022:** The RMG sector has been considered one of the industries which are significant for 'Export Diversification'. Several facilities, including cash and investment incentives, would be provided to facilitate the RMG sector. **Import Policy Order 2021-24:** Different supports for RMG sector such as sample collection (category wise 15 and in total 1,500 annually without permission), raw materials (no cost basis import approved in UD) & machinery import are provided in the import policy order 2021-24.

**RMG Business Expansion and Simplification Policy Guidelines 2020:** For the expansion and easing business for RMG sector, the Bangladesh government has introduced a policy in 2020. The policy suggested some recommendations which includes resolving technical fault in uploading documents to the website by Bangladesh Bank, reducing lead time to achieve competitiveness, exploring GSP+ facility in EU market after graduation from LDC, introducing 'One Stop Service' as per laws of BIDA, promoting high value added RMG products, providing policy support for developing backward linkage for woven garments, exploring duty free facilities for the RMG sector after LDC graduation, preparing agencies to improve trade facilitation and ease of doing business and strengthen the relevant institutional capacity for the faster services.

### **Impact of COVID-19 on the sector**

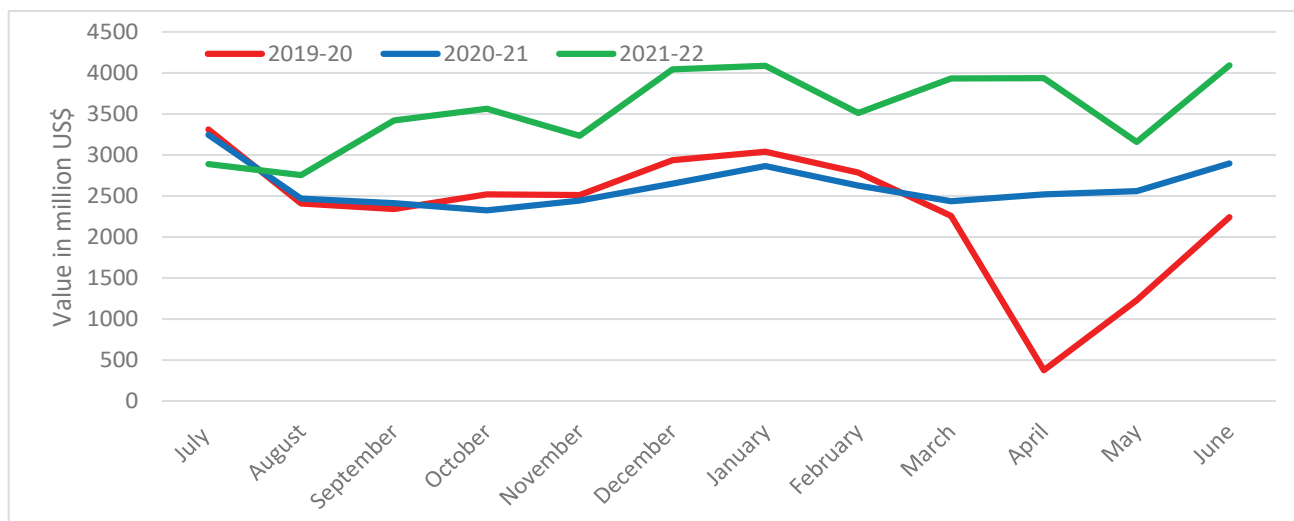
The major markets for RMG have been severely affected by COVID-19 pandemic. There was shift in consumer spending across the globe as people moved more towards consumables and commodity

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<sup>11</sup> 8<sup>th</sup> Five Year Plan and BGMEA

goods dropped in the sales and usage of various items such as clothing due to the lockdown and transportation embargos. Reportedly, Bangladesh received order cancellations worth several billion US dollars. Moreover, some retailers in export destinations started to file for bankruptcy protection, causing significant worries to suppliers in Bangladesh in apprehension of cancellation of orders. The figure below shows decline of RMG export values from February 2020 to April 2020. However, exports gained momentum in FY 2021-2022.

**Figure 3: Monthly variation in RMG export of Bangladesh**



Data Source: Export Promotion Bureau (EPB)

Challenges and opportunities of the RMG sector: findings from the SWOT analysis

SWOT analysis identified the following major strengths, weaknesses, opportunities, and threats that could impact the growth of the RMG sector.

**Table 4: SWOT analysis of RMG sector**

Strengths	Weaknesses
<ol style="list-style-type: none"> <li>1. Availability of labour force/Advantage of demographic dividend</li> <li>2. Competitive labour cost</li> <li>3. Competitive price</li> <li>4. Strong government commitment and support (cash incentives, duty drawback, bonded warehouse facilities etc.)</li> <li>5. Strong backward linkage industries</li> <li>6. High quality products</li> <li>7. Organized sectoral leadership</li> <li>8. Captive power generation capacity</li> <li>9. Socially and environmentally compliant factories</li> <li>10. Extensive negotiation experiences with buyers</li> </ol>	<ol style="list-style-type: none"> <li>1. Lack of skilled labour lowering productivity</li> <li>2. High dependency on raw material imports including cotton fabrics</li> <li>3. High transport costs</li> <li>4. Lack of global standard training for supervisors and mid-level managers</li> <li>5. High cost of funds</li> <li>6. Absence of innovative design</li> <li>7. Slow adoption of modern technology in manufacturing</li> <li>8. Insufficient capacity in managing compliance (Environment, Social and OHS) in small and medium factories</li> <li>9. Over dependence on buying houses for most marketing functions</li> <li>10. Over capacity of basic products weakens price negotiation</li> </ol>

Opportunities	Threats
<ol style="list-style-type: none"> <li>1. DFQF market access facilities</li> <li>2. Extension of EU GSP facility</li> <li>3. Potential relocation of Chinese production base</li> <li>4. Country branding</li> <li>5. High demand for basic products in global market</li> <li>6. Investment opportunity in Circular Fashion and renewable energy</li> <li>7. Potential FTA/CEPA with export destination countries</li> <li>8. Production of MMF based apparel items</li> <li>9. Capacity to produce high end product</li> </ol>	<ol style="list-style-type: none"> <li>1. Preference erosion due to LDC graduation after 2026</li> <li>2. Current global economic recession</li> <li>3. Weak infrastructure causing longer lead time</li> <li>4. Lack of uninterrupted quality power and gas supply</li> <li>5. Lack of enforcement of IPR</li> <li>6. Environmental pollution</li> <li>7. Lack of environment compliance in terms of carbon emission</li> <li>8. Impact of zero tariff due to potential FTA/CEPA</li> <li>9. Zero-tariff facility to competing countries by destination countries</li> <li>10. Unfair Competition of Brands and retailers</li> </ol>

Source: BFTI findings generated from KII and Stakeholder Consultation

### Key strengths

**Availability of labour force and competitive labour cost:** The presence of a sizable labor force in Bangladesh's RMG industry might be viewed as a strength in terms of output and expansion. Due to the availability of unskilled workers employed, Bangladesh's RMG sector enjoys low labor costs, which keeps production costs low and makes Bangladeshi RMG competitively priced.

**Competitive price:** Bangladesh leverages competitive labour costs for being cost-effective in production and securing a competitive position in the global market. The education level of Bangladesh's workforce has also improved noticeably which may help the RMG sector become more productive and competitive.

**Strong government commitment and support:** The government of Bangladesh is supporting the RMG sector with reduced corporate tax, cash incentives, duty drawbacks and bonded warehouse facilities. However, it should be noted that the availability of decent working conditions and pay ensured by the government as well as the productive use of the labour force are also significant elements in assuring the long-term development of the RMG industry in Bangladesh.

**Strong backward linkage industries:** The RMG business in Bangladesh heavily depends on the backward linkage sector. Backward linkages provide the RMG sector with raw materials, packaging, accessories, and other inputs. Recent data from Bangladesh Bank shows that the value addition of the sector is rising.

### Key weaknesses

**Lack of skilled labour lowering productivity:** The study found that the RMG sector suffers from a shortage of skilled labor and inadequate global standard training for supervisors and mid-level managers that lower the productivity of this sector.

**Absence of innovative design and slow adoption of modern technology in manufacturing:** The absence of innovative design and slow adoption of modern technology in manufacturing limits the country's capacity to produce and export high-value-added RMG products.

**Insufficient capacity in managing compliance (Environment, Social and OHS) in small and medium factories:** Though Bangladesh's RMG sector is embarking on green production methods by installing USGBC LEED (Leadership in Energy and Environmental Design) certified green buildings, and adopting energy-and water-efficient technology, SMEs lack the capacity in managing compliance (Environment, Social and OHS).

Moreover, the overcapacity of basic products weakens price negotiation with buyers which reduces the industry's revenue generation potential. High dependency on raw materials (yarn, cotton, and fabrics) imports, inefficiency and high costs of trade logistics, high cost of production, and long lead-time are some of the other weaknesses that restrain the competitiveness of this sector.



### Key opportunities

**Production of MMF-based apparel items:** More than 75 percent of the world's clothing is made from MMF. Whereas, cotton apparel makes for approximately 75 percent of the total apparel exports from Bangladesh. The global RMG market is shifting from cotton to MMF-based products which is opening new avenues for Bangladesh to explore.

**DFQF market access facilities and possible extension of EU GSP facility:** Bangladesh will enjoy DFQF market access facilities until graduation. However, to sustain the preferential market access facility, Bangladesh may negotiate with EU for the extension of the GSP and GSP+ facilities.

**Potential FTA/CEPA with export destination countries:** Potential FTA/CEPA with export destination countries will allow preferential market access and may provide the country with opportunities to retain and expand global RMG market share.

**Potential relocation of Chinese production base:** Bangladesh can leverage the advantages raised from geopolitical issues since Chinese-based production has been shifting to other countries.

**Country branding:** As the 2<sup>nd</sup> largest RMG exporter in the world, the country's image also presents the country with an opportunity to produce high-value products and explore new markets.

Also, the sector can leverage the opportunities such as high demand for basic products in the global market, investment opportunities in circular fashion and renewable energy, etc.

### Key threats

**Preference erosion due to LDC graduation after 2026:** Preference erosion threatens the sector with loss of competitiveness in markets where the country enjoys DFQF and preferential market access.

**Weak infrastructure causing longer lead time:** According to the World Bank Logistics Performance Index 2023, Bangladesh ranks 88<sup>th</sup> out of 139 countries. Bangladesh currently holds an LPI score of 2.6 and score of 2.3, 2.3, 2.6, 2.7, 2.4 and 3 respectively in customs, infrastructure, international shipments, logistics competence, tracking & tracing and timeliness. Infrastructural hindrances and logistics challenges pose threats to the trade growth of the RMG industry.

**Unfair competition of brands and retailers:** There are challenges in terms of competition with foreign products and competitors with the limited variety and quality that Bangladesh produces. RMG exporters expressed the view that international brands are constantly squeezing the price of products while making increasing demand for stricter compliance.

The sector's external threats also include current global economic recession and its short-term and long-term impacts, lack of uninterrupted quality power and gas supply, lack of enforcement of IPR, etc.

## Pharmaceuticals & API

### Overview of Pharmaceutical and API Sector

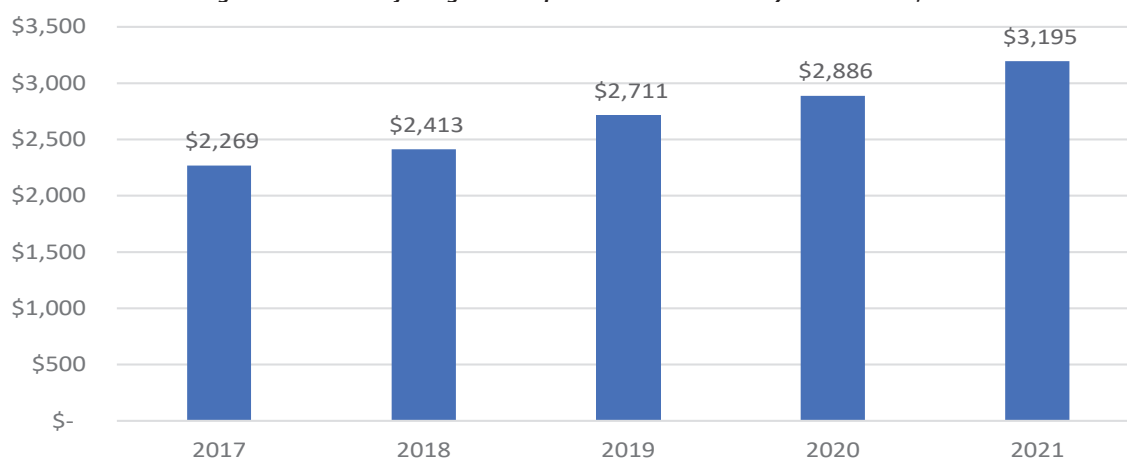
Bangladesh's pharmaceutical industry has witnessed phenomenal growth over the years catering to 98% of local demand and exporting to 150+ countries including the USA, UK, Canada, Australia and EU. With a current market size of over USD 3 billion<sup>12</sup> the pharmaceuticals sector has been growing at an annual rate of 16.7%<sup>13</sup> and is expected to exceed USD 6 Billion by 2025. After the formulation of the National Drug Policy 1982, the industry embarked on an accelerated growth path. The sector contributes around 1.8% to the Gross Domestic Product (GDP). As a result, Bangladesh now stands proudly as the only LDC country which has a well-developed pharma sector. The success story of pharmaceutical sector is citable but the sector has to travel a long way to achieve expected position both in domestic and international markets.

The Bangladeshi drug is dominated by the branded generic products accounting for almost 80% of the drug produced locally. Top ten producers of the pharmaceutical products produce 70% of the domestic market. The sector is capable of producing all types of dosage forms tablet, capsule, liquid preparations, dry suspension, injections, ointment/cream, nasal spray, lyophilized vials, eye drops, meter dose inhalers, dry powder inhalers, large volume parenteral and pre-filled syringes, etc. to more sophisticated such as insulin, hormones, anti-cancer products, etc.

### Domestic market size of pharmaceutical industry

Active pharmaceutical ingredients (API) are the principal constituents of medicines. Unfortunately, a major percentage of demand for APIs is met through import. Though the government has taken initiatives to build an API park for synthesizing pharmaceutical raw materials in Bangladesh awaiting being operational after installation of utility facilities and effluent treatment plant.

**Figure 4: Revenue of Bangladesh's pharmaceutical industry in million US\$**



Source: BAPI 2021

Currently Bangladesh's pharmaceutical industry is able to source only 10% of the total API requirement domestically. The estimated market size of the APIs is around US\$730 million. It is estimated that demand for APIs will reach around US\$1,409 million in the year 2025.<sup>14</sup> At present, there are 26 API producers in the country which produce around 40 API molecules. While domestic demand for APIs is growing rapidly, local production remains low in relation to the demand, leading to significant API imports.

<sup>12</sup> BAPI 2021

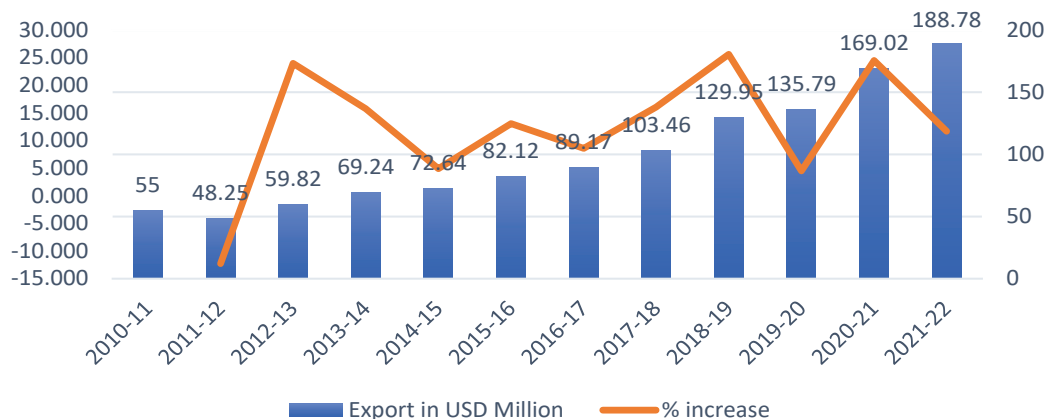
<sup>13</sup> EPB Data from 2015-16 to 2021-22

<sup>14</sup> Report on Pharmaceuticals sector in Bangladesh, MRC Bangladesh Ltd. 2017

### Export trend of pharmaceutical sector

According to BAPI data, the pharmaceutical industry exports medicines to 150+ countries<sup>15</sup> including USA, UK, Canada, Australia, Germany, EU, etc. As per BAPI data, around 1,200 products have been accredited for import by the authorities at the importing countries. The sector's current export earning was more than \$188.78 million in FY 2021-22.

**Figure 5: Export trend of Bangladesh pharmaceutical sector in US\$ million**



Source: EPB 2021-22

The market of pharmaceutical export is concentrated on the HS Code: 300490 (other medicaments of mixed or unmixed products, for retail sale) which amounts to US\$110.84 million in FY 2020-21 and US\$ 124.40 million in FY2021-22. It is around 66% of total export of pharmaceutical products.

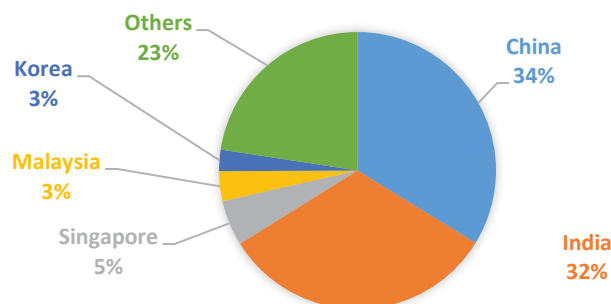
### Import of pharmaceutical products

As mentioned earlier, Bangladesh imports only 2% of the drugs required in the country. The trend over the past decade shows that imports of pharmaceutical products have increased. In FY2011-12, Bangladesh imported pharmaceutical product amounting to US\$119 million which increased to US\$291.8 million in FY2020-21 according to Bangladesh Bank data. Major HS Code wise import payment of pharmaceutical products shows that Bangladesh imported Medicament for therapeutic use under HS Code 3004 amounting to US\$181 thousands in FY 2021-22.

### Import of active pharmaceutical ingredients (API)

Bangladesh is highly dependent on imports of API, in recent times 90%<sup>16</sup> of API are imported from different countries mostly China and India which reflects the necessity for strengthening backward linkage in API production in Bangladesh. In FY 2021-22, Bangladesh sourced 34% of API from China and 32% of API from India.

**Figure 6: Import of API (organic chemicals: HS 29) by Bangladesh in FY2020-21**



Source: Bangladesh Bank

<sup>15</sup> <http://www.bapi-bd.com/bangladesh-pharma-industry/overview.html>

<sup>16</sup> Export of Pharmaceutical Sector upon LDC graduation: Strategies & Way forward, Mustafizur Rahman, Ph.D working paper 2022 and Author's own interview with BAPI

4-digit level HS Code wise API products or organic chemicals import data shows that Bangladesh imported major API ingredients under HS Code 29 in FY 2021-22 while import of API materials in FY2020-21 amounted to US\$1.27 Million.

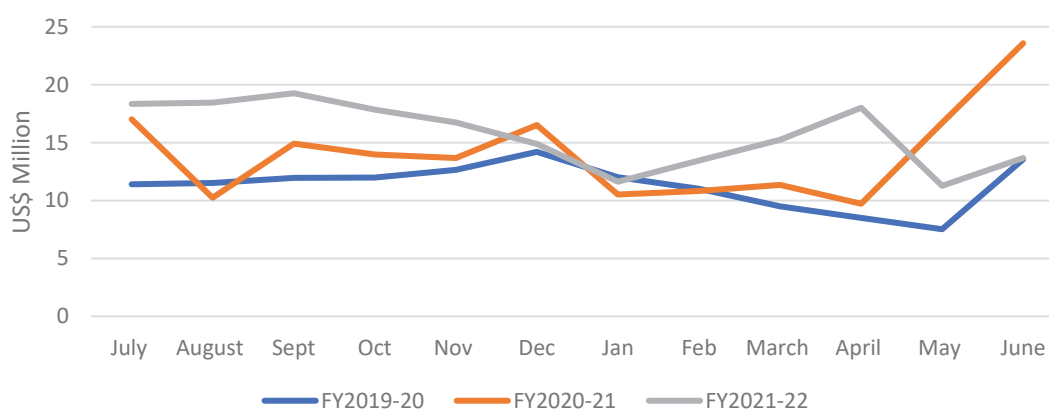
### Global pharmaceutical product market

The Statista's market outlook indicated that the commercially so-called "blockbusters" drug can generate more than US\$1 billion<sup>17</sup> a year. It implies that a single product can play a major role as certain segment of market is driven by a small number of drugs. According to Statista market projection, the revenue in the pharmaceutical sector was expected to reach US\$ 1,109 billion in 2022.<sup>18</sup> It also mentioned that the largest market segment of pharmaceutical products is oncology drugs amounting to US\$ 188.90 billion in 2022. Similarly, it is expected that by 2027, pharmaceutical revenue will be US\$ 1431 billion with 5.23% annual growth.

### Impact of Covid-19 pandemic on pharma industry

The sudden outbreak of the pandemic in 2019 directly hit the healthcare and pharmaceutical sectors of Bangladesh, as sourcing API from the China and other countries hampered due to disruption in supply chain. In response to the Covid-19 pandemic, the global health facilities and the health sector had to bear great strain. Due to Covid-19, India had banned the export of all raw materials related to Covid-19 medicine while China went into complete lockdown. It caused scarcity of the raw materials required for production of medicines for Bangladeshi industries. Meanwhile, international drug price soared during that period. Hence, dependency on imports may erode the sector's international competitiveness. However, export data from FY2019-20 to FY 2021-22 shows that the amount of export increased during the pandemic period and even after the pandemic period. In FY2019-20, the total export amounted to US\$135.79 million and it rose to US\$188.78 million in FY2021-22.

**Figure 7: Covid-19 Impact on export of pharmaceutical product in US\$ million**



Source: Export Promotion Bureau

### FDI in pharmaceutical sector

Government welcomes foreign investors in Bangladesh's health sector, especially in active pharmaceuticals and equipment manufacturing. According to Bangladesh Association of Pharmaceutical Industries (BAPI), the country's pharma companies have a demand for around USD 613.43 million\* worth of raw materials, which is growing by 12% per year. During Covid-19, everything from pulse oximeters to high-flow nasal cannula had to be imported. As of now along with imported API, most of the medical devices are being sourced from different countries. At present, Bangladesh needs to increase investment in molecular biological products. In addition, investment is required in building specialized hospitals and creating skilled human resources. In FY2020-21, the total FDI in pharmaceutical sector amounted to US\$ 81 million. According to the ICAB study, till January 31, 2019, foreign investment in listed pharmaceutical industries was on the rise.<sup>19</sup>

<sup>17</sup> Statista Pharmaceutical products outlook 2022.

<sup>18</sup> Pharmaceuticals - Worldwide | Statista Market Forecast 2021

\* Exchange rate 97.81 BDT per US Dollar, BBS 2022-23

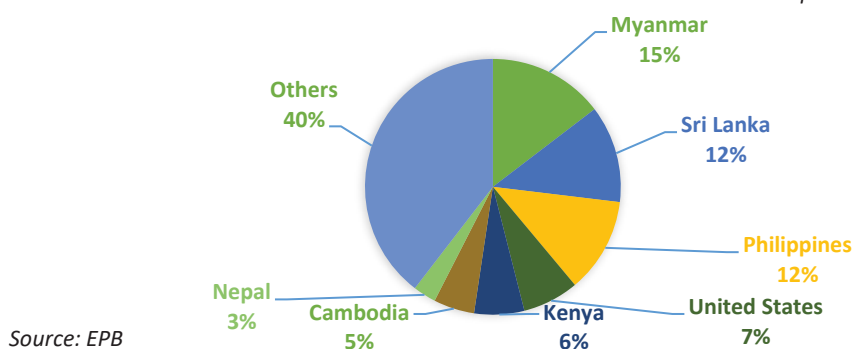
<sup>19</sup> ICAB Study: <http://www.icab.org.bd/wp-content/uploads/2019/07/10.Bangladesh.pdf>

## Market diversification of pharmaceutical products

Exporting pharmaceutical product requires to follow stringent regulations of the importing countries. Added to that are the requirements for registration, language and cultural preferences, national packaging standards and industry protection mechanisms. And to initiate registration process for entering a new market, exporters require a significant investment in money, time and paperwork to register the product in the target country. Given the registration process and quality standard, it implies that sales on the global market are quite competitive with firms from around the world vying for business. As generic products are branded in less regulated markets, pharmaceutical firms also need to make significant investments in sales and marketing to create product demand and these investments are made without a guarantee of future sales.

**Figure 8: Top export destinations of pharma products from Bangladesh in FY2021-22**

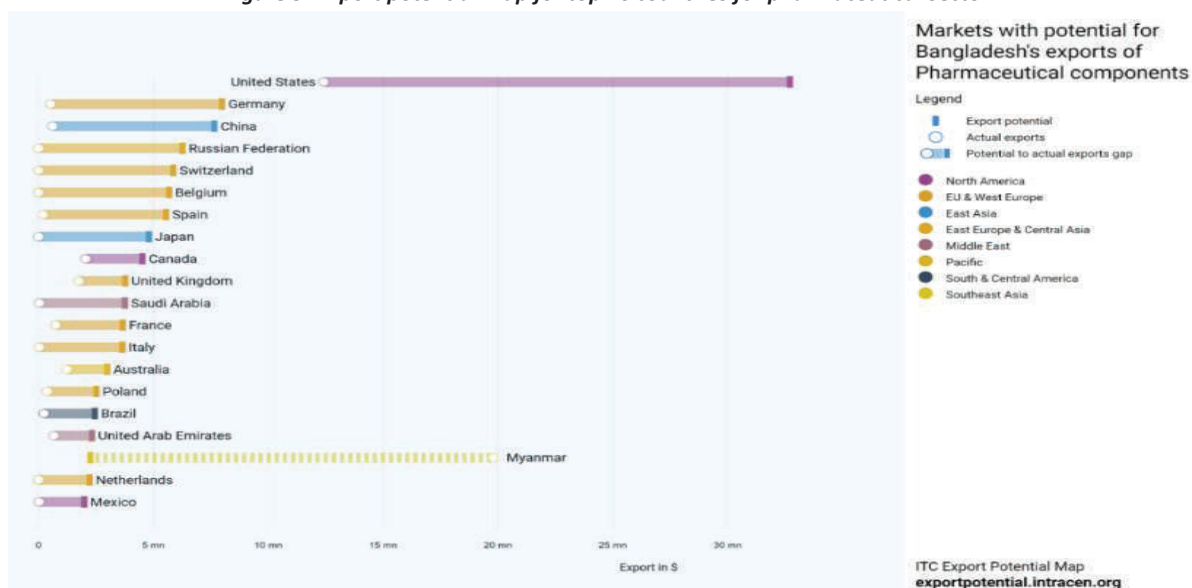
Export in FY22 = 188.8 Million USD



## Potential export market for pharmaceutical product

Except those countries cited in the figure 8, Bangladesh has the potential to export to Russia, Switzerland, Belgium, Spain, Japan, Canada, United Kingdom, Saudi Arabia, France, Italy, Australia Poland, Brazil, United Arab Emirates, Myanmar, Netherlands and Mexico. The markets with greatest potential for Bangladesh's exports are United States, Germany and China.

**Figure 9: Export potential map for top 20 countries for pharmaceutical sector**





The graph shows that there is a significant gap between the potential and actual exports of Bangladesh in various markets, with the largest difference being in the USA market. Bangladesh has the potential to increase its exports by \$20 million in the USA, \$8-10 million in Germany and China, and about \$50 million in Europe. Additionally, in Myanmar, there is a potential to export an extra \$15 million, particularly in the pharmaceutical industry. Therefore, it is crucial for Bangladesh to diversify its markets to capitalize on the available export potential.

### **Gender perspective in Pharmaceutical and API Sector**

The pharmaceutical and active pharmaceutical ingredient (API) sector of Bangladesh has historically been male-dominated, with few opportunities for women to advance in the industry. However, in recent years, there has been a growing recognition of the need for gender diversity and inclusion in the sector. According to the survey of manufacturing industries by Bangladesh Bureau of Statistics the pharmaceutical industry has around 11,000 or more female workers which constitutes 25% of total workforce. The survey also discovered that in the pharmaceutical industry, female workers in production and related roles constitute only 17%, whereas in administrative and managerial positions, the number is as low as 2%<sup>20</sup>. Therefore, it is crucial to address the gender gap in the pharmaceutical industry and promote gender diversity and inclusion across all levels of the workforce. Although some pharmaceutical companies have implemented policies to promote gender equality, such as providing equal opportunities for men and women in hiring and promotion, and ensuring safe and respectful workplaces for all employees. Despite these efforts, there is still a long way to go to achieve true gender equality in the industry. More research and action are needed to identify and address the barriers that women face in accessing opportunities in the pharmaceutical and API sector of Bangladesh<sup>21</sup>.

### **Policies regulating the pharmaceutical sector**

Directorate General of Drug Administration (DGDA) is the drug regulatory authority of Bangladesh. DGDA monitors and regulates all the activities of Allopathic, Ayurvedic, Unani, Herbal & Homoeopathic drug manufacturers. DGDA also works as licensing authority of drugs for issuing license to manufacture, store, sell, import and export of medicines. It has also put restrictions on manufacturing of 1,700 non-essential or harmful drugs<sup>22</sup>. The activities of DGDA are guided by the following Laws and policies<sup>23</sup>:

- The Drug Act 1940
- The Drug Rules 1945 and their amendments
- The Drug Rules 1946 and their amendments
- The Drug (Control) Ordinance 1982 and its amendments
- The Drug (Control) Ordinance Amendment Act 2006
- National Drug Policy 2016

### **API policy 2018**

The Bangladesh government is taking steps to reduce the country's dependence on imports for active pharmaceutical ingredients (APIs) by establishing an API industrial park. The API policy 2018 has been formulated to attract \$1 billion in investment in API production by 2032, with the aim of reducing import dependence to 80%. The policy proposes incentives such as unconditional tax holidays for five years for all API and laboratory reagent producers, and a 100% tax holiday for producers who can manufacture at least five molecules each year. Additionally, VAT and VAT deduction at source will be waived on locally made API, laboratory reagents, and all raw materials, among other benefits.

<sup>20</sup> Survey of Manufacturing Industries, Bangladesh Bureau of Statistics, 2019.

<sup>21</sup> Women at Work, ADB Brief, ADB, ADBBRIEFSNO.68, 2012.

<sup>22</sup> [www.dgda.gov.bd/](http://www.dgda.gov.bd/)

<sup>23</sup> [www.dgda.gov.bd/index.php/downloads/directorate-info](http://www.dgda.gov.bd/index.php/downloads/directorate-info)

The policy proposes a 20% cash incentive for manufacturers who make at least 20% value addition. However, the government will review the value addition condition after 2026. Additionally, raw material manufacturers will be allowed to retain 40% of their export earnings. The policy also suggests that manufacturers of three APIs or laboratory reagents annually will receive a 22.5% cut in corporate tax, resulting in them paying only 7.5% in tax. Non-listed companies that fail to meet the conditions will pay a regular corporate tax of 30%, while listed companies will pay 22.5%, according to the NBR proposal.

### **Export policy**

The Bangladesh government has declared Pharmaceuticals as the "Thrust Sector" in the Export Policy 2021-24. In addition, the policy aims to address the establishment and creation of Active Pharmaceutical Ingredient (API) in Dhaka and Chittagong, as well as increase foreign investment in the pharmaceutical industry through attractive incentives. Moreover, the policy prioritizes export incentives and policies for API and reagents and may pursue Mutual Recognition Agreements (MRA) with countries like the USA, the Philippines, and other exporting markets.

### **Incentives in pharmaceutical sector**

Pharmaceutical products are recognized as one of the highest priority sectors in the export policy. Under the Industrial policy, the sector will get the following incentives;

- Incentive will be given on capital investment
- Exempted Tax & duty on manufactured product
- Refunding the accreditation cost and insurance premium of the product
- Providing subsidy on the current capital investment
- Providing tax exemption and tax holiday depending on different location and set up
- Special incentives will be given in the priority and high priority area of the sector like Tax & Duty exemption is considered under Income Tax Ordinance, VAT & SD rule and the Customs Act
- Rationalizing the tariff and duty structure to import the essential raw materials of the industry
- There are export subsidy against the export of Active Pharmaceuticals Ingredients (API) 20%;
- Export Subsidy against the export of Pharmaceutical Products (Medical/Surgical Instruments and Appliances 10%
- Exemption of customs duties on capital machineries

#### **Income tax ordinance& Act and Customs Act and VAT & SD Act 2016**

- The pharmaceuticals ingredient and radio pharmaceuticals are eligible for tax exemption under Income Tax Act 2022 and Income Tax 2022, section 46CC of Income Tax Ordinance (10 years)
- 50% of income derived from export is exempted from tax
- The accelerated depreciation method for accounting income taxes can be availed for machinery and plants used by an entity that does not enjoy tax exemption
- Capital machineries are subject to reduced rate from customs duties
- Raw materials to be used for producing export goods are exempted from import duties
- Approval from the Chief Controller of Import & Export is required for import duty exemption.

### **Challenges and opportunities of pharmaceutical and API sector: findings from the SWOT analysis**

SWOT analysis identified the following major strengths, weaknesses, opportunities, and threats that could impact the growth of the pharmaceutical and API sector.

**Table 5: SWOT analysis of pharmaceutical and API sector**

<b>Strengths</b> <ol style="list-style-type: none"> <li>1. Robust Industrial base</li> <li>2. White collar workforce costs less than competitive countries</li> <li>3. Manufacturing facilities for import substitute drugs</li> <li>4. Availability of quality medicine at affordable price</li> <li>5. Sufficient capability to invest for expansion of pharma and API</li> <li>6. Available human resources for formulation of pharmaceutical finished products</li> <li>7. Many companies have international accreditation and many others are in pipeline</li> <li>8. Export-led improvement for quality control has taken off</li> </ol>	<b>Weaknesses</b> <ol style="list-style-type: none"> <li>1. More than 90% APIs are imported</li> <li>2. Insufficient investment in API, R&amp;D, reverse engineering and technical know-how</li> <li>3. Unavailability of accredited bioequivalence study center/ contract research organization</li> <li>4. Lack of Knowledge regarding stringent regulatory barriers in destination countries.</li> <li>5. Insufficient patentable molecules and API</li> <li>6. Import of API chemical reagents requires permission from several authorities (DGDA, Department of Explosives, Department of Narcotics Control, MoC, MoInd, etc.)</li> <li>7. Inadequate skilled labour and technical workforce for API manufacturing</li> <li>8. Scanty expertise in Synthesis Chemistry</li> <li>9. Lack of know how about patent enforcement</li> </ol>
<b>Opportunities</b> <ol style="list-style-type: none"> <li>1. Huge scope to further penetrate into the world market</li> <li>2. Tax waiver, cash incentives up to graduation</li> <li>3. Patent waivers for patented products until graduation</li> <li>4. Tax holiday, incentive for API</li> <li>5. Regulatory environment protects domestic market and facilitates contract manufacturing</li> <li>6. Demographic shift and enhanced life expectancy creating enormous demand for generic drug</li> <li>7. Enough data to file the first generic of the patented molecules</li> <li>8. Capability of setting up factory in foreign country</li> <li>9. Export potential in the global API market</li> </ol>	<b>Threats</b> <ol style="list-style-type: none"> <li>1. Erosion of WTO TRIPS agreement waiver after graduation affecting price</li> <li>2. Lack of protection option for domestic industry in IP and Patent act</li> <li>3. Absence of strong IPR enforcement</li> <li>4. Globalization led extremely competitive international market</li> <li>5. Complex biosimilar product registration guideline</li> <li>6. Export to patent granting countries will require patent owner's permission</li> <li>7. Insufficient cold chain facilities for export</li> <li>8. API park yet to be functional.</li> <li>9. National Board of Revenue yet to implement tax incentive proposed in API Policy</li> <li>10. Shift of chemical synthesis-based production to biotech-based production</li> </ol>

Source: BFTI findings generated from KII and Stakeholder Consultation

### Key strengths

**Robust Industrial base:** The Pharmaceutical sector of Bangladesh has been transforming and evolving since the early 80s. The pharmaceutical industry is one of the most developed technology sectors in Bangladesh. Manufacturers produce almost all type of medicine which includes high tech products like insulin, hormones, anti-cancer products etc. This sector provides 98% of the total medicinal requirement of the local market. Number of registered allopathic pharmaceutical companies is 284 of which number of functional companies is around 213.

**Competitive labour cost:** Bumpas, J., Kostermans, K., & Nair, D. urged that pharmaceutical labor costs are approximately 30% less in Bangladesh than that of the India. The industry faces challenges in the technical training because Bangladesh's educational system lags behind global levels. At present, pharmaceutical white collar workforce cost is less than other countries, implying the comparative advantage of the sector than that of competing countries.

**Manufacturing facilities for import substitute drugs:** The rapid rise of non-communicable diseases (NCDs), such as cardiovascular diseases, cancer, chronic respiratory diseases, and diabetes, among the Bangladeshi population has led to a growing demand for drugs used for their treatment. These drugs include anti-cancer agents, anti-diabetic medications, vaccines, insulin, and others. While Bangladesh has some facilities to produce medicines for NCDs, they are still predominantly imported, creating an opportunity to enhance local production.

**International Accreditation of many Pharmaceutical Industries:** Given the facilities and support provided by the government, this sector is maturing over time. Hence, leading pharmaceuticals companies have increasing focus on expanding their business in the highly regulated markets, including USA, UK, Canada, Australia, Germany, EU etc. This sector's leading companies Square, Incepta, Beximco, Opsonin, Renata, Healthcare, ACI, Eskayef, ACME Laboratories Ltd., Aristopharma Ltd. and Drug International Limited, etc. have attracted huge attention from clients abroad, achieving nearly all major GMP accreditation like USFDA, UK MHRA, EU GMP, Health Canada, TGA Australia, ANVISA (Brazilian Health Regulatory Agency), GCC, etc.

#### **Key weaknesses**

**Over dependence on API Import:** Using imported API, pharmaceutical industries primarily produce branded generic drug. According to BAPI data, about 80% of the drugs sold in Bangladesh are generics and 20% are patented drugs. Because Bangladesh API capacity is insignificant, firms import approximately 90% of their APIs.

**Insufficient investment in API and R&D:** For constraints related to price and quality competitiveness, many Bangladeshi pharmaceutical companies cannot meet the global standards. Efforts to build capacity, make investment in research and innovation and maintain quality and standard both for domestic and foreign used medicine are also inadequate. Increasing competition in international market compelling firms to seek low-cost manufacturing sources and reduce the cost of production. Multinational corporations (MNCs) are closing excess capacity of API production and searching for new, less expensive suppliers from developing countries where shift their whole manufacturing process. Due to cost constraints in the European and US health markets and narrow product pipelines from innovative firms, generic firms' growth is more than the non-generic firms. Domestic investment in API and R&D can address the need for the industry and can create the opportunity of self-reliance.

**Challenges of Drug Testing Laboratories:** Drug testing is the most expensive tool in the drug regulatory process, since it is the only means to verify if a product is counterfeit or substandard. There are two drug-testing laboratories in Bangladesh, one in Dhaka which is prequalified by the World Health Organization (WHO). The other is in Chittagong but not prequalified by the WHO. Though WHO Prequalification of Medicines Programme (PQP) helps ensure that medicines supplied by procurement agencies meet acceptable standards of quality, safety and efficacy. Although the Dhaka laboratory has the status of directorate general, the Chittagong laboratory is significantly under-resourced.

**Limited bioequivalence test facility:** A bioequivalence test of exportable product is required for the registration of that product both in moderately-regulated and highly-regulated regime. Bangladesh has limited facilities for bioequivalence study. A company has to carry out its bioequivalence test in a foreign country paying exorbitant testing charge amounting to US\$ 50000-100000 according a study by World Bank. Bumpas, J., Kostermans, K., & Nair, D. (2007) urged that because of this reason, many pharmaceutical manufacturers don't show interest to register their products in foreign countries that require Bioequivalence tests.

**Extra expenses for registering a product in potential export market:** In exporting the pharmaceutical product in foreign markets, a pharmaceutical company has to get registration from the drug or food administration authority of respective governments. The process of registration of a product into foreign country is so cumbersome that companies often open an office in the foreign market for this purpose. Commercial Councilors in Bangladesh missions can help in this regard.

**Lack of patentable Molecules :** The sector needs to ensure that as many innovations and known molecules as possible are in the public domain before graduation, to avoid the implications of enforcing a patent regime, given the sector's lack of patentable molecules. To this end, concrete measures should be taken to strengthen capacities, particularly in the following areas: IP law and patent law, chemical synthesis, patent examination, synthesis chemistry expertise, lab technicians, and accreditation specialists. Accordingly, Bangladesh should make use of the relevant research exemption as per Section 38 of the Patent Act 2022.

**Challenges related to API Production :** There are practical challenges related to basic chemical import permission for API, as an entrepreneur has to take permission from seven to eight organizations to import the product from the sourcing countries. For example, an individual has to take permission from the Department of Narcotics Control, Department of Explosives, Bangladesh National Authority for Chemical Weapons Convention, Ministry of Industry, Ministry of Commerce and Directorate General of Drug Administration of Bangladesh. Two leading pharmaceutical companies informed the study team that it took 11 months and 9 months respectively to get the permission of importing basic chemical.

#### **Key opportunities**

**Reaping the TRIPS Benefit:** Thanks to the flexibility provided by TRIPS, businesses operating in Bangladesh have been able to create generic versions of drugs that are patented elsewhere and sell these products in local markets, as well as to other LDCs or non-members of WTO who have not implemented patent protection. Proper utilization of this patent waiver flexibility has made Bangladesh the only LDC country with adequate pharmaceutical manufacturing ability and almost self-reliant. However, after graduation, such exemptions will no longer apply. The TRIPS agreement has turned Bangladesh into a center for affordable and high-quality generic medicines and contract manufacturing, with the potential to export to more than 100 countries worldwide.

**Export Potential in the global API market:** The global API market is expected to grow to USD 319.07 billion by 2025. In particular, the market for APIs used in generics is expected to grow substantially due to the scheduled patent expiry of blockbuster drugs, an increase in healthcare expenses, and supportive government policies for generics. Furthermore, China, one of the major API producers, is shifting its production base due to concerns about cost and sustainability. As labor costs rise in China, many producers are beginning to relocate their plants to other cost-competitive locations. Bangladesh, with an established formulation industry and access to the WTO patent waiver, would be an ideal location for API production.

**Regulatory environment protects domestic market and facilitates contract manufacturing:** Contract manufacturing for export to a regulated market is permitted under the current National Drug Policy (NDP). However, it is a significant financial opportunity that also poses some challenges. The domestic pharmaceutical firm must have a facility that is accredited by a regulated market. The Drug Control Ordinance (DCO) prohibits foreign firms from selling products in Bangladesh unless they have a manufacturing presence in the country. This has created opportunities for Bangladeshi firms to initiate contract manufacturing for domestic distribution with multinational corporations (MNCs) that already have a presence in Bangladesh.



## Key threats

**Erosion of WTO TRIPS Agreement waiver:** According to the TRIPS agreement under WTO, as a least developed country, Bangladesh would get patent exemption on pharmaceutical products till 2026. If domestic manufacturers want to maintain the production process after the grace period, they may have to pay royalties on patent, otherwise will face patent violation. Given the fact, the overall price of medicine in Bangladesh will increase.

**Impacts on the development of the API segment:** The government of Bangladesh has indicated that it expects patent protection to increase prices of pharmaceutical products, particularly the API. Bangladesh may also have to lift restrictions on imports, which could subject local industry to competition from large-scale manufacturers in other countries such as India and China that benefit from economies of scale and strong supply chain. This could exert downward pressure on prices for some products in the short run but could also have negative impact on domestic industries and local players. At present having established API industries, Bangladesh has only just started to produce API.

**Non-operational API Park:** Government of Bangladesh has taken an initiative to establish an API park near Dhaka, but slow progress makes the sector suffer. Uncertainty in gas connection, challenges regarding the payment for plot, extra service charge imposed by BSCIC, requirement of Environmental Impact Assessment (EIA) certificate, inactive central fire extinguishing service handicapped the API park from being operational.

**Prices of medicines and health care costs:** The South Centre (2020)<sup>24</sup> argues that, as a result of the reinstatement of patents, domestic companies have to buy the API or molecules only from the patent holder companies. Then few companies have the opportunities to control the market and hence South center urged “the lack of competition could lead to a significant increase in the price of medicines, particularly for therapeutic areas concerning non-communicable diseases which will be among the major contributors to the disease burden of Bangladesh.” In addition to reduced competition, production costs would rise as local producers would need to pay royalties and other costs associated with compliance with intellectual property rights.

**NBR yet to implement tax incentive proposed in API Policy:** The National Board of Revenue (NBR) is likely going to continue a tax break till 2032 for local pharma raw material producers, subject to complying with certain conditions, such as introducing at least five new ingredients a year. The facility was proposed to be extended to 2032 on certain conditions, as per a NBR proposal to the finance ministry. Accordingly, to stay eligible for the tax break, raw material suppliers will also have to spend 1% of their annual turnover on R&D. As per stakeholder consultation and KII, it was found that domestic API company cannot reap the benefit of tax break due to non-cooperation from NBR.

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<sup>24</sup> The South Centre is the intergovernmental organization of developing countries that helps developing countries to combine their efforts and expertise to promote their common interests in the international arena. It specially promotes IPR regime that are supportive to public Health.

## Leather and Leather Goods

### Overview of the leather sector

Leather is one of the most potential sectors for both domestic and export growth in Bangladesh, thanks to the country's large supply of low-cost labor and raw materials. The industry has the potential to participate in global value chains, enter new markets, and serve the growing domestic demand. Considering its high potential for producing and exporting high-value-added diversified products, the Government of Bangladesh has been putting special emphasis on this sector in various national policies and strategies. The Government of Bangladesh also declared the leather sector as the Product of the Year in 2017. The global market scenario for the leather industry indicates that the global leather goods market size was valued at USD 242.85 billion in 2022 and is expected to expand at a compound annual growth rate (CAGR) of 6.6% from 2023 to 2030.<sup>25</sup> The leather goods market in North America is the largest in the world, followed by the market in Europe. The Asia Pacific region is the fastest-growing region, driven by an increase in demand for high-end and luxury items, with China and India dominating the market. However, Europe has surpassed Asia as the dominant region in the global leather products market, with the largest revenue share. The regional market is expected to develop further due to the product's rising popularity and the region's growing online sales<sup>32</sup>. The following figure shows the global import-export trend of the leather sector, including leather, leather goods, and leather footwear.

**Figure 10: Global import-export trend of leather sector**



Source: ITC data

The leather sector has demonstrated consistent growth over the years despite a decline in global imports during the pandemic. However, in 2021, global imports began to rise, indicating sustained demand for leather products in the market. The USA was the top importer of leather footwear and goods, while China and Italy were the top importers of leather.

Although during the pandemic-stricken years global imports declined but in 2021 imports began to rise which indicates consistent demand for leather products in the global market. Global export of the leather sector hit a bump in the pandemic years of 2019 and 2020 but in the following year, the export trend has seen positive recovery. Global leather demand is dispersed around various countries for instance, in 2021, the USA was the top importer of leather footwear and leather goods. China and Italy were the top importers of leather (41). Among the top importers of leather goods, the position of Germany, France, Italy, and Netherlands indicates good export potentiality in the EU zone. China, South Korea and UK also exhibit substantial leather item imports in recent years.

Although the leather industry in Bangladesh started in the 1940s, it was mainly developed on a large scale in the 1970s contributing as one of the largest industries in Bangladesh. During the initial stage, production and exports

<sup>25</sup>Grand View Research (2022) Leather Goods Market Size, Share & Trends Analysis Report By Type (Genuine Leather, Synthetic Leather, Vegan Leather), By Product, By Region, And Segment Forecasts, 2023 - 2030

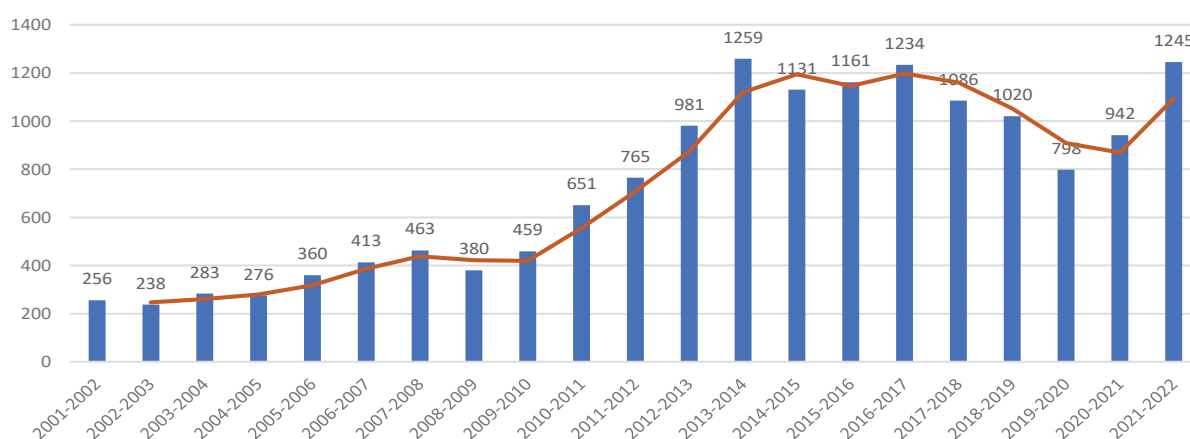
were mainly dependent on wet blue leather. Later on, it was realized that producing finished goods can add up to 90% value to leather goods. In 1990, the government of Bangladesh restricted the export of raw hide and wet blue leather for promoting structural transformation and increasing the production of higher-value-added leather goods. This initiative contributed to the growth of the industry as it led the entrepreneurs further modernize their operations to produce high-quality products.

Currently, the leather sector has been identified as one of the potential sectors for export diversification. A significant contributor to the economy both in terms of its domestic share and exports the sector contributes about 0.6% of the nation's GDP and around 2% of industrial production.<sup>26</sup> The sector is the second-largest export industry contributing 2.4% of the total export of goods<sup>27</sup> in FY2021-22. By volume, Bangladesh occupies about 3.0% of the world's leather and leather products market, 1.8% of the world's cattle stock and 3.7% of goat stock. The industry directly and indirectly employed 850,000 workers where about 60% of employees are female.<sup>28</sup> There are about 200 tanneries in the sector, along with 3500 SMEs, 90 large firms, and 15 large companies.<sup>29</sup> The export revenue of the leather, leather goods and leather footwear sector during the financial year 2021-2022 was US\$1,245.18 million against 941.67 million in the same period last year which is 32.23% higher than the previous FY. Based on the International Trade Center data, Bangladesh is the 18<sup>th</sup> top exporter of the leather products globally.

Leather products in Bangladesh include various segments, including crust leather, wet blue leather, finished leather, and split leather, as well as finished products like gloves, shoes, belts, bags, jackets, suitcases, wallets, etc. With its abundance of labor and natural resources and successful development experiences in the RMG industry, Bangladesh is ideally suited for the production of leather as well as high-value leather goods and footwear. The government of Bangladesh is working pro-actively to jack up the industry as it has relocated of all tanneries from Hazaribagh to a properly designed and controlled new industrial estate in Savar. Besides providing various incentives and support measures, the government has planned to build three more leather industrial estates: 1. Leather and Engineering Industrial Park in Rajshahi, 2. Multi-sectoral Industrial Park at Mirsharai in Chattogram and 3. Leather Industrial Park in Dhaka.

## Export trend

**Figure 11: Export trend of leather sector (in million USD)**



Source: EPB statistics

<sup>26</sup> Leather Sector Export Roadmap, A strategic framework for accelerated export growth, IFC World Bank (2019)

<sup>27</sup> EPB Monthly Summery Sheet July-June 2021-2022

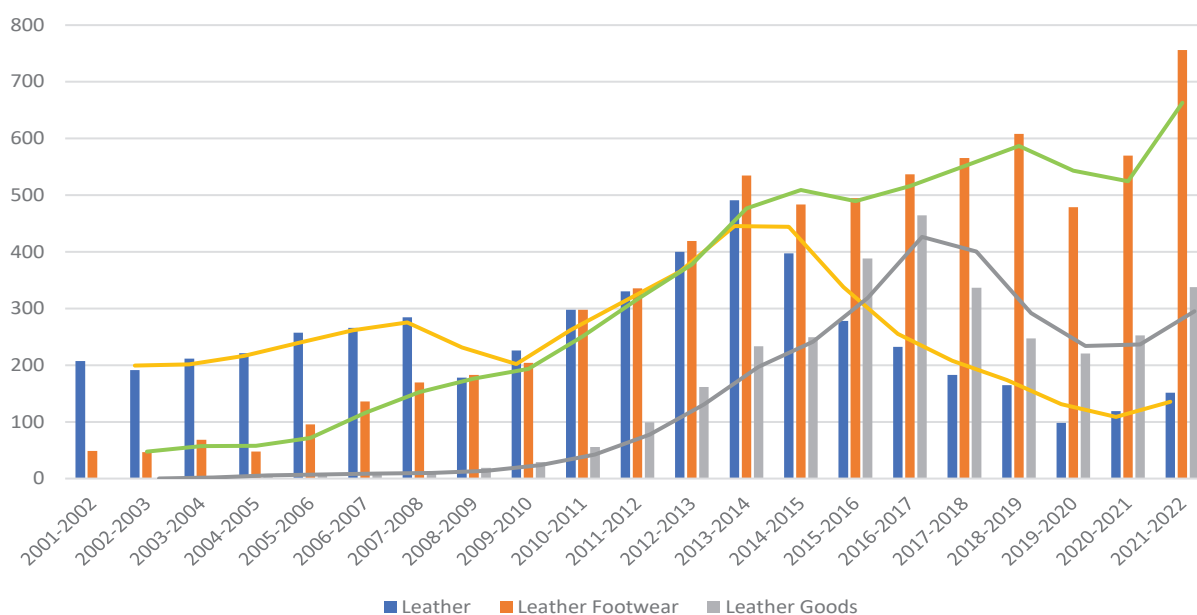
<sup>28</sup> Developing the Leather Industry in Bangladesh, ADB Briefs November 2018.

<sup>29</sup> BUILD Research (2022) Leather sector export roadmap

Despite being the second, the share of this sector in the total goods export is satisfactory. The recent COVID-19 has severely impacted the growth of this sector and it is still recovering from that shock.

The leather and leather goods industry showed a 32% growth in FY22, while it was about 18% in FY 2020-21. The export growth shows the upward trend. Leather goods are exported under 3 categories, which are: Leather (HS code Chapter 41), Leather Products (42) and Leather Footwear (6403). Among these categories, leather footwear is the most exported product. The figure (12) below presents a comparative picture of export of leather and leather goods products:

**Figure 12: Export trend of leather and leather, leather footwear and leather goods (in million USD)**



Source: EPB statistics

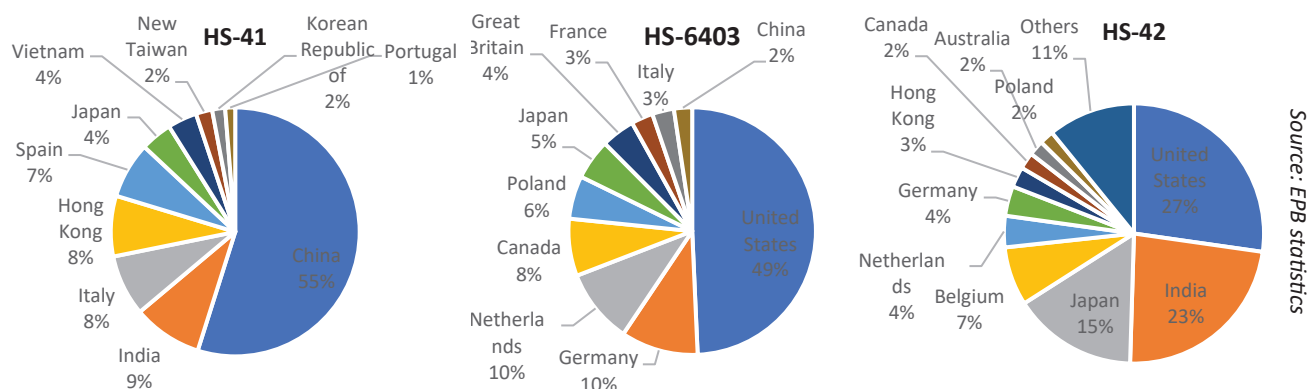
Export of leather (41) showed a 27% growth in FY22, while it was about 21% in FY 2020-21. Although leather used to dominate over leather goods and footwear it began to decline from FY15. However, from FY2021 this sector has been showing positive growth since government permitted export of rawhide and semi-processed leather – widely known as wet blue in 2020.

In FY2021-22, Leather footwear (6403) export was US\$756.18 million which accounted for 60% of the all the leather sector exports. Export of leather footwear showed a 33% growth in FY22, while it was about 19% in FY 2020-21. In the global footwear market, Bangladesh is ranked 18th. On the global market, Bangladesh contributes just 1.8% of this industry. Orders from China, the main exporter of leather goods, have started arriving in Bangladesh<sup>30</sup> which provides growth opportunity of this sector in future. Export of leather goods (HS code 42) has showed a 35.63% growth in FY22, while it was about 15% in FY 2020-21.

Leather and leather products of Bangladesh are mostly exported to several developed countries such as the UK, Argentina, Austria, Australia, Belgium, Canada, Switzerland, Chile, Germany, Denmark, Italy, Netherlands, Spain, Finland, as well as to some Asian and Middle Eastern countries like UAE, China, Japan, South Korea, Hong Kong. The following figure (13) illustrates major export destinations of leather, leather footwear and leather goods:

<sup>30</sup> Textile Today (2022), Footwear export potential Bangladesh's footwear exports will reach \$1 bn in current FY

**Figure 13: Raw hides (41), leather products (42), leather footwear (6403) export destinations**



Source: EPB statistics

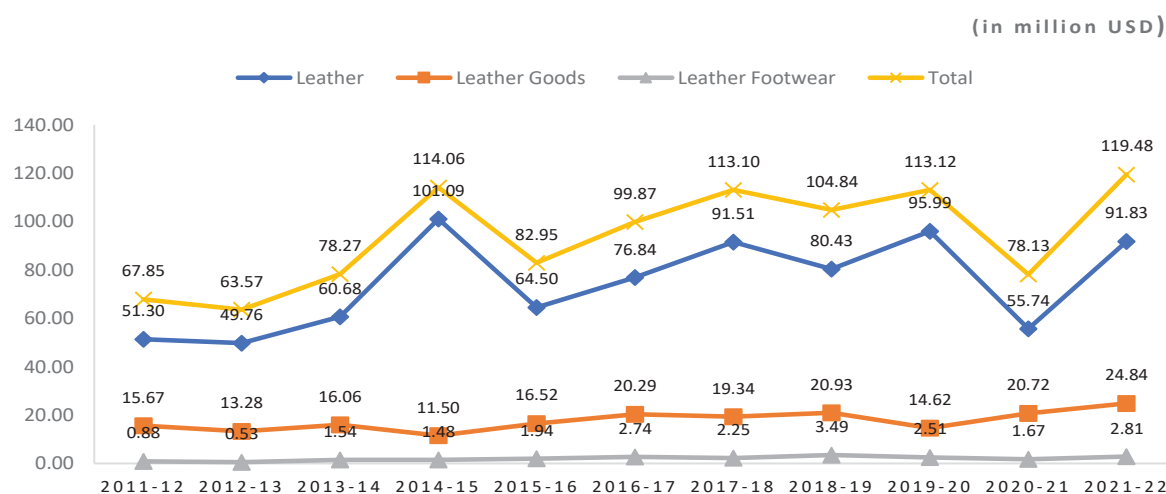
In FY2021-22 55% of the leather or raw hide was exported to China. After China, India stands for 9% of the export. Hong Kong and Italy had 8% of the export of Bangladesh for leather or raw hides.

Around 49% of the leather footwear export of Bangladesh was to the United States in FY 2021-22. Germany, Netherlands and Canada were the other largest export destination after the US for footwear export from Bangladesh. India was the second major export destinations and Japan was third as 23% and 15% of leather products were exported to these countries respectively.

### Import trend

Lack of adherence to compliance standards is a serious constraint to export of raw hides. So far, only three tanneries in Bangladesh have received Leather Working Group (LWG) standard certificates. Thus, some of the exporters in the leather and leather goods sector now import raw hides from other countries. The abundant supply of domestic raw hides is mostly used for local production and hence remains underutilized. Leather goods and leather footwear are also imported from different countries like China, India, Hong Kong, Italy, Belgium etc.

**Figure 14: Import trend of leather, leather goods and leather footwear**



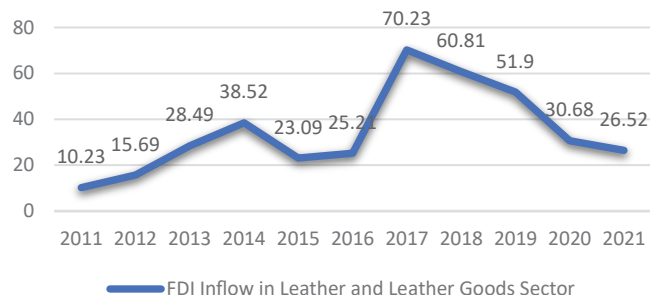
Source: Bangladesh Bank

In FY2021-22 total import of leather, leather goods and leather footwear increased by about 53% compared to the previous FY. From FY2015-16, the total import of leather and leather goods is increasing gradually. In FY2021-22 raw hides and skins and leather import stood for 77% of the total leather, leather goods, and footwear import. As raw hides and skins and leather imports show an upward trend, over the years, leather goods and leather footwear imports are also indicating a slow but steady growth.

### Investment

According to the Leather goods and Footwear Manufacturers & Exporters Association of Bangladesh (LFMEAB), the sector includes 200 tanneries, 3500 SMEs, 90 Large Firms, 15 big enterprises, and more than 60% of the workforce are women in this industry.

**Figure 15: FDI inflow in the leather and leather goods sector (in ml USD)**



Source: Bangladesh Bank

The sector has not been able to generate sufficient Foreign Direct Investment despite its huge potential. Though there was a rise in FDI inflow during 2016-2018, the sector has been facing a downward trend for the past few years. As per the Bangladesh Bank's report, Leather & Leather products generated US\$ 26.52 million FDI inflows in 2021 which was only 0.9% of total FDI. Moreover, Korea,

Source: Bangladesh Bank

Hong Kong and China together constitute more than 85% of the total FDI inflows into Bangladesh's leather and leather goods sector<sup>31</sup> while the top investor countries like USA, Singapore are not investing in this particular sector.

### Status of diversification

Over the years Bangladesh's leather exports has not increased compared to top exporting countries like Italy, United States of America, Brazil, China, Germany. In FY 2021-2022, Italy exported products under a total 37 of six digits of HS code where Bangladesh' leather export included only 19 six-digit HS code (chapter 41). Compared to the top exporters of leather goods, Bangladesh is also exporting almost the similar number of 6-digit HS codes (under Chapter 42) over the years. However, export volume is relatively trivial as the volume is still far behind the top exporters like China and Italy. In terms of product diversification, leather footwear sector is relatively at the same level of the leading exporters as Bangladesh's leather footwear export matches with all available segments of leather footwear exported by the leading exporter countries. However, there is opportunity for Bangladesh to further diversify its export products under leather (chapter 41) and leather (chapter 42) goods.

In 2002 Bangladesh exported leather to 37 countries, in 2018 it exported to 48 countries but in 2021 export destination included only 38 countries. For leather (41) the market diversification status shows the country is not expanding its export destinations over the years and there is scope of increasing the number of export destinations.

Once Japan was the country's prime export destination for leather, leather products and leather footwear accounting for around 18 per cent of the country's overseas sales. Currently, export destinations include the European Union, the USA, Italy, France, Germany, Canada, Poland, the UK, Belgium, and Spain. New and emerging markets of the sector include Turkey, South Korea, Brazil, Mexico, South Africa, Australia, Russia, China and UAE.<sup>32</sup> In FY 2020-21 Bangladesh exported USD 337.62 million worth of leather products (42) which is 33.63% higher than the previous year. In 2002

<sup>31</sup> Foreign Direct Investment and External Debt, July-December, 2021, Statistics Department Bangladesh Bank

<sup>32</sup> Diversification helps drive up exports of leather goods, shoes- LFMEAB



Bangladesh's export was limited to 51 countries while in 2021, the number increased to 107 countries. Similarly, in 2002, Leather footwear were exported to only 45 countries whereas in 2021 exports are reaching to 101 countries. Leather export has yet to achieve more volume and the country's export market share is trivial.

In 2021, Bangladesh's exports to China amounted to only 2% of its total import. Only 1.31% of Hong Kong's leather import was from Bangladesh and the rest top importers have less than 1% of imports from Bangladesh.

Although Japan is one of the prime export destinations for the country's leather products, in 2021 Bangladesh's export to Japan contributed only 1.21% of its total import. Bangladesh served only .59% of USA imports and .89% of China's import amount. However, leather footwear market share shows relatively good performance in 2021 Bangladesh claiming 2.29% of the market share in the USA's total import of leather footwear. The country had more than 1% of the market share in Germany, France, China and the Netherlands. Poland imported about 4% of its total leather footwear from Bangladesh in 2021.

### **Gender perspective in Leather and Leather Goods sector**

According to LFMEAB, the leather industry in Bangladesh indirectly and directly employs about 0.85 million people, of whom 70 percent are women. The leather and leather goods development policy 2019 mentions promoting the participation of women entrepreneur in the leather sector by providing training, and loans without mortgage. Leather goods and footwear sector is providing opportunities for women entrepreneurship. However, according to the Survey of Manufacturing Industries (SMI) 2019<sup>33</sup>, among total entrepreneurs engaged in manufacture of leather and related products, 38% are women. Women's participation is less in tannery sector in view of the hazardous work conditions entailing a lot of health risks. Most of the women participants in this industry are engaged in production & related activities, women's participation is barely visible in owner/director/ partner, administrative & managerial, clerical & sales. However, this sector has no wage discrimination and provides suitable opportunities for women like the RMG sector. The Leather Goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB) revealed that approximately 65 percent of workers in their members' export-oriented factories are women. LFMEAB also noted that women are increasingly represented in management and ownership positions in this sector, including on company boards. Women are also taking up management and ownership positions in the sector, including on company boards, and new SMEs are being developed and run by women. As leather goods exports are consistently rising and women form a significant part of the workforce, there is potential to further enhance women's involvement in international and regional trade in this sector, benefiting them from the overall expansion of the industry.<sup>34</sup>

### **Environmental aspects of this sector**

Environmental issues are largely attributed to Bangladesh's tannery subsector where environmental compliance remains a pertinent issue due to untreated effluent and chemicals. Leather goods and footwear sector is largely following the international environmental guidelines and compliances. Bangladesh is facing challenges in exporting leather and leather goods to Europe because of the absence of the Leather Working Group (LWG) certificate. The LWG is an environmental audit protocol that evaluates various aspects of leather manufacturing, including traceability, social responsibility, health and safety, and chemical management. Only four out of around 150 tanneries in Bangladesh are LWG certified, whereas India has 139, China has 103, and Vietnam has 14 such units.

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<sup>33</sup> Survey of Manufacturing Industries (SMI) 2019- Bangladesh Bureau of Statistics

<sup>34</sup> Women's Participation, Constraints, and Opportunities for Trade in Bangladesh, Australian Aid, Partnership for South Asia, World Bank Group, 2016.

In the past, the Bangladesh leather industry had noncompliance issues with environmental standards, particularly in Hazaribagh, where untreated waste and chemicals from the tanneries and leather processing factories were harming the rivers and environment. To address this, the industry has been relocated to a planned industrial zone on the outskirts of Dhaka, Savar Leather Industrial Park. However, it has yet to see full operational efficiency.

### Policies governing the sector

In view of the huge prospect of the leather and leather goods sector, the Government of Bangladesh has taken several policies to support the growth of this sector which are:

**Export Policy 2021-24:** Export Policy 2021-24, defined this sector as the highest priority sector.

**Import Policy Order 2021-24:** Cash LC facility will be available along with existing back-to-back LC facilities, in case of import of raw-materials for 100% export-oriented industries operating under bonded warehouse system. Import duty exemption on capital machineries. Limited import facility without import permit for exporters Sample.

**Leather and Leather Goods Development Policy 2019:** Target: Total export earnings to US\$5 billion and increase the contribution of this sector to the GDP from existing 0.5 percent to 1 percent by 2024. Three industrial estates dedicated for leather and tannery industries are being set-up by the government in the areas of Rajshahi, Savar and Chattogram. EDF (Export Development Fund) credit facility offered by Bangladesh Bank at 4.5% interest rate. Deduction of AIT from export proceeds 0.25% (265-AIN/Income Tax/2018 (Published on 6th September 2018), National Board of Revenue)

The Leather and Leather Goods Development Policy of 2019 provides a comprehensive framework for the sustainable and competitive growth of the leather industry in Bangladesh. The policy aims to promote environmentally-friendly production systems and provide fiscal support to the leather sector, such as low-interest loans and incentives for green industries. The policy also emphasizes the development of human capital and the introduction of a traceability system through the establishment of a laboratory.

To encourage investment in the sector, the government of Bangladesh has offered various incentives and support systems. According to the Bangladesh Investment Development Authority (BIDA), these include investment policies, regulations, and fiscal incentives for the leather industry. These measures are intended to attract investment, increase productivity, and enhance competitiveness in the sector.

*Figure 16: Sector-specific investment incentives and restriction*

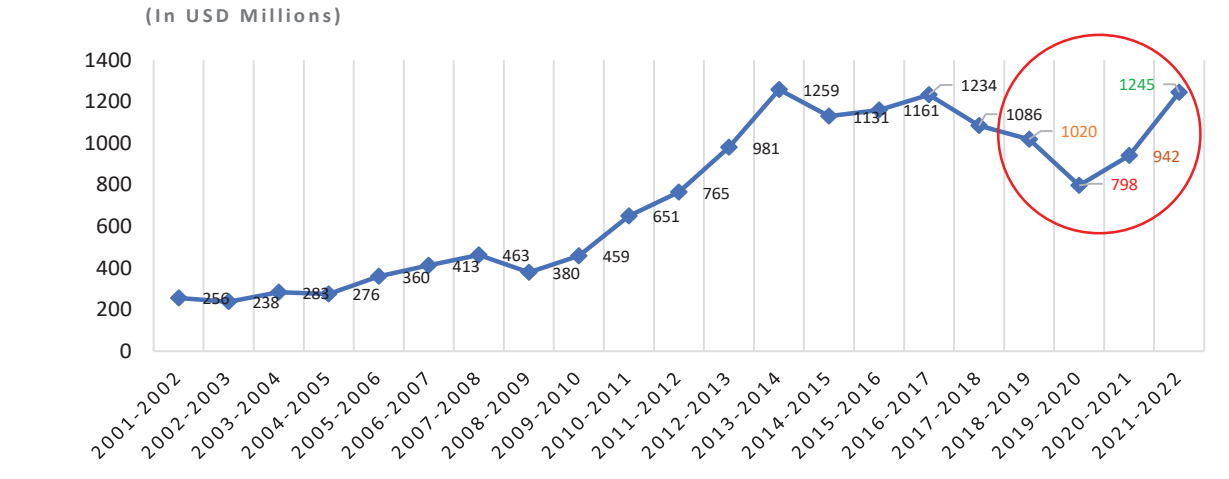
<b>Incentives</b>	<b>General:</b> <ul style="list-style-type: none"> <li>▪ Reduced CIT for 5 to 10 years depending on location.</li> <li>▪ Import duty exemption on capital machineries.</li> <li>▪ Regulatory/ supplemental duty exemption for footwear producer using materials such as tube, pipe, plastic, PVC screen, textile/ knitted fabric.</li> </ul>
	<b>For exporters:</b> <ul style="list-style-type: none"> <li>▪ 50% tax exemption for income derived from export.</li> <li>▪ No VAT imposition on export goods.</li> <li>▪ Bonded warehousing facility for large import of materials.</li> <li>▪ 15% cash incentive on export value of leather goods/ footwear, and 5% on crust leather from Savar Estate.</li> </ul>
<b>Restriction</b>	No specific restriction exists upon the entry of foreign investors.

### Impact of COVID-19 in the leather sector

The COVID-19 pandemic had a significant negative impact on the leather industry, including footwear, apparel, and accessories categories. Sales of footwear declined by close to 32% in the U.S. at the end of the first two quarters of 2020. The pandemic caused a massive 40% decrease in work orders for finished and processed leather from major exporting countries, leading to a 28% decrease

in overall revenue for the industry. Leather, leather footwear, and leather goods all suffered losses of almost 67%, 27%, and 12%, respectively, after the pandemic's effects.

Figure 17: Impact of Covid-19 in the leather sector



Source: EBP Statistics

This export trend shows that export started to dwindle in FY2017-2018 and hit a significant drop in FY 2019-20, the pandemic-inflicted year. The lingering impact of covid-19 also prevailed in FY 2020-21, however, in FY2021-22 the export trend showed recovery from the pandemic impacts.

### Challenges and opportunities of the leather and leather goods sector: findings from the SWOT analysis

SWOT analysis identified the following major strengths, weaknesses, opportunities, and threats that could impact the growth of the leather and leather goods sector.

Table 6: SWOT analysis of the leather and leather goods sector

Strengths	Weaknesses
<ol style="list-style-type: none"> <li>Competitive labor cost</li> <li>Availability of labor force</li> <li>Local Source of raw Materials</li> <li>High quality of leather</li> <li>Entrepreneur’s resilience, agility, and mindset to adapt to changes</li> <li>Capacity of meeting design quality</li> <li>Marketing and branding capacity</li> <li>Export Culture</li> <li>Capacity of meeting buyers’ demand.</li> <li>There are large firms currently supplying to reputable global brands</li> <li>Large number of SMEs in the sector</li> </ol>	<ol style="list-style-type: none"> <li>Lack of compliance with international standards regarding environmental, social, and safety issues</li> <li>Dependency on import of molds, accessories, and components resulting in higher cost and longer lead-time</li> <li>Limited availability of R&amp;D and technology for product design</li> <li>Lack of training facility and institutional education</li> <li>Limited access to finance, for technology upgradation and expansion particularly for SMEs</li> <li>Insufficient accredited laboratory facility at international standards</li> <li>Absence of SOP for Tannery Sector</li> <li>Import tax on raw materials</li> <li>Absence of proper solid and liquid waste management causing environment pollution</li> <li>Meagre traceability in locally produced leather</li> </ol>

Opportunities	Threats
<ol style="list-style-type: none"> <li>1. Large and growing domestic and global leather export market</li> <li>2. Government policy support as a highest priority sector in Export Policy 2021-2024</li> <li>3. Local and Foreign direct investment opportunity</li> <li>4. Global Branding of the industry</li> <li>5. Relocation of manufacturing from developing and developed countries</li> <li>6. Geographic Advantages</li> <li>7. Demographic Dividend</li> <li>8. Diversification of Leather and Leather Goods</li> <li>9. Piggyback opportunity</li> <li>10. Establishment of technology and design center</li> </ol>	<ol style="list-style-type: none"> <li>1. Stricter international standards, compliance and sustainability issues.</li> <li>2. Stiff competition from other Asian economies like Vietnam, India, etc.</li> <li>3. Preference erosion of special &amp; differential treatment and DFQF facilities</li> <li>4. Trade logistic constraints</li> <li>5. Anti-export biasness</li> <li>6. Potential non-availability of workers</li> <li>7. Lack of policy for ensuring ease of doing business</li> <li>8. Rising vegan culture</li> <li>9. Consumer preference towards non-leather items</li> </ol>

Source: BFTI findings generated from KII and Stakeholder Consultation

### Key strengths

**Competitive labor cost:** Bangladesh has a comparative advantage in terms of labor cost, with the minimum wage currently standing at \$77.153 per month, which is lower than other major competitors like Vietnam, Pakistan, and China. Vietnam's minimum wage This advantage provides a strong competitive edge for Bangladesh's export-oriented industries, including the leather industry. Although China, Vietnam, and India remain major competitors, Bangladesh's competitive labor cost has and will continue to strengthen its position in the global market. As China shifts towards high-tech, capital-intensive manufacturing, its market share for leather goods is expected to decrease, which may lead to the relocation of these industries to regions with lower labor costs, further benefiting Bangladesh.

**Availability of labor force:** Labor force participation rate, total (% of total population ages 15+) (modeled ILO estimate) in Bangladesh was reported at 56.97 % in 2021, according to the World Bank collection of development indicators, compiled from officially recognized sources. Bangladesh's labor force participation rate for 2021 was 39.38%.<sup>35</sup> With the sufficient availability of workforce in the country, the leather sector faces no problems in finding workers.

**Local Source of Raw Materials:** Among the country's major export sectors, the entire supply of raw materials for only leather and jute products comes from local sources. Bangladesh has the world's 12th largest cattle stock and a local supply base of raw leather products (hides and skins). Almost 50% of hides and skins are sourced during the Islamic religious festival, necessitating material collection and processing, as well as financing in a very short period of time. As a result, a large number (85%) of animals are slaughtered by unskilled seasonally involved people affecting the quality and traceability of hides/ skins and generating significant waste. This also inhibits local leather from being priced more favorably for export. Despite these facts, the abundant availability of animal skins provides an indigenous strong source of easy raw materials for the leather sector.

**Entrepreneurs' resilience, agility, and mindset to adapt to changes:** Entrepreneurial mindset and enthusiasm for global practice adaptation of leather sector businesses and SMEs also serve as a strength. Key insights revealed leather sector businesses are keen to follow all global standards but current compliance issues hinder their ability. Moreover, entrepreneurs are already trying their best to replicate best manufacturing practices in the leather sector.

<sup>35</sup> Macrotrends, Bangladesh Labor Force Participation Rate 1990-2022 available at- <https://www.macrotrends.net/countries/BGD/bangladesh/labor-force-participation-rate>

**Capacity of meeting demand and design quality:** Although this industry does not have ODM capacities, current local suppliers are capable of meeting design quality and volume prescribed by foreign buyers. The KII findings revealed that after working with a buyer for a certain period if the design quality orders are well met, then there can be substantial opportunities for joint designing of products too. This signifies the strength and potential of this sector for future growth.

#### **Key weaknesses**

**Lack of compliance with international environmental, social, and safety standards in the factories and manufacturing premises:** The poor compliance of the leather sub-sector in Bangladesh, both in environmental and social indicators, is a crucial hindrance to its growth. Workers lack a safe and healthy working environment and are exposed to toxic chemicals without Personal Protective Equipment (PPE), leading to health hazards. Inefficient toxic waste disposal also poses environmental concerns. To reap the potential benefits, the industry must ensure Environmental, Social, and Quality (ESQ) compliance due to rising concerns by international buyers. European and American buyers only purchase goods from certified factories, and non-compliant factories sell tanned leather to Chinese companies at rates 40% lower than international markets.

**Dependency on import of raw materials and lack of backward linkage:** Bangladesh produces sufficient raw materials or skins, but hides are not usable for global export due to environmental compliance demands in the leather goods industry. The country relies heavily on imports for accessories, machinery, molds, and chemicals needed for leather processing, resulting in increased costs. This has hindered the development of raw material industries like adhesive, lace, mold, and chemical production within the country. Modernizing equipment for leather production is also mainly acquired from overseas, and the cost of importing production-related chemicals further increases the price of leather preparation. The COVID-19 pandemic disrupted the supply chain, causing a significant slowdown in production and export capacity.

**Access to finance, for technology upgradation and expansion of units is constrained for SMEs:** The tannery subsector consists of many small, family-run tanneries that lack financial and technological support, which limits their potential for exportation. The lack of capital and funding, especially for small and medium-sized tanneries, is a significant challenge faced by the industry. Due to the high rate of loan default in the industry, it is challenging for tanners to obtain financing. The industry has received significant investment, but the majority of it is still in default due to falling exports and rising processing costs.

**Limited availability of necessary technology and software for product design:** Currently leather businesses follow the OEM approach where products are sold by the manufacturer based on the buyer's specifications. Local manufacturers lack the ODM or original design manufacturing capacity due to the absence of necessary technology and software for product design. Moreover, only a trivial amount of leather goods and footwear manufacturing firms have the capacity of ODM with their own design labs.

**Lack of environmental safety and infrastructure development for ETP:** The CETP at Savar is not fully functioning. The delay in setting up a fully functional CETP hampered production which has put a huge financial burden on the tanners. In addition, the tannery estate project is yet to provide proper support to the linked sectors like chemical, raw leather suppliers, and casual workers and did not create any accommodation facilities for the huge number of workers who are, directly or indirectly, related to this sector. Also, the global standard of using water for washing a ton of rawhide is 30,000 liters but in the case of Bangladesh, the tanners use more than 65,000 liters of groundwater. Moreover, proper solid waste management is yet to be developed.

## Key opportunities

**Large and growing global leather export market:** The market for leather goods was valued at USD 242.85 billion in 2022 and is expected to expand at a compound annual growth rate (CAGR) of 6.6% from 2023 to 2030. Increasing consumer disposable income, changing fashion trends, bettering living conditions, and rising domestic and international tourism are the main market drivers. The growing need for attractive, current, and comfy leather footwear, accessories, clothing, and other products is projected to be profitable for the industry.<sup>36</sup> Global demand for leather goods presents the sector with immense export opportunities.

**Designated as a priority sector in Export Policy 2021-2024:** The government made the new Export Policy 2021-24 with the highest priority attached to 14 sectors including leather in order to increase much-needed foreign currency earnings. According to this policy, exporters can borrow up to 90% of the amount specified in the irrecoverable letter of credit or confirmed contract. The leather sector is granted a 50% tax exemption for income earned from exports, as well as an import duty exemption for capital machinery. Additionally, leather sector exporters will receive financial assistance from the export-readiness fund. These supportive policies offer ample export opportunities for the leather sector.

**Rising demand in the domestic market:** The leather industry in Bangladesh has the opportunity to expand its domestic market in addition to exports to global market. The domestic footwear market in Bangladesh has been steadily rising, estimated at over 30 million pairs in 2018, and increasing at a rate of 10-15% per year with per capita consumption increasing to 3 pairs from 1.7 pairs a few years ago due to expanding middle-class population. Currently dominated by the informal sector, the market is expected to shift to modern retail chains and outlets with urbanization and a rise in the working population.

**Local and foreign direct investment opportunity:** Currently, the leather sector in Bangladesh is turning into a hotspot for foreign investment due to the country's low manufacturing costs, availability of low-cost raw materials, and its ability to benefit from trade advantages for exporting. New investors from Japan, Taiwan, and Vietnam are highly interested to invest in this sector either in joint ventures or in companies they could establish themselves. The export incentive on crust leather and leather is a major factor drawing foreign direct investment (FDI) to this sector. Moreover, the large domestic market of leather is also a driving factor behind attracting FDI in this sector. Currently, total investment in leather and leather goods and footwear is more than \$1 billion, of which some \$700 million is from domestic investors while the remaining \$300 million is from foreign investors are involved in exporting manufactured items. Foreign investments in this sector mainly came from Germany, Taiwan, China, India, and Italy.<sup>37</sup>

**Relocation of manufacturing in developing from developed countries:** In recent years, the tanning industries in developed countries have been shrinking due to pollution problems and high labor costs, creating an opportunity for developing countries like Bangladesh to benefit from this shift. Additionally, China, which has long been the market leader in the global leather industry, is losing market share due to rising costs and increasing demand for non-leather products. This provides opportunities for Bangladesh to become a direct investment hub for the global leather industry, including the relocation of factories from China.

## Key threats

**Stricter international standards and compliance issues:** The leather industry in Bangladesh has enormous potential, but its growth is hindered by non-compliant factories. This industry has access to sufficient raw materials, but the lack

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<sup>36</sup> GVR Report Leather Goods Market Size, Share & Trends Analysis Report By Type (Genuine Leather, Synthetic Leather, Vegan Leather), By Product (Footwear, Home Décor & Furnishing), By Region, And Segment Forecasts, 2022 - 2030

<sup>37</sup> Policy Review/Policy Study/Policy Paper Preparation on Leather and Leather Goods Development Policy 2019, SANEM (2021)



of compliance improvement makes it difficult to guarantee a fair price for their goods on the global market. Unless compliance standards are improved, the country may face export restrictions and reduced potential for growth, especially as it faces stricter international standards following its graduation from LDC status.

**Stiff competition from other Asian economies like Vietnam, India and etc.:** As in RMG sector, Bangladesh is facing tough competition mostly from Vietnam and India in leather sector. Vietnam's compliance and infrastructure strengths have helped it to become a formidable competitor in the global market. For example, in the first seven months of 2022, Vietnamese leather and footwear exports increased by 13% compared to the same period the previous year, reaching 14 billion US dollars. Vietnam's footwear exports alone rose by 6.1%, totaling 17.77 billion US dollars, which highlights the country's competitive power and growth potential in the leather sector compared to Bangladesh.

**Preference erosion of special treatment and DFQF facilities:** Currently, Bangladesh enjoys duty-free/quota-free access to many developed countries due to its status as a least-developed country (LDC) under the Generalized System of Preferences (GSP). This gives it a competitive advantage over China, a major competitor in the leather goods market, which is subject to additional duties to access the same markets. However, Bangladesh is set to graduate from LDC status, which will result in the loss of these advantages. Additionally, the government currently provides a 15% cash incentive on the export value of leather goods/footwear, which is likely to stop after the graduation. This could cause the cost of production to rise and make leather products less competitive. Furthermore, without preferential market access, Bangladesh's leather products will face heavy competition from other countries.

**Logistic problems:** The leather industry in Bangladesh is likely to face difficulties in handling a large number of export orders in the future, as the country's logistics performance index (LPI) is low compared to regional competitors. The sector is also challenged by rising logistics and shipping costs, as well as inadequate communication infrastructure, complex tax and customs procedures, lengthy banking transactions, transportation bottlenecks, slow handling of products at the port, high cost of doing business, unpredictability of tax regimes, and difficulties in handling foreign direct investments and joint ventures.

**Lack of policy for ensuring ease of doing business:** Despite progress with the policy environment for the private sector that has spurred the expansion of private investment, the overall investment climate for Bangladesh remains substantially weaker than those found in competing countries. This is reflected in the global rankings of investment climate prepared by the World Bank as well as by the World Economic Forum. For example, the World Bank's 2020 Ease of Doing Business (EDB) ranks Bangladesh at 168th out of 190 countries. The leather sector is currently not generating more entrepreneurs and these issues can be a serious threat to its further growth and development.

## Non-Leather Footwear

### Overview of the Sector

Global overview: The global non-leather footwear market is based on the five Harmonized Commodity Description and Coding System (HS) under four-digit HS codes typically correspond to the following categories: waterproof (HS6401), rubber and plastic (HS6402), leather (HS6403), textile (HS6404), and other (HS6505). The non-leather products' market size is forecasted to reach US\$365.3 billion by 2027 after growing at a Compound Annual Growth Rate (CAGR) of 5.1% during the forecast period 2022-2027.<sup>38</sup> In 2021 global footwear production increased by 8.6%, exceeding 22 billion pairs. Non-leather footwear in Bangladesh takes several forms, including jute-based espadrilles, canvas or rubber tennis shoes, molded polyurethane and polyvinyl chloride (PVC) shoes, and artificial leather shoes.

Globally, non-leather footwear products such as sneakers, athletic footwear, and textile & other footwear are dominant in the global market. The Sneakers segment is expected to experience a compound annual growth rate (CAGR) of 7.95% between 2022 and 2027, with revenue amounting to US\$72.72 billion in 2022, while the United States generates the highest revenue at US\$21,580.00 million in 2022. The athletic footwear market is expected to generate \$50.91 billion revenue in 2022 with a 6.71% yearly expansion rate (CAGR 2022-2027), while the United States generates the highest revenue at US\$14,480.00 million, with projected volume growth of 16.3% in 2023, and anticipated volume reaching 580.9 million pairs by 2027. The Textile & Other Footwear category generated US\$133.60 billion revenue in 2022, expected to expand by 5.61% yearly (CAGR 2022-2027), with China generating the highest revenue at US\$38,620.00 million in 2022.<sup>39</sup>

#### Global Production of the Non-Leather footwear industry

**Figure 18: % distribution of global footwear production by continent (Quantity)**



*World Footwear Yearbook Report, World Footwear, 2022*

Figure 18 indicates that Asia dominates the global footwear market, accounting for 88.2% of the world's footwear production, followed by South America at 4.7%, Africa at 2.9%, and Europe and North America at 2.8% and 1.4%,

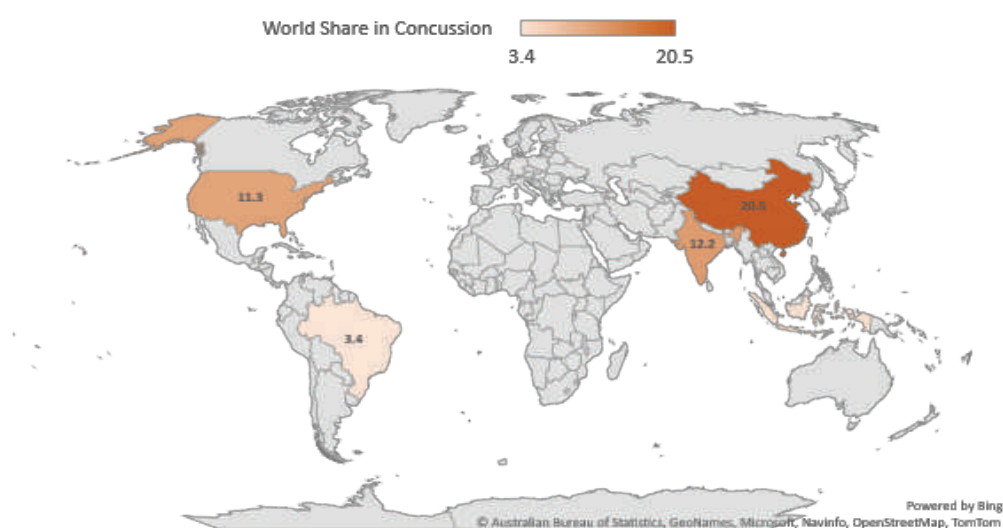
<sup>38</sup> Non-leather Products Market - Industry Analysis, Market Size, Share, Trends, Application Analysis, Growth and Forecast 2022 – 2027, Industry Arc, 2022.

<sup>39</sup> Statista Outlook, 2022, <https://www.statista.com/outlook/cmo/footwear/sneakers/worldwide>

respectively, with Oceania having no share in the global market. In terms of global production in pairs (million) in 2021, the Asia Pacific region dominated the global footwear market with China, India, Vietnam, and Indonesia producing more than 75% of the world's footwear. The global production in 2020 was lower due to the pandemic, and Bangladesh ranked eighth in the world in footwear production, having produced 401 million pairs in 2021.

#### Global consumption of the non-Leather footwear industry

Figure 19: Top five country consumption of footwear



Source: World Footwear Yearbook Report, World Footwear, 2022

Asia led the global footwear market with a consumption share of 56.1% in 2021, followed by North America (14.9%) and Europe (13.3%). China and India are the top two markets, with 20.5% and 12.2% of global consumption, while the United States consumed 11.3%.

#### Import situation of global non-Leather footwear industry

Table 7: Distribution of top 10 non-leather footwear importers country average global share (year 2015 -2021) (In billions USD)

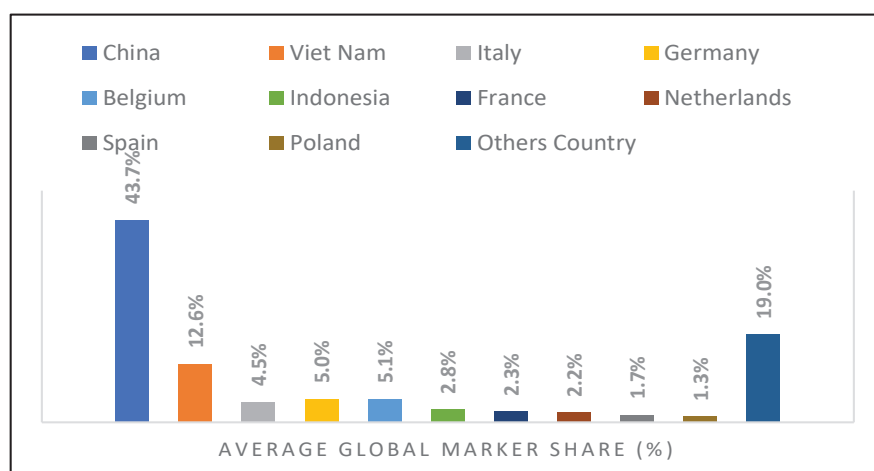
SL. No	Importers Country	Value (Billions USD)	Global Share %
1	United States of America	15.76	19.0%
2	Germany	7.44	9.0%
3	France	4.29	5.2%
4	Italy	3.70	4.5%
5	China	2.68	3.2%
6	Netherlands	2.28	2.7%
7	United Kingdom	3.60	4.4%
8	Japan	3.95	4.8%
9	Belgium	2.50	3.0%
10	Spain	2.32	2.8%
11	Others Country	34.53	41.5%
<b>Total</b>	<b>World</b>	<b>83.06</b>	<b>100.0%</b>

Source: ITC calculations based on UN COMTRADE and ITC statistics

The USA is the largest importer of footwear with a 19.0% share, followed by seven European countries led by Germany, while Japan and China have 4.8% and 3.2% shares respectively, and other countries share 41.5% of the global import market. The statistics shows that the USA experienced a 4% growth rate in import in 2020-21, surpassing the growth rates of the United Kingdom, Italy, and other European countries, which have recently shown increasing import growth rates, while China's import growth rate decreased from 11% in FY 2017-18 to 9% in FY 2020-21.

## Export situation of global non-Leather footwear industry

**Figure 20: % of global market share of top ten countries in non-leather footwear market**

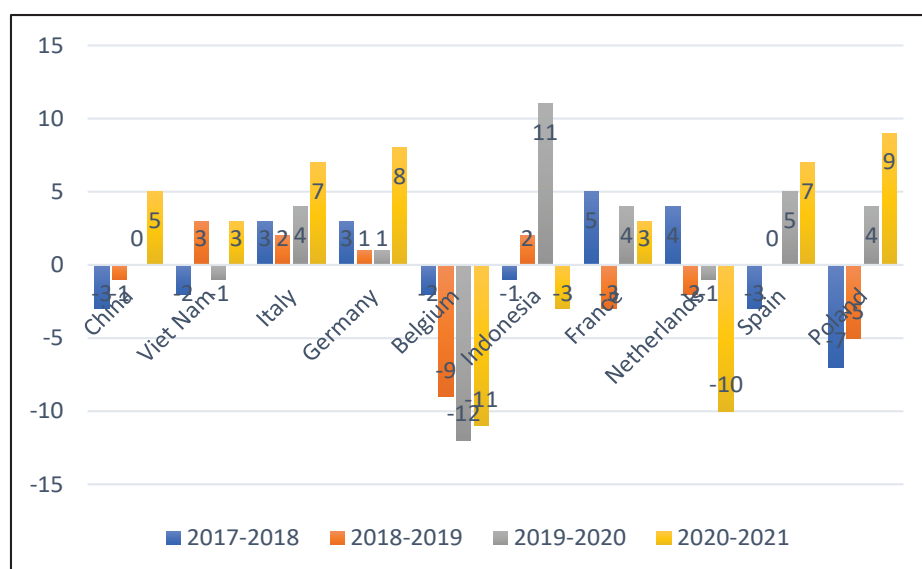


Sources: ITC calculations based on UN COMTRADE and ITC statistics

respectively of non-leather footwear. Other countries contributed about 19% to the global export of non-leather footwear.

China has maintained its position as the foremost exporter of footwear globally for over a decade, holding 43.7% of total export in 2021. The remarkable success story of the footwear industry over the past ten years is attributed to Viet Nam, which currently holds the second position and accounts for 12.6% of worldwide exports. According to Figure 20, Belgium and Germany ranked third and fourth with a 5.1% and 5% export share

**Figure 21: % of export growth of top ten countries**



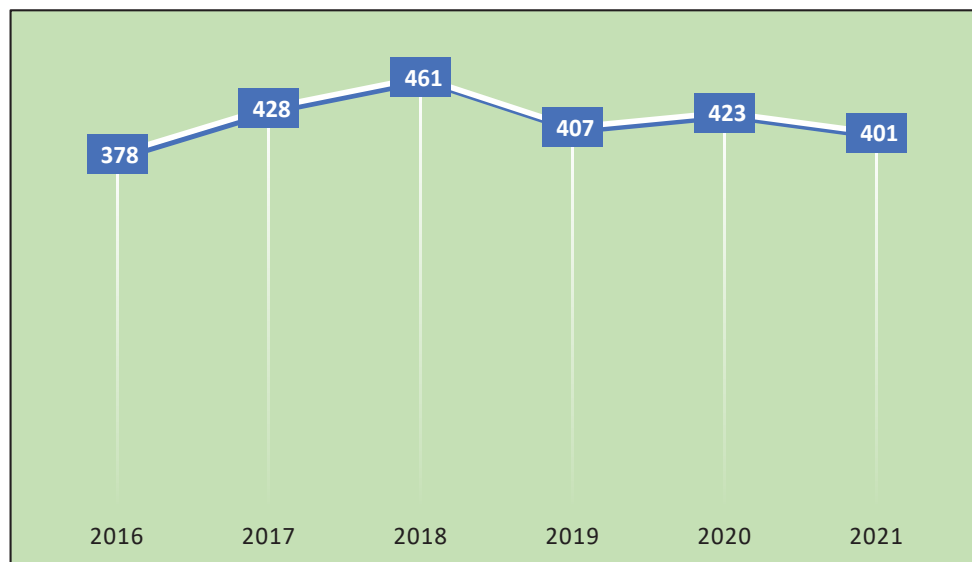
Sources: ITC calculations based on UN COMTRADE and ITC statistics

The global non-leather footwear exports are exhibiting a positive trend, except for Belgium, which is demonstrating a negative trend. The export leader China has experienced a growth rate of 5% in the year 2021. The second largest exporter Viet Nam had 3% growth. However, in 2021 Poland experienced the highest growth of 9%.

## Bangladesh's overview

### Bangladesh's production of the non-Leather footwear

Figure 22: Annual production of footwear (In million pairs)



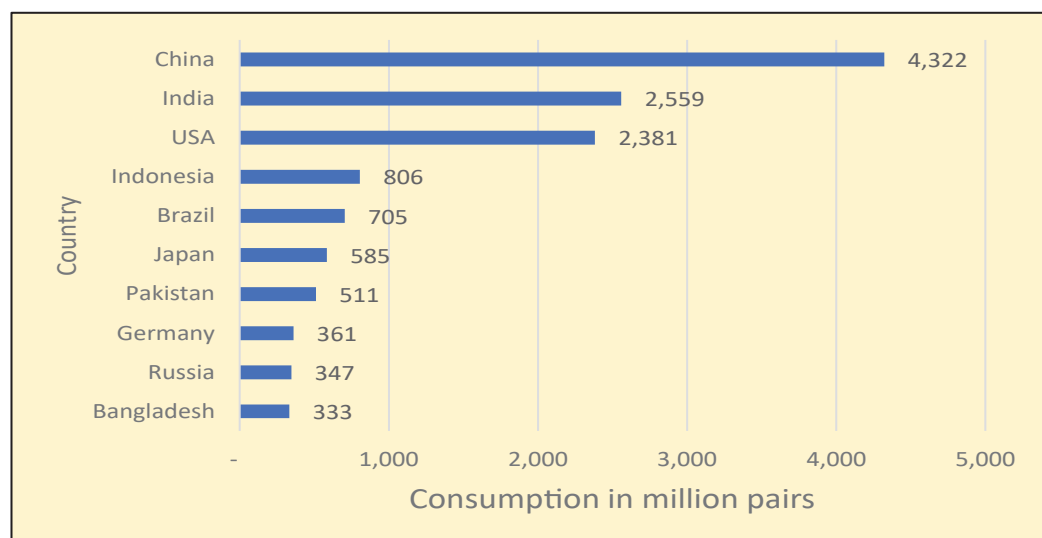
Bangladesh has experienced a 6% growth in footwear production from 2016 to 2021, becoming the 8th largest producer of both non-leather and leather footwear in the world, with its output increasing from 378 million to 401 million pairs of footwear during this period. According to the statistics, the Sneakers segment in Bangladesh

Source: Statista outlook, 2022

is projected to yield \$215.20 million in revenue in 2022. It is anticipated to have an annual growth rate of 8.47% between 2022 and 2027, with a predicted volume growth of 12.5% in 2023. The Athletic Footwear segment is expected to show a volume growth of 14.3% in 2023 and the Textile & Other Footwear segment is expected to show a volume growth of 12.6% in 2023.<sup>40</sup>

### Bangladesh's consumption of the non-Leather footwear

Figure 23: Bangladesh's consumption of footwear 2021

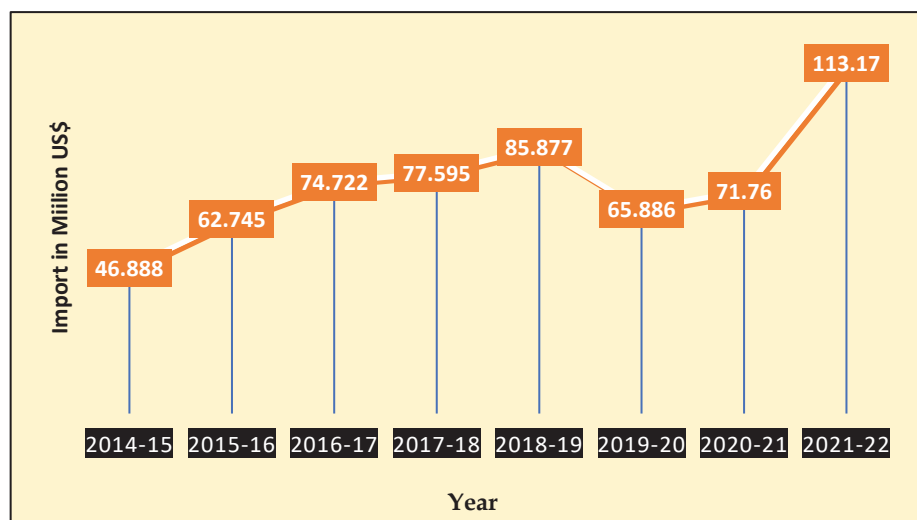


China, consuming a whopping 4,322 million pairs of footwear, leads the top footwear consumers worldwide, with Bangladesh ranking 10<sup>th</sup> and India coming in second, having consumed 2,559 million pairs in 2021.

<sup>40</sup> <https://www.statista.com/outlook/cmo/footwear/sneakers/bangladesh>

## Import situation of Bangladeshi Non-Leather footwear industry in Bangladesh

Figure 24: Annual import of non-leather footwear and footwear parts (In Million US\$)

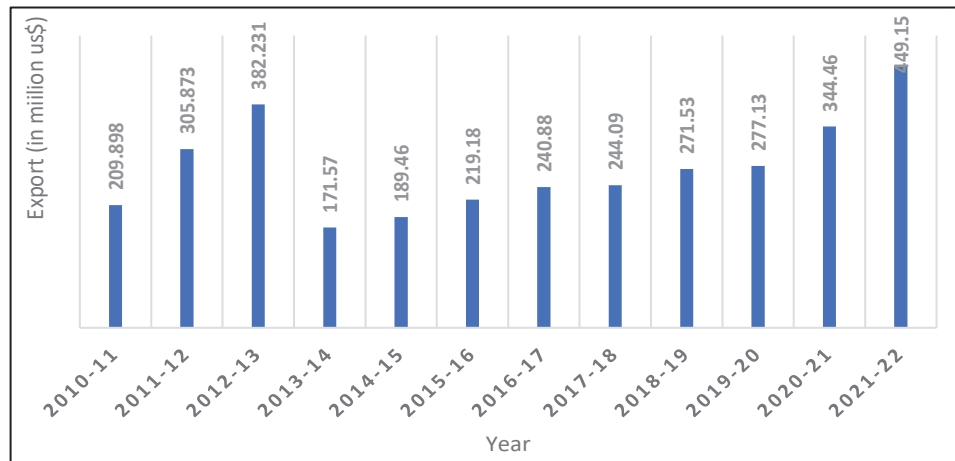


Source: Bangladesh Bank (BB)

Bangladesh imports non-leather footwear and footwear components primarily from China, India, France, Hong Kong, and Indonesia. Bangladesh has significantly increased its imports by 141% from FY 2014-15 to FY 2021-22, with non-leather footwear imports worth US\$ 46.9 million in FY 2014-15 rising to US\$ 113.17 million in FY 2021-22.

## Export situation of Bangladesh Non-Leather footwear industry in Bangladesh

Figure 25: Export volume of non-leather footwear in USD million



Source: Export Promotion Bureau (EPB)

The global market for non-leather products is predicted to grow at a 5.1% CAGR and reach US\$ 365.3 billion by 2027. The shift towards synthetic footwear among younger generations has led to an upward trend in Bangladesh's non-leather footwear exports, with the sector generating

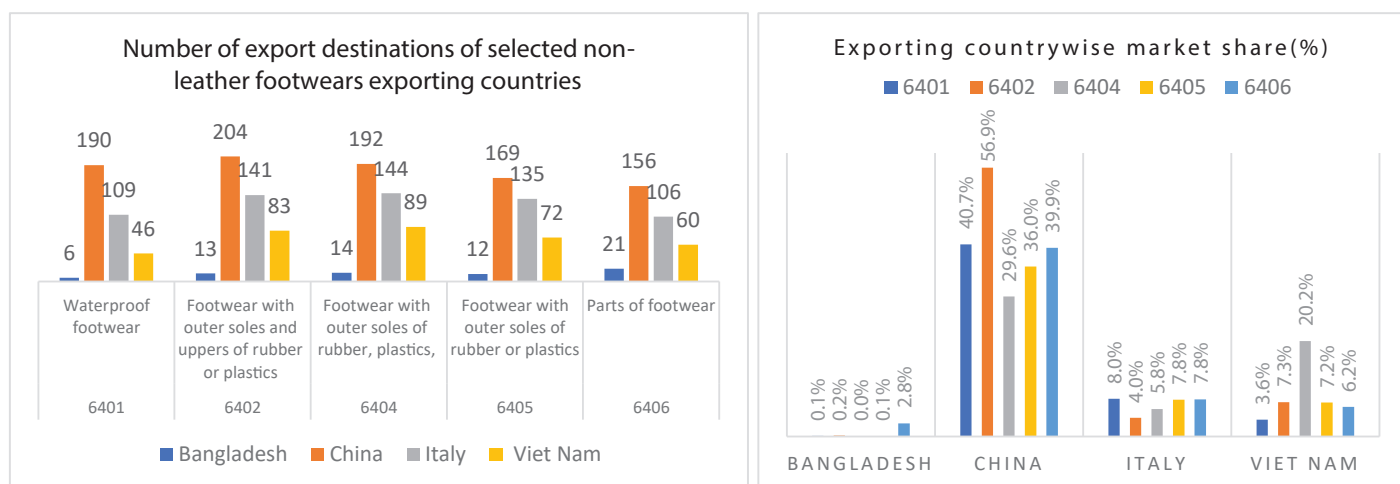
about US\$ 450 in export revenue in FY 2021-22, marking the highest export revenue ever, and experiencing an average annual growth of about 20% over the previous five years. In FY 2021-22 the growth rate was 30% which is also the highest-ever growth in the last 10 years. Bangladesh is emerging as a leading supplier of non-leather footwear for low prices and good quality. The country is now supplying sports shoes, sandals, flip-flops, and boots to a number of leading global retailers including Kappa, Skechers, Decathlon, Steve Madden, Puma, Fila, Graceland, Jenny Fairy, Denali Shoes, Ben Sherman, Hugo Boss, and H&M.<sup>41</sup> The main export destinations for Bangladesh of this sector are Spain, France, Netherlands, South Korea, India, Italy, and Germany.

<sup>41</sup>Non-Leather Goods, Bangladesh Investment Authority (BIDA), 2019



## Status of product diversification

Figure 26: Comparison of Bangladesh's non-leather footwear with top exporting countries (Based on 4 Hs digit code 2021)

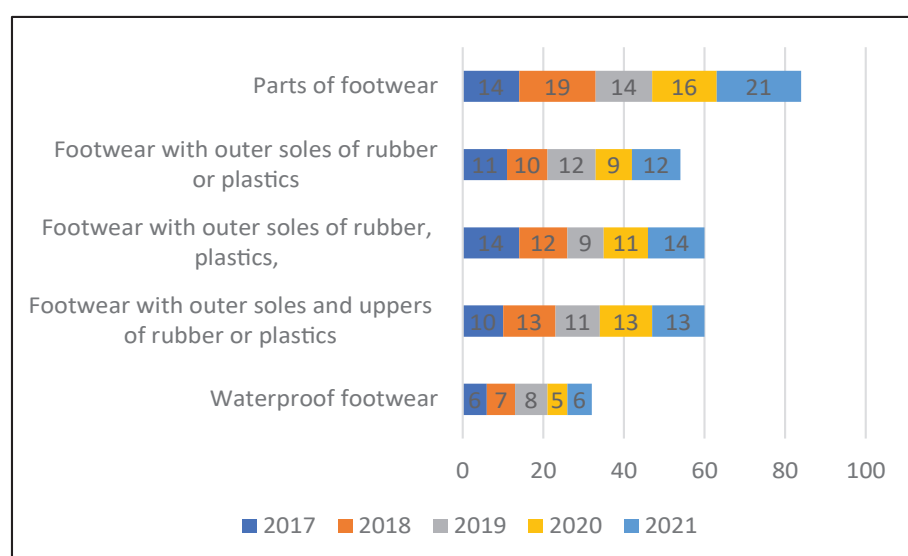


Source: ITC and BFTI Analysis

In the year 2021, under HS Code 64, China led the export market for Waterproof footwear products (HS code 6401) by exporting to 190 countries. Italy exported to 109 countries, Viet Nam exported to 46 countries, and Bangladesh exported to only 6 countries. In Figure 26, it can be observed that China held a market share of 40.7% in the export of Waterproof footwear products, while Italy had 8%, Viet Nam had 3.6%, and Bangladesh had only 0.1%.

## Status of market diversification

Figure 27: Bangladesh's non-leather export to different number of countries from 2017 to 2021



Bangladesh exported parts of footwear worth US\$ 260 million to 21 countries in 2021, with footwear having outer soles of rubber or plastics exported to 12 countries (US\$ 68.38 million), outer soles and uppers of rubber or plastics exported to 14 countries (US\$ 12.48 million), and waterproof footwear exported to 6 countries (US\$ 2.34 million), indicating a gradual market diversification of these products.

Source: ITC Data

### **Gender perspective in non-leather footwear Sector**

The non-leather footwear sector of Bangladesh employs around 1.2 million people, with approximately 70% of the workforce being women.<sup>42</sup> However, women face significant challenges in terms of employment, wages, and training opportunities. Women are more likely to accept low-paid and insecure jobs due to their limited access to opportunities outside of the home. Only 28% of women workers in the sector receive training compared to 43% of men. Women workers in the non-leather footwear sector earn around 35% less than their male counterparts<sup>43</sup>. Addressing gender inequality in the sector requires efforts to increase access to education and training for women, address gender-based wage gaps, and promote women's leadership and decision-making roles in the industry <sup>44</sup>. The consistent growth of footwear exports presents a significant opportunity for women to participate more actively in international and regional trade in this sector. As women form a substantial part of the workforce, further enhancing their involvement could lead to greater benefits for them, as well as contribute to the overall expansion of the industry.

### **Environment aspects of the sector**

The non-leather sector in Bangladesh is worth \$1 billion but generates 1,500 tons of solid waste, 22,000 cubic meters of wastewater, and 200 tons of air pollutants every day, posing significant environmental hazards. The use of hazardous chemicals in the industry exacerbates these risks, and the low level of compliance with environmental regulations is a concern <sup>45</sup>. Concerted efforts are needed by the industry and government to ensure sustainable development while minimizing the impact on the environment and human health<sup>46</sup>.

### **Policies governing the sector**

The Bangladeshi government prioritizes the non-leather footwear industry and provides various incentives, including cash incentives of 4%-20%, duty-free imports of raw materials and equipment, tax holidays, and generous bank credit. The government also supports the non-leather footwear industry through monitoring, assessing, and promoting it globally, providing uninterrupted utility supply, priority facilities for air travel, and attracting FDI for further development.

The import of raw materials for 100% export-oriented industries under the bonded warehouse system, including the non-leather footwear industry, will remain valid under Cash LC procedure with back-to-back LC facilities and import duty exemption on capital machineries, as listed in the top priority sectors in the Export Policy 2021-24 and Industrial Policy 2016.

### **Incentive in Non-Leather footwear industry**

Those investors registering with BIDA for their investment projects are able to benefit from the following key incentives and privileges

- Corporate Income Tax (CIT) exemption of up to 10% on the production of jute and jute products.
  - Reduced Corporate Income Tax (CIT) for 5 to 10 years for industries undertaking the production of artificial fiber.
- Duty-free access to 52 countries, including the European Union (EU), under the Generalized System of Preference (GSP) framework for suppliers of non-leather goods.

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<sup>42</sup> Women's Participation, Constraints, and Opportunities for Trade in Bangladesh, Australian Aid, Partnership for South Asia, World Bank Group, 2016

<sup>43</sup> International Labour Organization (ILO). (2017). Women in the Non-Leather Footwear Sector in Bangladesh: Challenges and Opportunities

<sup>44</sup> Centre for Policy Dialogue. (2019). Gender Wage Gap in the Non-Leather Footwear Industry in Bangladesh.

<sup>45</sup> ILO (2017). Hazardous chemicals and waste in the non-leather footwear sector in Bangladesh.

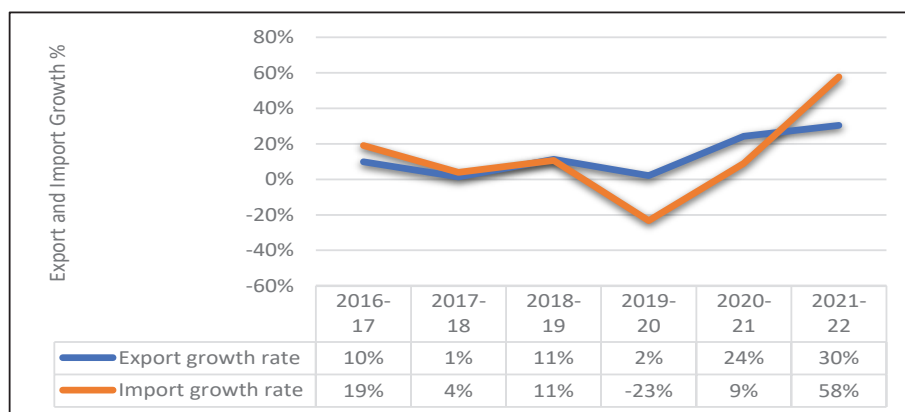
<sup>46</sup> BCAS (2016). The State of Environmental Pollution and its Impact on Health in Dhaka City. Bangladesh Center for Advanced Studies.

<sup>47</sup> Non-Leather Goods, Bangladesh Investment Authority (BIDA), 2019

### Covid-19 impact on non-leather footwear industry

The COVID-19 pandemic also greatly affected the Non-Leather Footwear industry. The sector experienced lack of sales during the three major festivals of 2020 & 21 - Eid-ul-Fitr, Eid-ul-Azha and Pohela Boishakh (Bangla New Year) - as a result of the COVID-19 pandemic 40% of sales came down during that time.<sup>48</sup> Footwear exports worldwide fell by 17 billion dollars (31.1%) in 2020. At least 73% of factories laid off their 50% employees. The price of raw materials, particularly raw chemicals, polymeric materials, and packing materials, has significantly increased by 3% to 123% since December 2018. A study conducted by Global Business Review showed that 11.29% of small and medium businesses permanently closed due to the negative impact of the COVID-19 pandemic<sup>49</sup>. According to ITC data in 2020, USA import of non-leather footwear products decreased to 24%, but increased to 33% after COVID-19 while during COVID-19 top importer countries decreased import except for China. As per ITC data, it is evident that during Covid-19 pandemic China's export growth rate decreased by 20%, Viet Nam export growth rate decreased to 10% compared to 2019.

Figure 28: Export and Import growth performance % over years



Source: EPB and BB Data

Bangladesh exported parts of footwear worth US\$ 260 million to 21 countries in 2021, with footwear having outer soles of rubber or plastics exported to 12 countries (US\$ 68.38 million), outer soles and uppers of rubber or plastics exported to 14 countries (US\$ 12.48 million), and waterproof footwear exported to 6 countries (US\$ 2.34 million), indicating a gradual market diversification of these products.

### Challenges and opportunities of the non-leather footwear sector: findings from the SWOT analysis

SWOT analysis identified the following major strengths, weaknesses, opportunities, and threats that could impact the growth of the non-leather footwear sector:

Table 8: SWOT analysis of non-leather footwear sector

Strengths	Weaknesses
<ol style="list-style-type: none"> <li>1. Availability of labour force and low-cost labour</li> <li>2. Availability of Raw materials (mold) for Organic Shoe, Espadrille, Hogla, Water Hysinth, Bana Shoe</li> <li>3. Domestic production of Last and Knife for PU, PVC and Textile Shoes</li> <li>4. Locally manufactured machineries for repair and maintenance facilities for Espadrille</li> <li>5. Capacity to produce international quality products</li> <li>6. Accredited laboratory facility at international level</li> <li>7. Skilled labour in sewing non-leather footwear</li> <li>8. Existence of large firms with capacities to cater to reputable global brands</li> </ol>	<ol style="list-style-type: none"> <li>1. Import dependency on raw materials like plastic, PU, PVC and others materials</li> <li>2. Shortage of Gas and Power Supply</li> <li>3. Slow pace of transformation from Original Equipment Manufacturing (OEM) to Original Design Manufacturing (ODM)</li> <li>4. Limited availability of R&amp;D and technology for product design</li> <li>5. Lack of market research on international market, products, design, seasonality.</li> <li>6. Lack of communication skill of the local entrepreneurs</li> <li>7. Lack of skilled and semi-skilled labour</li> <li>8. Lack of full time functionality of customs and different border post agency</li> <li>9. Lack of bonded warehouse facility for SMEs</li> <li>10. Lack of backward linkage industry for PU, PVC, upper materials, sole, zipper, mold, adhesive and different accessories</li> </ol>

<sup>48</sup> COVID -19 Pandemic Outbreak Impact Analysis on Footwear Sector in Bangladesh, BRAC Institute of Governance and Development, BRAC University, 2019.

<sup>49</sup> Md. Rayhan Sarker, S. M. Abidur Rahman, A. K. M. Hedaitul Islam, Md. Farhan Fuad Bhuyan, Sunjida Enam Supra, Kauser Ali and K. M. Asadun Noor, Impact of COVID-19 on Small- and Medium-sized Enterprises, Global Business Review, 2022.

Opportunities	Threats
<ol style="list-style-type: none"> <li>1. High demand of non-leather footwear in EU, Western, Australia, Canada, Japan and etc.</li> <li>2. Rising demand in the domestic and global (Safety shoe, Flip-Flop and Mule) market</li> <li>3. Cash incentive of 20 % on export of jute products, carbon and jute particle boards and for PU PVC shoe 4% if bond is available, 15% without bond</li> <li>4. Rising demand for eco-Friendly shoes</li> <li>5. Reduced corporate income tax (CIT) for 5 to 10 years for industries undertaking production of artificial fibre</li> <li>6. Local and foreign direct investment opportunity</li> <li>7. Advantages of geographical location</li> <li>8. Duty-free access to 52 countries up to 2029.</li> <li>9. Designated as a highest priority sector in Export Policy 2021-2024</li> <li>10. High entrepreneurship opportunities</li> </ol>	<ol style="list-style-type: none"> <li>1. Lifting of trade preferential treatment in the near future</li> <li>2. Stiff competition from other Asian economies like Vietnam, Pakistan, Indonesia, India and etc.</li> <li>3. Longer lead time in export (Bond Facility, Product development and design)</li> <li>4. Unavailability of or inadequate access to funds specially for SMEs</li> <li>5. Absence of a market intelligence platform to keep pace with global trends</li> <li>6. Unstable world economy</li> <li>7. Procedure in FDIs approvals</li> </ol>

Source: BFTI findings generated from KII and Stakeholder Consultation

## Key strengths

**Availability of labour force and low-cost labour:** Bangladesh has a large labor force of 6.9 million<sup>50</sup> and non-leather footwear manufacturing offers employment opportunities with lower wages for unskilled (US\$49) and skilled (US\$73 to US\$146) workers compared to Vietnam and China.<sup>51</sup>

**Availability of raw materials:** Bangladesh is the second-largest jute producer in the world, accounting for an estimated annual production of 1.349 million tones, and is also the greatest supplier of jute fiber globally, providing abundant raw materials (mold) for Espadrille. The local factory also produced raw materials for Organic Shoe, Hogla, Water Hysinth and Bana Shoe.<sup>52</sup> Domestic production of last and knife for PU, PVC and Textile shoe: Bangladesh locally produces last and knife for PU, PVC, and Textile shoes.<sup>53</sup>

**Locally manufactured machineries for repair maintenance facilities for Espadrille:** Different stakeholder informed that local engineers can repair and maintain the parts of non-leather footwear manufacturing machineries specially for Espadrille.

**Capacity to produce international quality products:** Brands and buyers like H&M, Puma, Decathlon, Fila and Kappa source products such as belts, bags, purses, sportswear, sandals, flip-flops, boots and fashion accessories from Bangladesh.<sup>54</sup>

**Accredited laboratory facility at international level:** Bangladesh has a well-established and globally recognized testing facility that includes over 50 accredited government and private laboratories. This facility is known for its efficient testing procedures for various chemical products such as PVC and PU.<sup>55</sup>

<sup>50</sup> World Bank Data, available at- <https://data.worldbank.org/indicator/SL.TLF.TOTL.IN?locations=BD>

<sup>51</sup> Attracting Investment in Bangladesh—Sectoral Analyses • <http://dx.doi.org/10.1596/978-1-4648-0924-8>

<sup>52</sup> <https://www.worldatlas.com/articles/top-jute-producing-countries-in-the-world.html>

<sup>53</sup> KII, Public Consultation, BFTI

<sup>54</sup> BIDA-available at [https://bidaevents.gov.bd/assets/pdf/Non\\_Leather\\_Goods\\_Sector\\_Profile\\_E\\_Version.pdf](https://bidaevents.gov.bd/assets/pdf/Non_Leather_Goods_Sector_Profile_E_Version.pdf)

<sup>55</sup> Bangladesh Accreditation Board

**Skilled labour in sewing non-leather footwear:** Bangladesh's RMG industry, which consists of about 4.22 million workers, including 1.72 million men and 2.50 million women, can potentially replicate the same experience in the production of non-leather footwear, owing to the country's abundant availability of skilled labor.

### Key weaknesses

**Import dependency on raw materials:** Bangladesh has a high dependence on imported raw materials such as plastic, PU, PVC, etc., for the production of non-leather footwear. As discussed earlier, the import growth rate has increased by 58% in the fiscal year 2021-2022.

**Shortage of Gas and Power Supply:** ADB's study on attracting investment in Bangladesh reveals that inadequate gas and power supply has hindered the production process, with stakeholders attributing the issue largely to the current state of the world economy for shortage of gas and coal supply.<sup>56</sup>

**Slow pace of transformation from Original Equipment Manufacturing (OEM) to Original Design Manufacturing (ODM):** Bangladesh lacks educational, research, or training institutions that focus on non-leather footwear, which has resulted in a slow transition from Original Equipment Manufacturing (OEM) to Original Design Manufacturing (ODM) in the industry.

**Limited availability of necessary technology and software for product design:** Most non-leather shoe manufacturers have traditionally produced leather shoes, but with the increasing demand for non-leather footwear, there has been a shift in the production of leather shoes to the non-leather footwear industry. However, acquiring the software and technology required for product design has become challenging for the non-leather footwear industry due to this shift. Lack of R&D in design and pattern: Since Bangladesh lacks educational, research, or training institutions that are dedicated to non-leather footwear, this sector is likely to face challenges in funding Research and Development (R&D) activities for design and pattern-making.

**Lack of Access to finance for technology upgradation and expansion:** The non-leather footwear market in Bangladesh is dominated by SMEs, but many entrepreneurs struggle to obtain financing for upgrading technology and expanding their businesses, as highlighted by stakeholders during KII and public discussions.<sup>57</sup>

Lack of leadership (Mid-level Management) within the sector, insufficient market research on international market, products, design, seasonality, lack of communication skill of the local entrepreneurs, shortage of skilled and semi-skilled labour, lack of backward linkage, absence of full-time functionality of Customs and different border post agency and lack of bonded warehouse facility for SMEs are others key weaknesses of the Non-Leather Footwear Sector.

### Key opportunities

**High demand of non-leather footwear:** According to the World Footwear 2022 Yearbook, the USA consumes around 11% of all footwear worldwide, Japan 2.8%, and EU countries like Germany 1.7%. The ITC data also shows that the USA, EU, and Japan are the top importers of non-leather footwear and the demand trend is increasing.<sup>58</sup>

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<sup>56</sup> Attracting Investment in Bangladesh—Sectoral Analyses • <http://dx.doi.org/10.1596/978-1-4648-0924-8>

<sup>57</sup> KII, Public Consultation, BFTI

<sup>58</sup> The World Footwear 2022 Yearbook, 2022, (<https://www.worldfootwear.com/yearbook/the-world-footwear-2022-Yearbook/230.html>)

**Rising demand in the domestic and global market:** According to BIDA, a major growth catalyst for domestic consumption, is the young population (with 70% of the population under 40 years old) combined with growing disposable income (with a per capita GNI of USD 2,824 in FY22). According to conversations with many industry stakeholders, there is a substantial demand for safety shoes, flip-flops, and mules in the global market.<sup>59</sup>

**Cash incentives:** Government has implemented a variety of cash incentive programs on non-leather footwear products, 4% or 15% depending on whether a bond is available for PU, PVC shoes.<sup>60</sup>

**Rising demand for eco-friendly Shoes:** Bangladesh is the second-largest jute producer in the world with an average annual production of 1 million tons and it also has a strong ecosystem for the production of synthetic textiles. As consumers around the world shift to products made of jute, plastics, textile, and polyurethane (PU) leather, this trend will continue.

**Reduced corporate income tax (CIT):** Reduced Corporate Income Tax (CIT) for 5 to 10 years for industries commencing production of artificial fiber is one of the several incentives offered by BIDA.

**Local and foreign direct investment opportunity:** The establishment of 100 economic zones around Bangladesh is in progress and will largely solve the issue of accessing industrial land. Some of them are already functioning. These zones provide non-leather products industries with a prepared infrastructure, which may increase local and foreign direct investment prospects.

Duty-free access to 52 countries, designated as a highest priority sector in Export Policy 2021-2024 and high entrepreneurship opportunities are other key opportunities of the sector.

## Key threats

**Lifting of trade preferential treatment in the near future:** Bangladesh will graduate from LDC in 2026, after the graduation Bangladesh will face different challenges and lifting of trade preferential treatment is one of them.

**Stiff competition from other Asian economies like Vietnam, Pakistan, Indonesia, India and etc.:** The World Footwear Yearbook 2022 report states that Vietnam is the fastest-growing non-leather footwear industry and the second-largest exporter worldwide, while Indonesia ranks third, India ranks sixth, and Pakistani non-leather market is growing, posing stiff competition for Bangladesh after its LDC graduation.<sup>61</sup>

**Longer lead time in export:** During the KII and stakeholder consultation, some of the stakeholders expressed concern about longer lead time due to poor logistics.

**Unavailability of or inadequate access to funds specially for SMEs:** During the KII and stakeholder consultation, some of the stakeholders voiced worry about unavailability of or inadequate access to funds specially for SMEs.

**Absence of a market intelligence platform to keep pace with global trends:** Bangladesh lacks a dedicated platform for design and software development for non-leather footwear, and non-leather manufacturers lack market research on global trends, which is a major drawback in keeping pace with the industry.

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<sup>59, 60</sup> Non-Leather Goods, BIDA, 2020.

<sup>61</sup> The World Footwear 2022 Yearbook, 2022, (<https://www.worldfootwear.com/yearbook/the-world-footwear-2022-Yearbook/230.html>)



## Light Engineering Including Electronics and Electrical Sector

### Overview of the sector

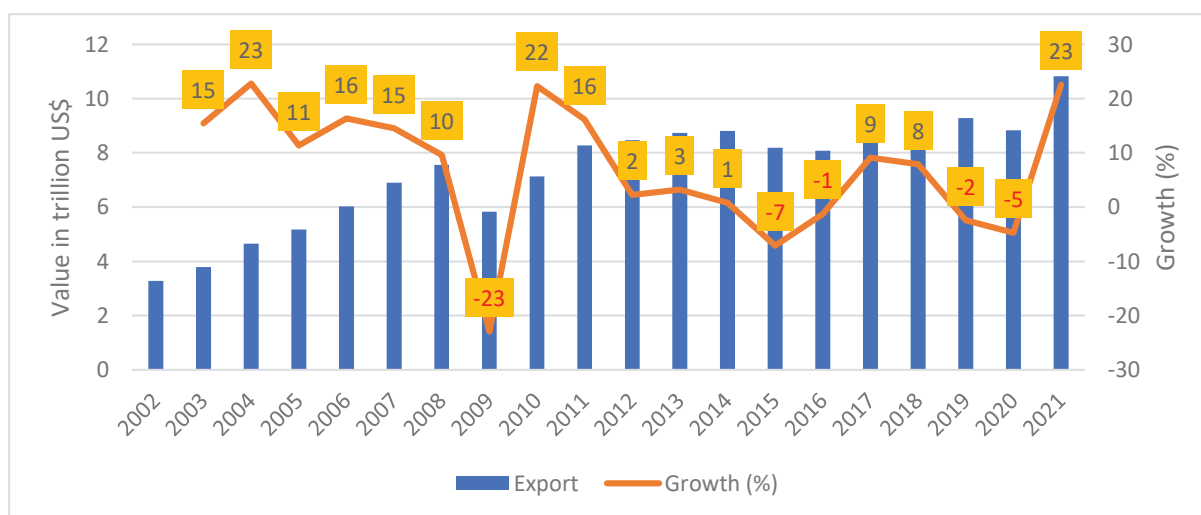
The light engineering (LE) sector in Bangladesh comprises a wide variety of parts/components, intermediate and final goods, including industrial machinery, spare parts for transport equipment, bicycles and parts, electrical equipment and parts (such as switches, sockets, lights, channel cable, fan, generator, compressor, accumulator, transformer), ferrous and non-ferrous casting products, mold and die, agricultural machinery, printing and packaging machinery, construction machinery, and many spare parts for almost all categories of machinery and equipment, etc. In FY 2021-22, Bangladesh exported 455 light engineering products to 114 countries (EPB, 2022). Realizing the potential of the sector, the government of Bangladesh has established 10 dedicated LE industrial parks and allocated 29.71 percent of the land area of Bangabandhu Sheikh Mujib Shilpa Nagar (10,043.12 acres) for small and medium industries. The Ministry of Commerce (MoC) is establishing three General Engineering Technology Centers, among which one is specifically focused on the Electrical & Electronics Sector named "Centre of Excellence of Engineering and Technology at Bangabandhu Hi-Tech City, Kaliakoir, Gazipur," another is specifically focused on the Light Engineering Sector named "Sheikh Rasel Institute of Engineering and Technology at Bangabandhu Sheikh Mujib Shilpa Nagar, Mirsarai, Chattogram," and the third one is specifically focused on the Plastics sector and Die-Mold sub-sector named "International Institute of Engineering and Technology, BSCIC at Chemical Industrial Park, Sirajdikhan, Munshiganj.

This sector has been steadily growing over the years, and one of the major contributing factors to this is the growing large domestic market demand with a growing middle-income class. Despite various challenges, domestic demand has helped it grow and sustain. The price and quality of the products are reasonable, although there is much room for improvement. Bangladesh faces challenges in terms of competition with foreign products due to the limited variety and quality of products that it produces.

### Global overview of the sector

The sector covers a wide-range of component, intermediate, and final products that are clustered under main export groups HS code 71 to 88 and HS code 90.

**Figure 29: World light engineering (LE) products export (2002-2021)**



Data Source: International Trade Centre (ITC)

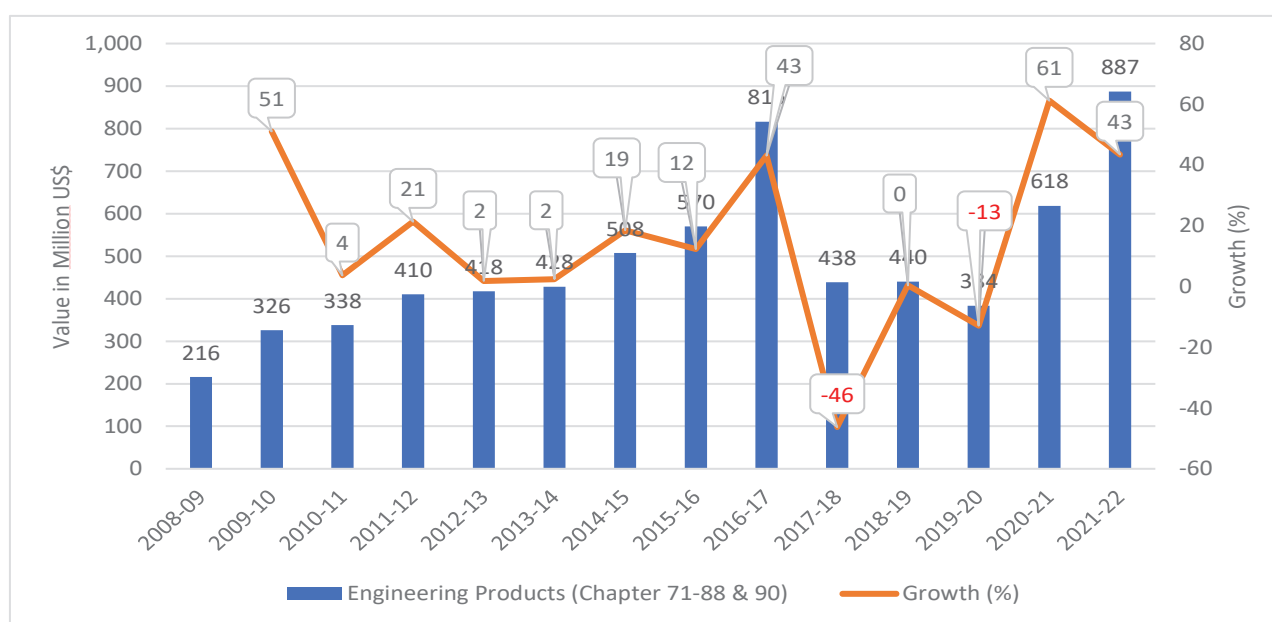
The light engineering (LE) sector including electronics and electrical products export grew on average (CAGR) by 6.46% from 2002 to 2021 (shown in figure 29) in the world. In export value, the electrical machinery and equipment and parts increased from US\$ 894 to US\$ 3,394 billion from 2002 to 2021. The sector comprised 49% of world export in 2021 where the electrical machinery and equipment held 15% (world-ranked 1<sup>st</sup> in export value), machinery, mechanical

appliances, nuclear reactors, boilers; parts thereof 11% (world-ranked 2<sup>nd</sup>), vehicles other than railway or tramway rolling stock, and parts and accessories 7% (world-ranked 4<sup>th</sup>) and optical, photographic, cinematographic, measuring, checking, precision, medical or surgical 3% (world-ranked 8<sup>th</sup>).

### Export status of Bangladesh

The light engineering (LE) sector including electronics and electrical products has been experiencing positive export growth from FY 2008-09 to FY 2021-22 except in FY 2017-18 and FY 2019-20. During this period, the compound annual growth rate (CAGR) was 10.63% (shown in figure 30). The export amount increased from US\$ 216 to US\$ 887 million during the same period.

**Figure 30: Bangladesh's export performance in light engineering products including electronics and electrical**



Data Source: Export Promotion Bureau (EPB)

In terms of export, the sector is in its infancy in Bangladesh and the few key products that are exported include bicycles; copper waste and scrap; waste and scrap of stainless steel; sewing machines of industrial type; mould bases; lead-acid accumulators for starting piston engines; articles of iron or steel; refrigerators-freezers; semi-products of iron/steel; iron/steel bars; rods, hot-rolled, twisted, or with deformations from rolling process; mounted objective lenses, needles (excl. tubular metal or for sutures), catheters, cannulae; apparatus for switching; grinding or polishing machines; machinery parts other than ships' or boats' propellers and blades therefore; transformers, batteries, etc. The sector contributed close to 1.61% in 2021 of total exports from Bangladesh.

Bicycle is the single largest exportable product in Bangladesh's light engineering sector. This currently comprises about 19% amounting to US\$ 168 million in FY 2021-22 of total light engineering products exported by Bangladesh.

The demand for bicycles is growing as the vehicles are environment-friendly, social distance-friendly and safer modes of communication. The global market for bicycles is about US\$ 13 billion in size and Bangladesh contributes to around 1% of world export.

Optical and precision goods/objective lens includes cameras, projectors or photographic enlargers or reducers, prisms, mirrors and other optical elements, mounted, filters, optical, being parts of or fittings for instruments, apparatus and

appliances, framed for projectors and other devices and LED-based goods. Bangladesh exported USD 91.43 million worth of optical goods in FY 2021-22.

The global market for objective lenses is about US\$ 681 billion in size and Bangladesh contributes to around 0.02% of world export.

**Electric products** are one of the largest exportable products in Bangladesh's light engineering sector. This currently comprises about 11.28% amounting to USD 100.10 million in FY 2021-22 of total light engineering products exported by Bangladesh. Here, electric products include diodes, transistors and similar semiconductor devices. Bangladesh has shown a strong growth rate (CAGR) of 7.29% from FY 2011-12 to FY 2021-22 wherein exports increased from US\$ 49.54 million in FY 2011-12 to US\$ 100.10 million in FY 2021-22 for those goods. In addition, electric products also include electric accumulators, including separators, whether or not square or rectangular; parts, electric transformers and converters. The global market for electric products is about US\$ 3.38 trillion in size and Bangladesh contributes very negligible to the world export. Bangladesh has a great opportunity to capture a larger share of the global market.

**Motorcycle** exports have been recently added to the export basket. Bangladesh has a strong prospect in the motorcycle industry for export growth. It also has a huge opportunity to export parts and accessories for motorcycles and bicycles.

#### **Import status of Bangladesh**

Bangladesh's import demand for light engineering products was US\$22.13 billion which is 28.58% share of total imports in 2021<sup>62</sup> (ITC, 2022). The major imported LE products including electronics and electrical products are waste and scrap of iron or steel (excluding slag, scale and other waste of the production) parts of telephone sets, telephones for cellular networks or other wireless networks and flat-rolled products of iron or non-alloy steel. Currently the sector meets only 50% of national demand.<sup>63</sup> The growing unmet demand creates opportunities for increasing local production as import substitution. Alongside, potential population (68% aged 15-64, data source statista.com, 2020) coupled with rising disposable income (per capita income of USD 2,824 in FY22, BBS) is a key growth driver for domestic consumption.

#### **Investment including FDI**

The light engineering sector, including electronics and electrical products, has the potential to attract foreign investment through the establishment of industries or knowledge sharing, thanks to Bangladesh's competitive labor force and supportive government policies. The government has created an environment conducive to foreign investment, including the establishment of special economic zones and pragmatic policies for tax holidays and repatriation of 100% profit earned by the foreign investors. It is important to invest in capacity building training to develop the labor force's skills and prepare for the next industrial revolution. The Skills for Employment Investment Program (SEIP) implemented by the Ministry of Finance is focused on up-skilling existing workers and supporting the capacity building of new entrants in the sector.

#### **Gender perspective in Light Engineering sector**

LE industries (LEIs) are situated scattered both in urban and rural areas in Bangladesh. Thus, the sector offers several job opportunities for women, particularly rural women. According to a study by Majumder (2022),<sup>64</sup> women work more than 70% in the electric industry's output level (such as fan and electrical products factories) and more than 50% at bicycle factories in Bangladesh.

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<sup>62</sup> International trade centre, Geneva, Switzerland

<sup>63</sup> Light engineering industries profile (June 2021), BIDA

<sup>64</sup> S. Majumder (2022), The Role of the Light Engineering Industry Sector in Achieving Sustainable Development Goals (SDGs) of Bangladesh.

### **Environment aspects**

LEIs belong to the green category as per Bangladesh's environmental regulations. The LEIs belong to the smart industry category as per the country's environmental regulations. Smart industry category manufacturing firms are, by and large, free from environmental hazards<sup>65</sup>. The recycling of scrap steel and iron, which are the primary products of the shipbreaking business, appears to be associated with Bangladesh's light engineering sector (LES), which is thought of as an environmentally benign activity.

### **Policies governing the sector**

Bangladesh government declared "Light Engineering goods" as "Product of the year" for 2020 aimed at encouraging product-based export and also simultaneously stressed the need for taking appropriate measures to strengthen the light engineering sector and help explore its export potential.

**The 8th Five Year Plan:** The 8FYP growth strategy has put top priority on the production and exports of non-RMG manufacturing to diversify the production and export base in areas including processed food, leather and footwear, light engineering, and pharmaceuticals.

**Export Policy 2021-24:** The light engineering products (auto parts, bicycles, motorcycles, batteries etc.) are among the most prioritized ones and electric and electronic products have been considered as special development sectors for export diversification.

The policy aims to support the development of the light engineering sector in Bangladesh through a range of measures. These include the supply of investment credit at a reduced rate of interest, moratoriums on income tax, and various cash assistance facilities for utility services. The policy also prioritizes the sector in air transportation, provides duty drawback and bond facilities, supports infrastructure development, enhances technical assistance, and helps in production and marketing. Other initiatives include the development of a Light Engineering Cluster Village near Dhaka, the building of modernized laboratory and common facility centers, and capacity development for research and development. The policy also aims to attract foreign direct investment and encourage industry owners to include light engineering industries in the category of environmentally friendly green industries.

**National Industrial Policy 2022:** The light engineering sector has been considered one of the export diversification industries and electric and electronics as a special development industry. Several facilities, including environment-friendly industrial parks in different regions of the country are being implemented.

**Light Engineering Industry Development Policy 2022:** The policy has been gazetted on 29 September 2022 including timebound activity plan (2022-2027). The light engineering industry development policy has emphasized on:

- Development of the light engineering industry as a strong supporting industry for increasing contribution of industries to GDP to 40% by 2027;
- Identification of potential products and services of light engineering sector for continuous development
- Establishment of light engineering industries for manufacturing import-substitute light products
- Supporting establishment of industrial parks, common facility centers, industry clusters, etc. for ensuring production of high-quality products and services
- Establishment of Made in Bangladesh brand for light engineering products at home and in abroad

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<sup>65</sup> Talukder, M.A. & Jahan, S.M. (2016). Light Engineering Business Ecosystem in Bangladesh: A Study on Institutional Preparedness. IOSR Journal of Business and Management, 18(12), 18

- Provide support for acquiring low-cost and long-term funding, tax subsidy and cash incentives for expansion of light engineering industries
- Support development of technological capacity of the light engineering industries for facing challenges of the 4<sup>th</sup> Industrial revolution (4IR)
- Investment in diversification of light engineering products through research and development as well as establishing metal research lab

**National Motorcycle Industry Development Policy 2018:** For the prospects of the motorcycle industry, the Bangladesh government has introduced the policy which provides special incentives for Research & Development (R&D), motorcycle tariff policy, development of backward linkages, market expansion, etc.

Sector Specifics Export Subsidy:

- 15% for exporting light engineering products including accumulator batteries (HS: 85.07.10 & 85.07.20) (FE Circular-26, September 2022, BB)
- 4% for domestically produced bicycles & parts export (FE Circular-26, September 2022, BB)
- 10% for consumer electronics, electrical home, and kitchen appliances (FE Circular-26, September 2022, BB)
- 10% for motorcycles export (FE Circular-26, September 2022, BB)

**Other Incentives:** 10-year exemption of corporate income tax<sup>66</sup> for newly established industries from July 1, 2021, till June 30, 2030, import duty exemption on capital machinery, reduced import duties on brass wire and copper plate as inputs for mold fabrication and reduced import duties on raw materials, tools, and equipment used for light engineering sector. Currently, Bangladesh enjoys duty free access to 52 countries which includes the EU, Australia, New Zealand, Norway, Switzerland, Japan, Iceland, Russia, South Korea, Canada, Chile, India, Turkey, China.<sup>67</sup>

### Impact of COVID-19 on the sector

The prevailing COVID-19 pandemic is upsetting the development of this sector from mid-2020. According to the International Trade Centre (ITC), during the surging of pandemic caused a massive 13.47% decrease in world export proceeds for light engineering products including electronics electrical from China, Germany, USA, Hong Kong, Japan, South Korea, Taipei, Mexico, Singapore, and Italy which accounts for more than 61% of the world exports. However, the sector is recuperating, buyers are now focusing more on health and health matters for COVID-19 which is counting cost to production in some cases.

The export destinations of Bangladesh have been severely buffeted by COVID-19. Due to the nature of the operators and the population density of the worksites, there is an exceedingly high risk of transmission. In that backdrop government made strict health and safety measures which persisted until significant changes occurred in the medical response protocol for COVID-19. Lockdown and social distancing measures stayed in places. That was particularly difficult in the Light Engineering Sector (LES) as most of them operate as micro-cottage level enterprises.

There was also shift in consumer spending across the nation as people have moved more towards consumables and commodity goods dropped in the sales and usage of various items such as cycles, motorcycles, cars, agricultural machinery due to the lockdown and transportation embargos. While many of these are likely to bounce back, such as agricultural equipment and motor vehicle production, some of these will take more time to return to their previous activity levels.

The COVID-19 pandemic has impacted the development of the light engineering sector globally and in Bangladesh, with a significant decrease in world export proceeds for electronics and electrical products. The sector is recovering, but buyers' focus shifted more on health and safety measures during pandemic, which affected production in some cases.

<sup>66</sup> Bangladesh Investment Development Authority (BIDA), available at <https://bida.gov.bd/light-engineering#>

<sup>67</sup> Bangladesh Investment Handbook (2020), page-103, Bangladesh Investment Development Authority (BIDA)

## Challenges and opportunities of the light engineering sector including electronics and electrical sector: findings from the SWOT analysis

SWOT analysis identified the following major strengths, weaknesses, opportunities and threats that could impact the growth of the light engineering sector including electronics and electrical sector:

*Table 9: SWOT analysis of light engineering sector including electronics and electrical*

<b>Strengths</b> <ol style="list-style-type: none"> <li>1. Availability of workforce</li> <li>2. 34 light engineering clusters spread over 18 districts across the country</li> <li>3. Reverse engineering</li> <li>4. Increased participation of Women labor force</li> <li>5. Intermediary goods</li> </ol>	<b>Weaknesses</b> <ol style="list-style-type: none"> <li>1. Shortage of skilled labor lowering productivity</li> <li>2. Absence of international-standard testing and certification facilities</li> <li>3. Higher cost of doing business</li> <li>4. Lack of proper training for industrial workers, supervisors, and managers</li> <li>5. Locally counterfeit electronic products</li> <li>6. Limited high quality diversified products</li> <li>7. Absence of R&amp;D facilities and lack of design capacity</li> <li>8. Inadequate die &amp; moulds manufacturing facilities</li> <li>9. Lack of modern foundry</li> <li>10. Insufficient heat treatment facility</li> </ol>
<b>Opportunities</b> <ol style="list-style-type: none"> <li>1. Duty-free market access</li> <li>2. Favourable policy and incentives</li> <li>3. Potential Free Trade Agreement/CEPA with export destination countries</li> <li>4. Large domestic market with a growing middle class</li> <li>5. 10-15% cash incentive on export value</li> <li>6. 10-year exemption of Corporate Income Tax (CIT) for industries commencing operations between July 1, 2021, to June 30, 2030 for new entrants</li> <li>7. Available energy and utility services are comparatively low price</li> <li>8. Demographic dividend</li> </ol>	<b>Threats</b> <ol style="list-style-type: none"> <li>1. Preference erosion due to LDC graduation after 2026</li> <li>2. Interrupted supply of gas and power</li> <li>3. Lack of low cost long term financial resources</li> <li>4. Environmental pollution</li> <li>5. Insufficient port capacity (product handling, sheds, etc.)</li> <li>6. Lack of capital-intensive modern technology</li> <li>7. Frequent changes in tariff Policy</li> <li>8. Long lead time for export</li> <li>9. Absence of central bonded warehousing facilities</li> <li>10. Duty structure makes imported products more competitive than locally produced products (Electronic products)</li> </ol>

*Source: BFTI findings generated from KII and Stakeholder Consultation*

### Key strengths

**Availability of workforce:** The study identified the availability of the workforce, though mostly unskilled, as one of the strengths of the sector.

**34 light engineering clusters spread over 18 districts across the country:** LE sector, in general, has clusters of companies spread around the country with major clusters located in Dhaka, Chattogram, Narayanganj, Bogra, Jessore, Gazipur and Kishorganj. According to SME Foundation, 34 light engineering clusters are spread over 18 districts across the country.



**Reverse engineering:** Because it provides other sectors with replacement parts and fully functional small machines, the LE is sometimes referred to as the mother of all industries. LE Enterprises are handy as they can imitate almost any product through reverse engineering.

**Increased participation of Women labour force:** Participation of women labor force has been increasing in the light engineering sector. According to a study by Majumder (2022), women work more than 70% in the electric industry's output level (such as fan and electrical products factories) and more than 50% at bicycle factories in Bangladesh.

In addition, the sector as a backward linkage industry supplies intermediary goods to other industries making it essential for industrial development.

#### **Key weaknesses**

**Shortage of skilled labor lowering productivity:** The study found that LEIs are facing workforce shortages due to various reasons. When a worker came into the LEI, they are fully unskilled. After a certain period, when workers become experienced through on-the-job training, they left the industry due to two main reasons; first one is that they go to overseas countries with high wages and another one is that they left the job to start independent ownership enterprises.

**Absence of international-standard testing and certification facilities:** Bangladesh does not have any dedicated standard certification body or institution to undertake standardization and testing of machinery and spare parts of the LE sector. Moreover, the lack of quality raw materials and poor quality of products are the greatest challenges in the LEI sector of Bangladesh. According to BEIOA, most of the raw materials come from ship scraps. The development of this sector is further constrained due to the absence of R&D facilities and lack of design capacity, inadequate die & moulds manufacturing facilities, lack of modern foundry and insufficient heat treatment facility.

#### **Key opportunities**

**Duty-free market access and Potential Free Trade Agreement/CEPA with export destination countries:** The study identified duty-free market access until graduation as one of the opportunities of the sector. However, to sustain this preferential treatment, Free Trade Agreement/CEPA with export destination countries can be concluded.

**Favourable policy and incentives:** The sector has been enjoying favorable policies and incentives like a 10% to 15% cash incentive on export value, a 10-year exemption of Corporate Income Tax (CIT) for industries commencing operations between July 1, 2021, to June 30, 2030, for new entrants, etc. that can be leveraged further for ensuring sectoral growth.

**Large domestic market with a growing middle class:** The country's robust economic growth and increasing disposable income provide new scopes for building a large domestic market for light engineering products.

Moreover, available energy and utility services at comparatively low prices and demographic dividends are also presenting the sector with ample growth opportunities.

#### **Key threats**

**Preference erosion due to LDC graduation after 2026:** The light engineering sector is likely to lose competitiveness in the global export market due to preference erosion caused by LDC graduation.

**Frequent changes in tariff Policy:** Frequent changes in tariff policy and absence of central bonded warehousing facilities hinder the sector's both investment and export potential.

**Lack of low-cost long-term financial resources:** The absence of low-cost long-term financial resources also curbs new investment and entrepreneur development in this sector.

**Duty structure:** The LEIs owners informed that the customs duty for raw materials of LE machinery is significantly higher than that of imported LE spare parts and products thereby, the existing duty structure makes imported products more competitive than locally produced products.

Issues like absence of central bonded warehousing facilities, infrastructural and logistics challenges like interrupted supply of gas and power, and insufficient port capacity (product handling, sheds, etc.) threaten the sector with production inefficiency and longer lead time.

## Plastics Industry

### Overview of the Plastics sector

The plastics industry in Bangladesh has emerged as a promising industrial sector over the last two and a half decades, and made an important contribution to the economy of Bangladesh with an increasing growth rate. Currently, the plastic sector contributes to 1 percent to the GDP in Bangladesh.<sup>68</sup> The plastic sector is a linkage industry since the plastic industry contributes to industries like RMG, pharmaceuticals, light engineering, food processing, etc. The current global plastic market size stands at more than USD600 billion and Bangladesh contributes very insignificant to this market.

### Global overview of the Plastic sector

*Table 10: Top global exporters of plastic products (Under HS code 39) (Value in million US\$)*

SL.	Top Exporters	Exported value in 2017	Exported value in 2018	Exported value in 2019	Exported value in 2020	Exported value in 2021
1.	China	70646	80136	84157	96378	131074
2.	Germany	63174	67669	62930	60109	76295
3.	United States of America	61908	66562	65004	60206	74311
4.	Korea, Republic of	31486	34918	32595	31562	43196
5.	Belgium	29626	32645	29489	27480	38972
6.	Netherlands	23948	26141	24036	23699	32428
7.	Japan	25139	26133	25218	25556	30365
8.	Taipei, Chinese	20289	22440	19867	18574	26460
9.	Italy	20985	22742	21509	20530	25953
10.	France	21511	22578	20889	19297	25546
11.	<b>Saudi Arabia</b>	<b>16992</b>	<b>20906</b>	<b>18978</b>	<b>16251</b>	<b>23640</b>
12.	Canada	12580	13618	12696	12425	16884
13.	Singapore	14580	15956	14605	12911	15913
14.	Spain	12156	13229	12216	11530	15848
15.	Poland	10271	13044	11722	11900	15822
16.	<b>Thailand</b>	<b>12706</b>	<b>14531</b>	<b>13355</b>	<b>11864</b>	<b>15526</b>
17.	United Kingdom	11893	12385	11876	10799	12896
18.	Mexico	8977	9544	9422	9129	11401
19.	<b>Malaysia</b>	<b>7483</b>	<b>9404</b>	<b>9595</b>	<b>8182</b>	<b>10285</b>
20.	Türkiye	5474	6043	6805	6971	10016
21.	Austria	7314	8195	7517	7190	9925
22.	United Arab Emirates	5100	5490	6018	6966	9267
23.	Hong Kong, China	10637	10041	9059	7993	9252
24.	<b>India</b>	<b>5923</b>	<b>7882</b>	<b>7351</b>	<b>6598</b>	<b>8555</b>
Total World Export		596514	655689	625323	611270	806608

Source: ITC Trade Data

Plastics possess some remarkable features that make them accepted globally. Their lightweight, attractive color, ease of processing, non-rusting property, and competitive benefits and advantages for wages, make them highly demanded worldwide.<sup>69</sup> As a result, the plastics sector is witnessing increasing demand both in domestic and international markets.

<sup>68</sup>BBS

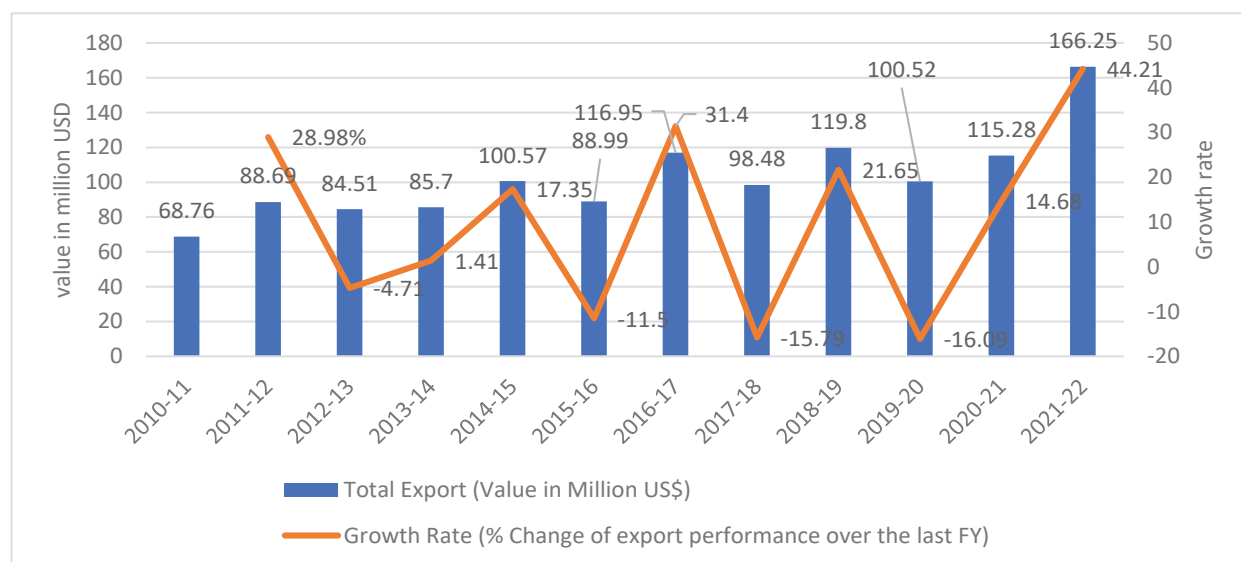
<sup>69</sup> BFTI, May, 2019, Non-Tariff Measures/ Barriers Faced by Bangladesh While Exporting to Major Export Destinations, Retrieved from [https://bfti.org.bd/?page\\_id=52](https://bfti.org.bd/?page_id=52)

The average per capita global usage of plastic is 50 kg. The rate is 109 kg per capita in the United States whereas in India the per capita use is 11 kg and in China, it is 38 kg. On the contrary, the average per capita consumption in Bangladesh is only 9 kg (World Bank). About 2.35 percent of the consumption takes place in Dhaka with about 24 kg/person per capita consumption. As a result, the sector has huge potential in the country.

In 2021, the world export value of plastic products was a staggering \$806 billion. Plastic products are exported under HS code 39 globally. Over the last 5 years, China has consistently been the top global exporter, with \$43 billion export value in 2021. In the list of top 25 global exporters over the last 5 years, Saudi Arabia stands 11th with export value worth \$23 billion, followed by Thailand in the 17th position with export value of \$15 billion, Malaysia 20th with export value of \$10 billion and India stands 25th with export value worth \$8.5 billion. Bangladesh stands far from the top 25 exporters' list and was identified in the 82<sup>nd</sup> position.<sup>70</sup>

### Export trend in Bangladesh

**Figure 31: Exports scenario of plastic products in Bangladesh**



Source: EPB Data

Plastic sector is the 12<sup>th</sup> largest export earning sector of Bangladesh. Though plastic products have seen positive growth in the FY 2021-22 with an export value of USD 166.25 Million<sup>71</sup>, export data of the last five fiscal years show that the export of plastic products in FY 2019-20 had a negative growth compared to the previous FY 2018-19. A similar scenario was found previously in FY 2017-18 when the export of plastic products saw a negative growth. This indicates the sector has fluctuating export trends. At present there are more than 6110 plastic manufacturing units in Bangladesh 98 percent of which belong to small and medium enterprises (Source: BPGMEA). Among these, about 3500 are small, 2500 are medium and 110 are large.<sup>72</sup>

<sup>70</sup> ITC Trade Map

<sup>71</sup> EPB Statistics

<sup>72</sup> BPGMEA Data

## Import Trend

Bangladesh imported about US\$ 2.6 billion worth of plastics and articles thereof in FY2020-21 which was about 5.2 percent of its total imports. In the previous FY2019-20, the import value of same commodities was about US\$ 2.01 billion (about 4.4 percent of total import).<sup>73</sup>

**Table 11: Import trend for plastics and rubber articles thereof**

Year	Total Import
2011-12	1366
2012-13	1366
2013-14	1793
2014-15	1845.2
2015-16	1818
2016-17	1937
2017-18	2163
2018-19	2383
2019-20	2323
2020-21	3017
2021-22	3705

While analyzing the import trend from the database of Bangladesh Bank, combined import value of plastics and rubber articles over the last 10 years were identified.

From the table (11), it can be observed that import value for the last ten fiscal years with the value reaching the highest peak at about US\$ 3.7 billion during the last fiscal year 2021-22.

**Table 12: Import of selected commodities of plastics (HS Code 4-digit level) (value in million US\$)**

HS Code	Commodities	2017-18	2018-19	2019-20	2020-21
3901	Polymer of ethylene in primary form	495.14	533.49	514.33	562.46
3902	Polymer propylene/olefins primary	459.57	504.32	535.64	599.01
3903	Polymer styrene primary form plastic	105.88	137.53	118.51	152.31
3904	Polymer vinyl chloride/halogen olefin	270.11	299.82	308.14	443.75
3907	Polyacetal/polyethers/epoxide resin	266.54	334.06	302.19	325.26
3909	Amino/phenolic resin/polyurethanes	86.41	90.17	77.26	111.29
3919	Self-adhesive plate sheet film etc	71.80	76.28	71.24	90.14
3920	Plate sheet film foil/strip plastic	171.22	182.07	199.71	229.32
3926	Article of other plastic/material	70.28	103.90	133.19	169.35

Source: BBS Statistical Yearbook 2021<sup>74</sup>

Moreover, raw materials such as pvc stabilizers, stearic acid, polyethylene wax and transfer paper used in the production of plastic products are completely import-dependent. Table (12) shows the extent of import of materials required for production of plastic products such as polymer of ethylene, propylene, polymer of styrene, vinyl chloride/halogen olefin, polyacetal/ polyether/ epoxide resin. Import figures of the last 4 years show huge dependence of the sector on import of these raw materials. In FY2020-21 polymer of ethylene worth US\$ 562.46 million were imported.

Investment in the sector has been increasing. Despite the Covid-19 pandemic, new investors are coming up to invest in the sector. At present, the sector is experiencing investment of about US\$ 1 billion to US\$ 1.5 billion each year .<sup>75</sup>

<sup>73</sup> Import Payment statistics of Bangladesh Bank

<sup>74</sup> value converted to US\$ from taka using exchange rate of 82.10 taka/us\$ for FY 2017-18; 84.03 taka/US\$ for FY 2018-19; 84.78 taka/US\$ for fy 2019-20; 84.81 taka/US\$ for FY 2020-21

<sup>75</sup> BPGMEA

## Destination analysis of Bangladesh and global perspective for Plastic (HS 39)

*Table 13: Destination analysis of Bangladesh and global perspective for plastic (HS 39)*

S.L.	Top Export destination of Bangladesh (FY 2021-22)	Export value in million USD	Top Global Importers	Import value in 2021 in million USD	Share of Import from Bangladesh (in %)
1	India	30.43	China	82826	0.02
2	United States of America	16.94	United States of America	82463	0.02
3	CN: China	14.49	Germany	55215	0.01
4	DE: Germany	8.23	Mexico	29733	0.001
5	VN: Vietnam	6.79	France	29270	0.01
6	AE: United Arab Emirates	6.15	Italy	27131	0.01
7	United Kingdom	5.45	Belgium	23925	0.01
8	NG: Nigeria	5.26	Poland	21206	0.009
9	ES: Spain	4.01	United Kingdom	21032	0.03
10	JP: Japan	2.94	Netherlands	20908	0.014
11	NL: Netherlands	2.84	Canada	20494	0.01
12	PK: Pakistan	2.21	Viet Nam	19984	0.03
13	FR: France	2.19	India	19258	0.17

India was the top export destination of Bangladesh in FY 2021-22 with export earnings of US\$ 30.42 million. India being the 13<sup>th</sup> largest importer of the plastic products globally, imported a whopping US\$ 19.2 billion worth of the products in 2021 (ITC) where Bangladesh had a meagre share of 0.17%. China being the largest importer of plastic with \$83.8 billion total import, had just 0.02% (\$14.48 million) import from Bangladesh. This shows Bangladesh has huge room for improvement in diversification of its export market. Countries like USA, Germany, Mexico, France has huge demand for plastic and import plastics in huge amount (\$82, \$55, \$29, \$29 billion respectively) whereas Bangladesh's exports to those countries was negligible (\$17, \$8, \$0.19, \$2.19 million respectively).

### Gender perspective in Plastic sector

The plastic industry in Bangladesh is male-dominated, with women constituting about 24% of the total workforce, according to the survey of manufacturing industries by Bangladesh Bureau of Statistics.<sup>76</sup> Women are typically employed in lower-skilled and lower-paying jobs, such as packing and sorting, and are underrepresented in higher-skilled technical and managerial roles. Additionally, women entrepreneurs are often subject to cultural biases that limit their access to networks and markets, by addressing these challenges, gender-responsive policies and programs are needed to promote gender equality and inclusivity in the industry. Such measures could help unlock the full potential of women entrepreneurs and workers in the plastic industry in Bangladesh, leading to more inclusive and sustainable growth.

### Environment perspective

The threat exposed by plastic wastes is caused externally mainly due to weak handling of the city corporations and the municipalities. Reduce, reuse, recycle method is widely popular worldwide for reducing negative environmental impacts of plastics. This method is not quite strictly followed in Bangladesh. However, environmental pollution is occurred by the post usage of plastic products, not by the industry which can be reduced by the proper initiatives taken by the government.

<sup>76</sup> Survey of Manufacturing Industries, Bangladesh Bureau of Statistics, 2019.

### Policies governing the sector

Considering the potential of plastic and the toy sector for creating newer employment opportunities and export earnings, the Industrial Policy 2022 mentions the plastic sector as one of the Export Diversification Sectors and the Toy sector as one of the Special Development Sectors. Export Policy of 2021-24 mentions the Plastics sector as one of the Highest Priority Sectors. In the 8th Five Year Plan (FYP) 2021-2025 the Government emphasized on production of diversified Plastic products for the implementation of inclusive growth strategy. The following acts, rules and policies regulate the Plastics sector:

- National Plastic Industry Development Policy 2022
- The National Industrial Policy 2022
- The Export Policy, 2021-24
- The Import Policy Order, 2021-24
- National Environment Policy 2018
- The Environmental Conservation Act-1995
- The Environmental Conservation Rules-1997
- Air Pollution Reduction Strategy for Bangladesh
- Bangladesh Labour Act-2006 (Bangladesh Shromo Ain)
- National Environment Policy 2018

### National Plastic industry development Policy 2022

The Ministry of Industries has finalized a draft of National Plastic Industry Development Policy which has been finalized recently. The policy will be an important tool to promote widening of domestic manufacturing base of the plastics industry, accelerating investment and earning more foreign currency by the export of plastic products.

#### Some facilities and incentives from the policy:

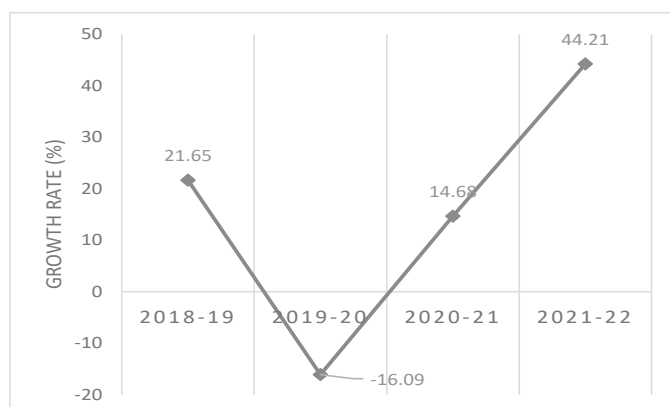
**Access to finance and Tax incentives:** The availability of financial resources is a critical component of being competitive, as a capital-intensive industry. The government will:

- Provide low-cost loans (cost of fund+3%) to Plastic SMEs duly authenticated by the respective association/designated support agency.
- Allow accelerated depreciation, renewable energy loan programs or concessional loans to ESQ compliant plastic manufacturing industries.

**Appropriate budget and taxation procedures:** Tax relief and exemption will be targeted towards the development of plastic industries and increasing their competitiveness. The policy has also highlighted some export and investment incentives. The above policies when effective and implemented, expected to be soon, will have a positive impact on the sector.

### Impact of COVID-19 on the Plastics sector

Figure 32: Export growth analysis of plastics during pre-COVID-19 and post COVID-19



Plastics sector having been played fulcrum role in international trade, like all the other sectors, has been negatively affected due to the global pandemic of COVID-19. Though this high potential industry contributes to only 3 percent of the total export of Bangladesh, the SMEs in the industry faced negative impacts on their businesses. Closing down of operation during lockdown both domestically and internationally, closure of transshipment through borders, cancellation of orders by clients, problems related to cash inflows and outflows were some of the challenges faced by the SMEs in the sector.



The growth rate of plastics export during the COVID period was negative and as low as 16.09 percent. During the pre-COVID period, the percentage change of export performance of plastics in FY 2018-19 compared to the previous FY 2017-18 was 21.65 percent. In the next fiscal year, the percentage dropped as low as 16.9 percent.

### Challenges and opportunities of the plastic sector: findings from the SWOT analysis

SWOT analysis identified the following major strengths, weaknesses, opportunities, and threats that could impact the growth of the plastic sector:

**Table 14: SWOT analysis of plastic sector**

<b>Strengths</b> <ol style="list-style-type: none"> <li>1. Positive country image</li> <li>2. Competitive labour cost</li> <li>3. Availability of labour force;</li> <li>4. Increasing female participation</li> <li>5. Strong part of backward linkage industries of other sectors such as ready-made garments, processed food, healthcare, toys, sanitary items and construction products including PVC pipes of light engineering and electronics sectors</li> </ol>	<b>Weaknesses</b> <ol style="list-style-type: none"> <li>1. High dependency on raw materials imports</li> <li>2. Inadequate warehouse facilities</li> <li>3. Insufficient art tool mould and die making industry</li> <li>4. Lack of design</li> <li>5. Insufficient skilled technical workforce</li> <li>6. Lack of diversification</li> <li>7. Lack of factories compliant with the global standards</li> <li>8. Insufficient IPR capacity</li> <li>9. Insufficient number of accredited testing labs</li> <li>10. Inefficiency to run Computer Numerical Control (CNC) machines</li> </ol>
<b>Opportunities</b> <ol style="list-style-type: none"> <li>1. Increasing demand in the domestic and global market including China and Africa</li> <li>2. Increasing compliant factories producing high quality RMG related plastic accessories</li> <li>3. Increasing demand of PU Plastic products (a plastic similar to Plastic)</li> <li>4. Increasing demand of Man-Made Fibres (MMF) (produced by recycling discarded plastic products)</li> <li>5. Opportunity for recycling and circular economy</li> <li>6. Opportunity to export PET Plastic/PET flakes</li> <li>7. Bilateral trade agreements (Free Trade Agreement/CEPA/MoU) with potential export destinations.</li> <li>8. Policy support of government (cash incentives, import duty exemption on raw materials, tax holidays, incentives for local and foreign investment etc.)</li> <li>9. Huge diversified plastic products</li> <li>10. DFQF market access facilities</li> </ol>	<b>Threats</b> <ol style="list-style-type: none"> <li>1. Current and upcoming global economic downturn</li> <li>2. Weak infrastructure causing longer lead time in export</li> <li>3. Improper recycling of used plastic products externally</li> <li>4. Unavailability of or inadequate access to funds especially for SMEs.</li> <li>5. Complexity in access to finance in green funds</li> <li>6. Lack of standardized regulations and guidelines to maintain the warehouse</li> <li>7. Absence of a market intelligence platform to keep pace with global trends</li> <li>8. Lengthy procedures in FDIs approvals</li> <li>9. Excess import duty on raw material</li> <li>10. Ocean pollution</li> </ol>

Source: BFTI findings generated from KII and Stakeholder Consultation

### **Key strengths**

**Positive country image:** The world-class readymade garments exports has earned a positive image as a manufacturing hub for Bangladesh which has led to the increasing demand for Bangladeshi plastic products. Due to geopolitical issues, a lot of countries are inclined to switch import of plastics from China, which is a great opportunity for Bangladeshi plastic products to be exported to newer markets. It will also help strengthen the backward linkage industries of plastic with RMG products.

**Low wage/Less labour cost:** Bangladesh has comparatively lower wage than that in other countries. This has been a driving force in expediting the export of the sector.

**Availability of labour force:** This industry is to some extent labor intensive. The industry provides employment opportunities of around 1.5 million populations.<sup>77</sup> Female labour force participation has also increased in the plastic industry.

**Increasing female participation:** Around 40% of the workforce in the sector are women. Some factories even have this share as high as 50%. Due to the nature of industry, plastic producing factories are equipped with heavy machineries in comparison to apparel industries. Most of the machine operators are men in the plastic factories as women in most of the industries lack skills to run such machines. Very recently women are also coming forward to operate plastic injection molding machines, fork lift & other heavy machineries in the industries. This is remarkable for gender balancing in workforce. In other sections of the industry, such as assembling & packaging section, quality assurance section, female participation goes more than 90%. Moreover, women participation is increasing in the mid-management level of the factories in the sections of data entry, computer operating, IT- support, mold & product design.

**Strong part of backward linkage industries:** The sector has made significant contributions to the growth of other industries in Bangladesh. It is a strong part of the backward linkage industries for sectors such as ready-made garments, processed food, healthcare, toys, and sanitary items. Additionally, it plays a role in the production of construction products, including PVC pipes and other light engineering and electronics products.

### **Key weaknesses**

**High dependency on raw materials imports:** One of the reasons for the fluctuations in the export trend of plastic is the dependence on the import of raw materials. Fluctuations in the price of raw materials affect the production and exports of the plastic products.

**Inadequate warehouses:** Due to the absence of adequate central bonded warehouses in the country, export-oriented domestic industries face difficulties in importing raw materials in bulk for plastic production. Bulk import of raw materials helps negotiating price of the raw materials and reduces cost of production significantly. Currently, a few firms (only 2: RFL Plastics Ltd. and Bengal Plastics Ltd.) have adequate warehouse facilities.

**Insufficient art tool mould and die making industry:** There is no state-of-the-art art tool mould and die-making industry in Bangladesh. As the quality of moulds manufactured in Bangladesh is very poor, the majority of export-oriented plastic manufacturing units import such tool moulds from China or Republic of Korea. Importing moulds subjects the exporters to long lead times, high prices, and expensive after-sales services.

**Insufficient skilled technical workforce:** The number of skilled workers in the plastics sector is very low due to the limited number of trainers in the local establishments which is a big obstacle to our development in the plastics industry. Manpower to run injection mould machine is also insufficient.

**Lack of diversification:** The plastics industry in Bangladesh is in need of diversification and expansion into new markets to remain competitive. The industry must innovate to keep up with other countries and their constantly improving products. Currently, Bangladesh's plastics industry only holds a very small portion of the world market share.

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<sup>77</sup> BIDA

**Lack of factories compliant with the global standards:** Most of the plastic firms are not compliant, except one or two giant firms, like, RFL Plastics Ltd. and Bengal Plastics Ltd. Among the other industries, approximately 10-20 percent are highly compliant and 30-40 percent are averagely compliant.

**Insufficient number of accredited Testing Labs:** Exporting plastic products to potential destinations is challenging due to the stringent and complex parameters and standards required. Bangladesh Standards and Testing Institution lacks globally recognized product testing and certification facilities, providing certification only nationally. In many cases, the standards set by BSTI fail to meet international standards. Other available testing units are not well equipped and take much time for certification and testing. This results in products needing to be sent to other countries, such as Singapore, Germany, and Hong Kong, for quality certification, leading to increased costs due to added lead time.

**Inefficiency to run Computer Numerical Control (CNC) machines:** Due to the shortage of workers skilled in operating Computer Numerical Control (CNC) machine, plastic manufacturers in most cases, are forced to continue using outdated machinery for plastic production. Some companies even hire CNC operators from countries such as India, Sri Lanka at higher salaries. Hiring and retaining mid-level managers and skilled workers with technical and design knowledge is also a challenge in the sector.

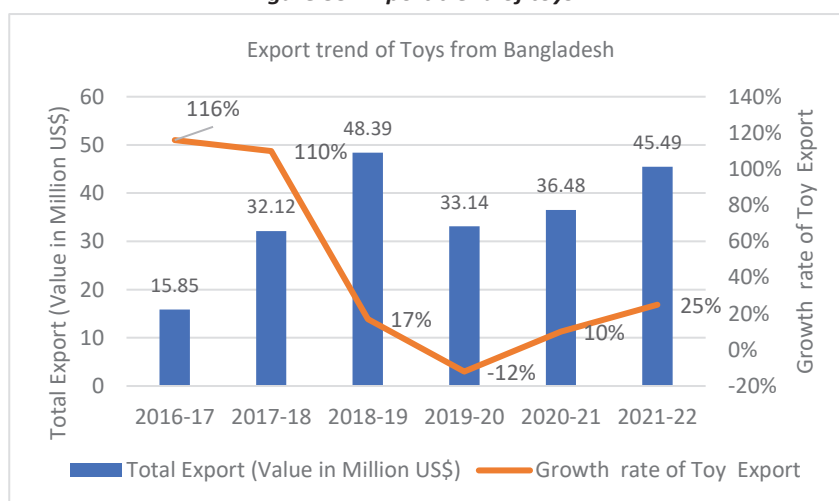
#### Key opportunities

**Increasing demand in the global and domestic market:** In 2021, the world export value of plastic products was a staggering \$806 billion. Plastic products are exported under HS code 39 globally. The plastics sector is witnessing increasing demand both in domestic and international markets. The average per capita global usage of plastic is 50 kg.

**Increasing compliant factories producing high quality RMG related plastic accessories:** With gradual development, the local market of the plastic accessories such as buttons, hangers, plastic packaging saw a growing demand among the RMG exporters of Bangladesh during the 1990s. At present, there are many factories in Bangladesh that solely produce plastic accessories for RMG export and are highly compliant with the global standards. H&M, Walmart and Zara use huge amount of plastic accessories produced by Bangladeshi factories.

**Increasing export of toys:** About 90 per cent of the toys in Bangladesh were imported a decade ago but now, only 10 per cent comes from abroad.<sup>78</sup> Export of toys showed a 25% growth in FY2021-22, while it was about 10% in FY 2020-21 (Figure 3). The export growth shows upward trend in the last 6 FYs. Although due to Covid-19 pandemic there was a negative growth in FY 2019-20, toy subsector shows great promise in product diversification as well as export growth in plastic sector.

**Figure 33: Export trend of toys**



<sup>78</sup> BPGMEA

**Increasing demand of PU Plastic products (a plastic similar to Plastic):** Some industries in Bangladesh produce PU leather, also known as synthetic leather, created from polyurethane, a plastic similar to leather which is widely popular in the global market. In Bangladesh, PU Leather market is served by both local manufacturing and through import. Most of the manufacturers are exporting their manufactured products. Those selling at the local market usually sells around 2-5% of their total production.<sup>79</sup>

**Increasing demand of Man-Made Fibres (MMF) (produced by recycling discarded plastic products):** Some of the leading factories in Bangladesh are also producing Man-Made Fibres (MMF) produced by recycling discarded plastic products. The number of factories producing artificial fibers are also increasing. The number of polyester fibre production units has increased to 52 from 12 in the last 7 years.<sup>80</sup> On average Bangladesh annually imports 78,000 tonnes of polyester staple fibre, 29,000 tonnes of viscose staple fibre and 5,000 tonnes of Tencel fibre . If local spinning mills start production of MMF by using locally available plastic products, especially plastic bottles, the import of such substances could be reduced to half.

**Opportunity to export PET Plastic/PET Flakes:** Bangladesh has huge opportunity to export PET Plastic, because EU countries have a huge demand of this product and Bangladesh is quite capable to produce this. But due to stringent parameters set by the EU countries and incapability of the industries to comply with the standards, the export in this sector is comparatively low.<sup>82</sup>

**Bilateral trade agreements (Free Trade Agreement/CEPA/MoU) with potential export destinations:** Bangladesh government has been emphasizing on signing trade agreements such as FTA, PTA, CEPA with potential trading partners. Successful and immediate signing of such agreements will open newer opportunities for the sector to flourish.

**Policy support of government (cash incentives, import duty exemption on raw materials, Tax holidays, incentives for local and foreign investment etc.):** Considering the potential of the sector, Bangladesh government has put in place various policy supports for the plastic sector. Proper utilization of the incentives before graduation from LDC status, may expedite development of the sector.

**Diversified plastic products:** Currently, Bangladesh produces about 142 plastic items like house hold articles, furniture, PVC pipes and fittings, flexible packaging, building materials, engineering parts and industrial parts, disposable plastic product, electric components and accessories, electronics components and accessories, automobile spare and accessories, shopping bags, garbage bags, butcher bags, oven sacks, film and sheets, pharmaceutical packaging products, health care products, bag, sachet, bottle and container, engineering plastic, toys, plastic sheet, melamine table ware, travel luggage, pet recycle and export, office file and stationary, water sewage pipes, ball point pen, garments accessories, plastic slipper sandal shoes, battery casing, PVC compounding, food grade plastic packaging products, etc.

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<sup>79</sup> Innovision Consulting, Polyurethane (Pu) Leather: The Potential Frontier of Export Industry, retrieved from, <http://innovision-bd.com/polyurethane-pu-leather-the-potential-frontier-of-export-industry/>

<sup>80</sup> Man-made fiber: A great room to invest for Bangladesh textile and apparel millers, Textile Today Analysis, January 8, 2020, Retrieved from <https://www.textiletoday.com.bd/man-made-fiber-a-great-room-to-invest-for-bangladesh-textile-and-apparel-millers/>

<sup>81</sup> Hopes in new fibre from plastic wastes, Financial Express, Retrieved from, <https://www.thefinancialexpress.com.bd/views/hopes-in-new-fibre-from-plastic-wastes-1581955829>

<sup>82</sup> Bangladesh Pet- Flakes Manufacturers & Exporters Association

**DFQF market access facilities:** As an LDC, Bangladeshi industries at present get access to duty free quota free market access in some of the major export destinations. These facilities are required to be utilized efficiently to order to get best ramification from them and hence are great opportunity for the sector.

**Extension of EU GSP facility:** After LDC graduation, Bangladesh may get EU GSP facility if the 32 conventions under the scheme can be ratified. Such schemes could be beneficial for the industries.

**Export opportunity to China and African markets:** For plastic products, export opportunities to China and African market can be explored as China imports about 350 billion USD worth of plastic and possesses an exploitable market for Bangladesh. Growing African markets also possess opportunities for plastic product export.

### **Key threats**

**Current and potential global economic downturn:** As EU is one of our main markets, current and potential future economic downturn due to war in Ukraine and global food crisis may reduce the demand of some plastic items in the world, which is a great threat for the sector.

**Lack of modern technology:** Lack of modern technology and weak infrastructure is a huge threat for the sector that must be addressed, as per feedback from the public consultation, even better bottle labelling is not available in Bangladesh due to insufficient technology.

**Improper recycling of used plastic products externally:** The plastic industry does not wastes compared to many other industries. Poor post-consumption handling of plastic wastes by city corporations and municipalities remains a big concern though.

**Scarcity of raw materials:** Due to scarcity of raw materials the industries wholly depend on their imports. Sudden unavailability or failure to get access to the raw materials may jeopardize the sector. Similar scenario was found during the COVID-19 pandemic when export in the sector declined due to paucity of raw materials.

**Unavailability of or inadequate access to funds especially for SMEs:** Unavailability of or inadequate access to funds is a major constraint for small and medium firms in the plastic sector as commercial banks do not accept movable assets as collateral to secure loans. Inadequate pre-shipment facilities like back-to-back L/Cs and export cash credit, increased working capital requirements for plastic manufacturers affect their export competitiveness as well.

**Complexity in access to finance in green funds:** Banks are not interested to provide green loans to this industry, despite demand of the industries for such funds. Due to this, the industries are not being able to set green industry.

**Lack of standardized regulations and guidelines to maintain the warehouse:** The industry in Bangladesh do not have any standardized regulations and guidelines to maintain the warehouse, which is a great impediment for the firms to maintain the warehouses.

**Absence of a market intelligence platform to keep pace with global trends:** There is no market intelligence platform available for the sector and businesses lack the structure to take informed decisions. Because of this, the sector cannot keep pace with the global trends and fail to build extensive relationships with the global networks which make the sector less competitive in the international export market.

**Ocean Pollution:** Ocean pollution caused by plastic waste can be a threat to the plastic industry. However, pollution is occurred by the post usage of plastic products, not by the industry which can be reduced by the proper management, govt. investment is needed for reducing this pollution.

## Shipbuilding Sector

### Overview of the Shipbuilding sector

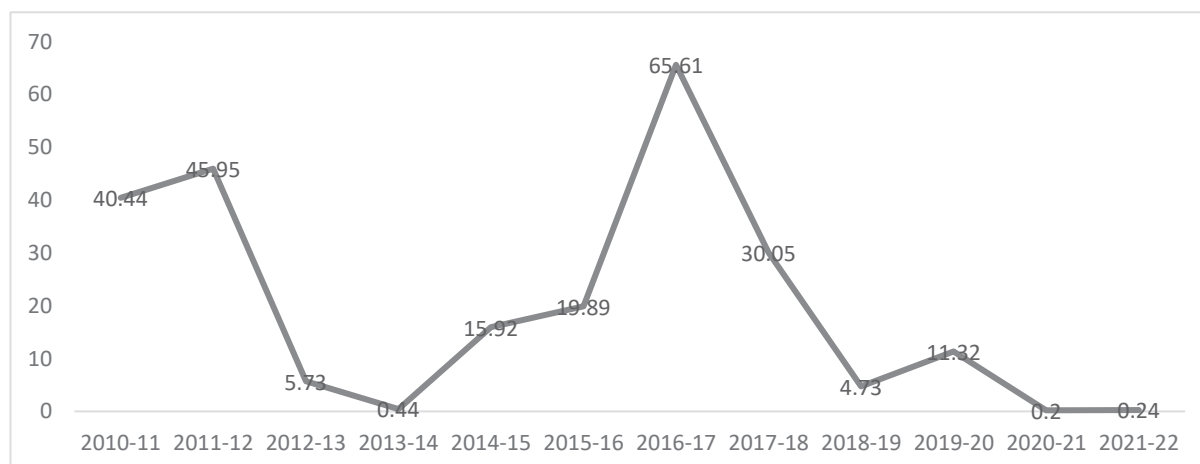
Bangladesh has a long coastal belt of 710 kilometre and over 700 rivers and 24,000 kilometre of waterways, which are rich in natural resources, especially fish and aquatic species. The country's economy heavily relies on rivers and water transport, with over 10,000 active vessels carrying more than 90% of total oil product, 70% of cargo, and 35% of passengers. There are over 20 internationally accredited shipyards and 100 local quality ship and dockyards engaged in building vessels, employing over 150,000 skilled and semi-skilled workers. The local shipbuilding market is estimated to be worth over USD 1 billion, and the demand for vessels is expected to keep pace with economic expansion. The domestic demand for various types of vessels is increasing due to continuous economic growth, trade expansion, and ongoing massive infrastructure projects. The shipbuilding industry of Bangladesh has to depend largely on domestic demand over the short and mid-term, with vessels of sizes ranging from 15,000 to 20,000 Dead Weight Ton (dwt) being manufactured locally for domestic use, including multi-purpose vessels (MPV), container, bulker, tankers, dredgers, tugs, and passenger ferries, etc. Annual gross production has reached 250,000 (Gross tonnage) GT at present, of which 185,000 GT are said for domestic orders.

### Export trend of Shipbuilding sector

Once known as a shipbreaking nation, Bangladesh has transitioned itself to a shipbuilding country, exporting small and medium-sized ships as well as ocean-going multi-purpose vessels including for icy waters of the North Sea and Baltic Sea for highly competitive European countries such as Denmark, Germany, Finland, Norway, etc. Bangladesh shows the potential to capitalize the global shipbuilding market, which is worth around \$200 billion, by improving its infrastructure and investing in research and development. Bangladesh's shipbuilding industry started exporting ships in 2008 and has since exported 44 ships to various countries, adding US\$180 million to the government's exchequer. The industry has a positive image in the country's industrial sector, and with government support, it has the potential to earn about US\$4 billion annually through ship exports in the next five years and create 100,000 jobs, as stated in the National Shipbuilding Policy 2021.

Bangladesh's shipbuilding industry can compete in the small and medium-sized vessel segment market up to 12,000 DWT in the international market due to its lower labor costs, which are 20-30% lower than other countries, according to BIDA. While some shipyards have export capabilities and modern building facilities such as computer-based control machining, there are still only a few with international "classed" standards. The export statistics from FY2010-2011 to 2020-21 show a decline in exports from US\$ 40.44 million in FY2010-11 to US\$ 0.24 million in FY2020-21.

**Figure 34: Export performance of shipbuilding sector in million USD**



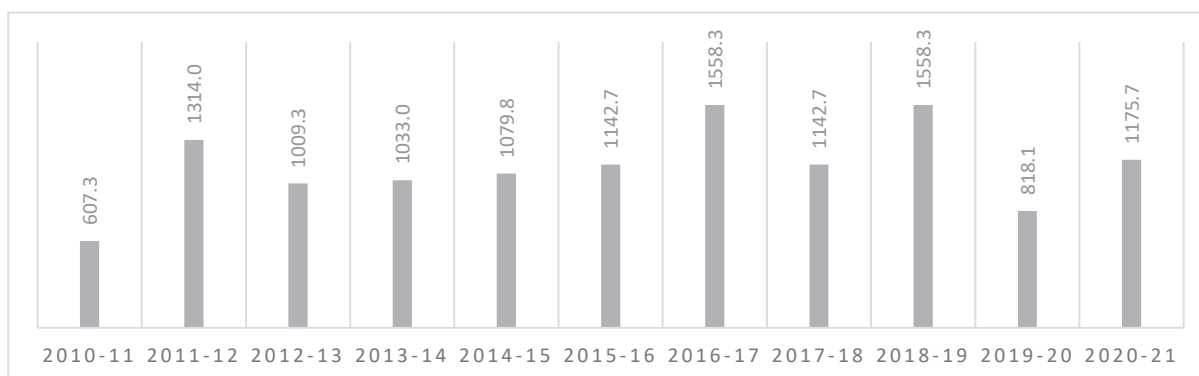
Source: EPB export data FY2021-22



### Import of Ships, boats & floating structure

According to sources from Bangladesh Bank, the import payment for ships was USD 607.3 million in FY2010-11, which increased to USD 1175.7 million in FY2020-21. This indicates that while Bangladesh's shipbuilding exports have declined, the import of ships has been increasing. As a result, the shipbuilding industry has the potential to benefit from the growing demand in the domestic market as a substitute for imports.

**Figure 35: Import payment of ships in USD million**



Source: Bangladesh Bank Import Payment Data FY2020-21

### Global trade of Ship and floating structure

BFTI analysis shows that world imports different number of products under HS Code: 890310; HS Code: 890399, HS Code: 890400, HS Code: 890690, HS Code: 890710, HS Code: 890790 and HS Code: 890800. In 2020, the export amount was US\$727 billion and in 2021 the export amounted to US\$900 billion. The incremental market size has created the potential for Bangladesh to tap into the growing demand.

### FDI in shipbuilding sector

The government has taken steps to set up shipbuilding facilities in partnership with foreign investors at Payra Seaport in Patuakhali with an investment of US\$ 1.58 billion to cut import dependence for vessels and create Bangladeshi ship market globally. State-run Bangladesh Steel and Engineering Corporation (BSEC) under the Ministry of Industry will provide land to Gentium Solution, a Singapore and Australia-based company and Damen Shipyard Group (a Dutch Company) to construct the shipyard for building merchant and passenger ship. In January 2020, the Ministry of Industry signed a memorandum of understanding (MoU) with these two foreign companies. The state-of-the-art shipbuilding yard along with a backward linkage industry is about to be built on 105 acres of land at Patuakhali with an investment of USD 1 billion.<sup>83</sup>

**Shipyard development involving technical assistance for “classed” ships:** Bangladesh is a potential place for building small-size vessels clustered below 25,000 DWT or 12000 DWT. Vocational training in shipbuilding and marine engineering can be upgraded through FDI or joint ventures with existing and newly established educational institutions. The continuous supply of skilled engineers and welders especially for the high quality, sophisticated vessels can stimulate the growth further. FDI and joint ventures in this sector are mostly expected to expand both capacity and capability of local industry to build class ships with international standard. Especially, upgrading the shipyard with modern technological facilities such as computer-based machining, bending, welding shot blasting as well as heavy lifting required for steelworks and component assembling for larger vessels can change the structure of the industry.

<sup>83</sup> (BSEC) signed a memorandum of understanding with Damen Group of the Netherlands and Gentium Solutions of Australia

The backward linkage industry of the shipbuilding sector is another potential area of investment, especially for FDI. Foreign direct investment (FDI) or joint ventures from foreign suppliers might significantly improve locally value-added vessels for both domestic and export markets, reducing reliance on imported materials and components. As a result, local marketing may be done for the supply of steel pipes, engines, generators, compressors, transformers, and metal works (flanges, valves, propellers, anchors, etc.).

### Gender perspective in Shipbuilding sector

The shipbuilding industry in Bangladesh is also male-dominated, with women making up only a small percentage of the workforce. The shipbuilding sector in Bangladesh has a gender disparity, with women occupying only 2 percent of the available jobs. This under representation of women is a clear indication of the discrimination and challenges they face in the industry. Despite this, Bangladesh is a leading example of women's empowerment globally, with surveys by the Bangladesh Bureau of Statistics showing an increasing contribution of women to the country's economy. Currently, women contribute 20 percent to the country's GDP and are making progress in mainstream sectors. In this sector women are typically employed in maritime and lower-skilled and lower-paying jobs, such as cleaning and catering, and are under represented in higher-skilled technical and managerial roles. Moreover, there is clear evidence that women have less employment opportunities in shipbuilding sector treated less better than men coworkers and paid unequally. Additionally, women face several challenges in accessing financing, training, and information, which are essential for starting and growing a shipbuilding-related business. To address these challenges, gender-responsive policies and programs are needed to promote gender equality and inclusivity in the industry.<sup>84</sup>

### Environment Perspective

Only a few shipyards have shown concern for safety, health, and environmental aspects, and even those are only at an average level. The processes of shot blasting, plate and section preparation, welding, and painting are the most significant contributors to environmental and health issues. Controlling and reducing the waste generated by shot blasting in open air, including dust and sound, requires expensive equipment. The costs of reducing pollution are therefore borne by the shipyards. In shipyards, paints are widely used, which contain volatile organic compounds (VOCs). VOCs are elements that produce ozone when exposed to sunlight. Developed countries, such as those in the European Union (EU), have limited the quantity of emissions or disposal of this kind of contamination. It is possible to use paints that contain no VOCs, but the cost of painting ships would increase as a result.

### Covid-19 impact on Shipbuilding industry

The COVID-19 pandemic has had a serious negative impact on the shipbuilding industry in Bangladesh, causing order cancellations and loss of revenue. The industry has been affected by lockdowns and has faced difficulties in paying salaries and retaining workers. Industry owners have requested cash incentives with low interest (between 2 and 4 %) loans from the government to keep the shipyards functional. The pandemic has caused a significant decline in the sector's exports, from around US\$11.32 million before the pandemic to just US\$0.17 million in FY 2020-21, with a limited rebound to US\$0.24 million in FY2021-22.

*Table 15: Export of shipbuilding sector in USD million*

Month	FY2019-20	FY2020-21	FY2021-22
July	0	0.01	0.01
August	0.13	0.01	0.01
September	0	0.03	0.00
October	0.04	0.00	0.11
November	0	0.0	0.00
December	0	0.02	0.00

<sup>84</sup> Shipbuilding in Bangladesh, rewriting history of a golden past, a potential future, Women in the maritime sector: where Bangladesh stands, CPA News, Vol 03, Issue 01, April 2018.

Month	FY2019-20	FY2020-21	FY2021-22
January	11.07	0.06	0.01
February	0	0.01	0
March	0	0.00	0.01
April	0.02	0.02	0.03
May	0.06	0.01	0.05
June	0	0	0.01
Total	11.32	0.17	0.24

Source: EPB Export Data FY2019-20, 2020-21 and 2021-22

### Policies regulating the Shipbuilding sector

The government has set up policy and regulations for the domestic shipbuilding industry. The Ministry of Industry along with the Ministry of Shipping has been looking after this industry. Some other authorities from the government include BIWTA which was set up for the development, maintenance and control of water transport and certain inland navigable waterways.

**Regulations related to Shipbuilding:** Inland Shipping Ordinance 1976 is an ordinance to provide for the survey, registration and control of navigation vessels plying on inland water. The national standard for such vessels is depicted in Bangladesh's domestic vessels code. On the other hand, Merchant Shipping Ordinance 1983 sets rules and regulations for all Bangladeshi merchant ships plying in the ocean or ocean-going vessels. Such vessels need to be certified with the International Association of Classified Society (IACS) "class" standards by internationally recognized accreditation bodies.

**Shipbuilding Industry Development Policy 2021:** The policy aims at raising the contribution of the export-oriented shipbuilding industry to USD 4 Billion by 2026 by attracting more investment and promoting advanced technology in this sector. The policy stipulates the shipbuilding industry to grow to an international level by integrating domestic, regional and international shipbuilding industries thanks to its immense potential and demand in the domestic and international markets. The policy envisages employment opportunities for 100,000 people by the year 2026 in place of the currently employed 30 thousand people in this sector. Moreover, the policy will offer different incentive packages, tariff facilities and loans at a lower rate of interest so that the industry can embark on a growth path competing in the global market.

The policy has suggested forming a national council of 24 members to supervise the implementation, monitoring and evaluation of the sector. The policy has specific guidelines for building a futuristic shipyard, backward linkage industry, guarantee facilities and lowering the bank interest rate to 4 percent with a repayment period of 20 years.

### Incentives in Shipbuilding Industry

In this policy, a Strategic Action Plan has been proposed to emphasize four specific strategic actions, and some basic programs will be undertaken to ensure the development of a globally competitive shipbuilding industry in the country. These strategic actions are Partnership, Capacity Building, Market Expansion, and Banking Assistance. Under banking assistance, it is proposed to resolve the banking challenges in shipbuilding industries by issuing sovereign guarantees at minimal cost. A dedicated fund comprising adequate finance for providing bank guarantees, bid bond guarantees, performance guarantees, letter of credit facilities, all non-funded and revolving in nature will be instituted as policy support to boost up this sector.

**Financial & policy support:** The policy further proposed to provide financial incentives as follows;

- The rate of interest on working capital along with all other types of loans will be kept at a minimal level and fix long term debt repayment period;
- Creating a special working capital fund for this sector to enhance the capabilities and efficiency of shipyards and to facilitate continuity of development projects involved as partners in ongoing mega development projects of the government;
- The amount of cash incentives will be increased from the existing rates for encouraging the export of ships and other ship-related accessories and continue paying cash incentives for exporting ships and ship-related products;
- Allowing the shipbuilding industry to use a special facility like other export-oriented industries to import raw materials for building export-oriented ships and assisting participation in international business fairs;
- Extending cash support, in line with other competing shipbuilding countries, to shipyards participating in international tenders in manufacturing ships, dredgers, fishing trawlers, tugs and ferries, etc.;
- Arranging necessary investments and financial incentives for the shipbuilding industry for its contribution to Blue Economy and continuing bonded warehouse facilities;
- For discouraging the import of ships and equipment, initiatives will be undertaken for capacity building of domestic shipbuilding industries side by side banning imports of all/any types of ships and vessels below 5500DWT or length less than 100.00 meters.

### Challenges and opportunities of the shipbuilding sector: findings from the SWOT analysis

SWOT analysis identified the following major strengths, weaknesses, opportunities, and threats that could impact the growth of the shipbuilding sector:

*Table 16: SWOT analysis of the shipbuilding sector*

<b>Strengths</b> <ol style="list-style-type: none"> <li>1. Available workforce at competitive cost</li> <li>2. Capability of making warship and low-cost transport and all types of ships</li> <li>3. Existence of academic institutions to provide quality training and education to create expertise</li> <li>4. Available workforce entailing the glorious history of shipbuilding</li> </ol>	<b>Weaknesses</b> <ol style="list-style-type: none"> <li>1. High import tax on raw materials</li> <li>2. Shortage of skilled manpower and manpower migration abroad</li> <li>3. High Investment, low return</li> <li>4. Knowledge gap between academia and industries</li> <li>5. Low productivity and inefficiency in management</li> <li>6. Delay delivery from shipyards</li> <li>7. Quality control problem due to lack of proper supply chain management</li> <li>8. Inadequate backward linkage industries</li> <li>9. Lack of safe working environment in shipyards</li> </ol>
<b>Opportunities</b> <ol style="list-style-type: none"> <li>1. Huge scope to penetrate the world shipbuilding market</li> <li>2. Growing local and international demand due to low cost of construction</li> <li>3. Long coast line area of Bangladesh along with facility of deep-sea port</li> <li>4. Existence of backward linkage industries for Shipbuilding sector like light engineering, IT, etc.</li> <li>5. Creating more employment opportunities from backward and forward linkage industries</li> <li>6. Flourishing Blue economy</li> <li>7. Growing number of ports and facilities</li> </ol>	<b>Threats</b> <ol style="list-style-type: none"> <li>1. National Shipbuilding Policy 2021 is yet to be implemented</li> <li>2. High corporate tax (30% for non-listed and 22.5% for listed)</li> <li>3. High rate of interest is applied on industrial and working capital</li> <li>4. Absence of sovereign guarantees for participating in international bidding</li> <li>5. Higher charges for bank guarantee and bid-bond guarantee and insurance premium</li> <li>6. Scanty branding</li> <li>7. Lack of investment friendly environment</li> <li>8. Longer lead time for steel sheet and clearance of raw materials from port</li> <li>9. Lack of navigability in Inland waterways</li> <li>10. Complexity in getting fund from export-oriented shipbuilding fund of the government</li> </ol>

*Source: BFTI findings generated from KII and Stakeholder Consultation*

### **Key strengths**

**Competitive and available Workforce:** Bangladesh is experiencing a demographic dividend with a large labor force that can efficiently contribute to increasing exports. The government is implementing various training programs for the shipbuilding industry under the SEIP project, providing young people with training and making them efficient in different production sectors of shipbuilding. In addition, every year, Bangladesh produces well-trained marine science engineers from reputed engineering universities, which can help improve the quality and capacity of shipbuilding companies to produce world-class ships. This presents an opportunity for the shipbuilding industry in Bangladesh.

**Capability of making warship:** Chittagong Dry Dock Ltd has started the processing of building six frigates for Bangladesh Navy. Twelve international companies already expressed their interest to do joint venture with Chittagong Dry Dock Ltd. to build frigates jointly. As Bangladeshi companies are increasing their capability, they can also earn foreign exchange from the marine defense industry beyond shipbuilding.

### **Key weaknesses**

**High import tax on raw materials and higher corporate tax:** The raw materials of ships are very expensive. More than 60% of raw material has to be imported. Based on the customer's requirements, the shipbuilding firms import raw material to build the ship. But the import tax of raw materials is still double digit, which is a barrier for the builder. Because of the high import tax on raw materials, their production cost increases compared to their competitors. In RMG sector, 10% corporate tax is imposed on the green industry while 12% corporate tax has to pay if it is traditional industry. On the contrary, a shipbuilding corporate has to pay 25% of corporate tax if it is not listed in share market and if it is listed the company has to pay 22.5% of corporate tax as per the Finance Act 2022.

**Shortage of skilled labour:** Low-cost labor force is one of the most important assets for Bangladeshi shipbuilding companies, although many of the workers are unskilled. Currently, there is a lack of specialized departments in Bangladeshi shipyards, which puts them at a disadvantage compared to their competitors like China. The Assistant General Manager of Western Marine Shipyard explained that China and other top competitor countries have specialized departments for each production stage, which are also technology-based. While there are a large number of workers in Bangladesh, most of them lack the necessary skills.

**Manpower migration:** Professionals who are developed by the academies and industries, and could potentially contribute to the industry, often migrate abroad in search of higher pay. The qualifications that these professionals attain are often government-subsidized. The industry invests a significant amount of money in fresh graduates by providing industrial training and even sending them abroad for higher training. Despite this investment, many professionals choose to ignore the idea of staying in their home country for the development of Bangladesh, instead opting to migrate to developed countries. They often recommend that Bangladesh lacks the better lifestyle and facilities that they deserve.

**Low return on high investment:** Shipbuilding is a capital-intensive industry, and consortium financing is needed in this industry and local financial institutions are not capable of financing such an industry individually. Initial investment required in this sector is about 100-1000 crore. In comparison to other competing nations like China, Korea, Japan, India, Vietnam, etc., Bangladesh's ship manufacturing costs are 15% to 20% higher. Tax on imported shipbuilding equipment and materials increases the cost even further. India, on the other hand, has a finance cost of only 10%, a cash subsidy of 30%<sup>85</sup>, and is overall around 30% to 40% ahead of Bangladesh in the shipbuilding industry.

**Delayed delivery from shipyards:** A timely delivery is a major factor of delay in delivery. Import of raw materials of any industry is financed by a bank in terms of LTR backed L/C facilities. LTR usually are adjusted in 120 days or in a maximum 6 months, otherwise they are termed as substandard. After a year, they are declared as classified loan. In export of ship, LTR adjustment is only possible in 2 years. Consequently, an export-oriented shipyard may face classification for non-adjusting LTR. Enhancing the long-term LC payment period for shipbuilding sector and extending time period of LTR facilities to 2 years can solve the problem.

**Quality control problem due to lack of proper supply chain management:** Inventory management is a very big issue for shipbuilding sector. In Bangladesh, inventory management is still not of international standard. The process of shipbuilding is time-consuming as one ship may take years to be built. Also, the parts are needed to be imported to make a ship since in Bangladesh does not have the capacity to produce those parts.

**Working condition in shipyards:** A study<sup>86</sup> found that most of the workers are unable to lead a decent life due to meager wages and often unsafe work environment. The report recommended that shipbuilding companies should ensure human rights and care about wellbeing of workers. Similarly, there is lack of opportunity for women employment as their payment is low and having no accommodation facilities. The study findings indicate that 40% of the shipbuilding workers' monthly wage is US\$ 122.69\*.

**Inadequate backward linkage sector and dependence on imported raw materials:** In shipbuilding, about 60%<sup>87</sup> of the contract value is spent for procurements. The industry depends on import for most materials and components. Over 80% of materials and components are imported for either export or ocean-going vessels, while vessels for inland waters have broadened local supply basis up to 50 to 60%. According to industry sources, materials such as steel pipe, heavy metal-casted parts like propellers and anchors, components of engine, generators, transformers, and certain types of fixtures, including sanitary equipment, furniture, upholstery, etc., generally rely on import. On the other hand, steel plate, angle steel, cable and paint, become procurable from local suppliers. This makes Bangladesh uncompetitive against its competing countries like China, Vietnam and India.

### Key opportunities

Bangladeshi shipbuilding industry has a big opportunity to export small vessels since major competitors are focusing on building high-capacity vessels. As a result, Bangladeshi businesses can take the remaining market share. These enterprises are currently enhancing the quality of their output and have already made a name for themselves in numerous worldwide markets. There are several significant export potentials for Bangladeshi shipbuilding companies, including:

**Growing international demand:** Based on the responses of various officials from major ship exporters and shipbuilders' associations, there is increasing international demand for Bangladeshi ships.

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<sup>85</sup> Iqbal K. S., Zakaria N.M., Hossain K. A., Identifying and Analyzing Underlying Problems of Shipbuilding in Bangladesh, Journal of Mechanical Engineering

<sup>86</sup> Study on Working Conditions of Shipbuilding Workers in the Shipyards of Bangladesh: Problems and Consequences (2015) Mohammad Monirul Islam, Journal of Business Studies

<sup>87</sup> BFTI interview with the stakeholders

\*Exchange rate: 1 USD= 97.81 BDT, BBS 2022-23



The Assistant General Manager of Western Marine Shipyard stated that they received orders for 37 ships from different international buyers between 2010 and 2018. According to several representatives of significant ship exporters and shipbuilders' associations, the market for Bangladeshi ships abroad is growing yearly. Western Marine Shipyard has already delivered 32 ships, and five ships are currently in the process of delivery. The same situation is prevalent for Ananda Shipyard & Slipways Ltd. and other interviewed shipbuilders.

**Long coast line area:** A long coast line provides some natural advantages for Bangladesh. Western Marine Shipyard has the largest shipyard in Bangladesh and their shipyard is located at the Karnafuli riverside, near the Bay of Bengal. If companies can get the facility from the government to build shipyard in coast line areas, then they can increase their production capacity. Shipbuilding companies import more than 60% raw materials from international market. As a growing sector, light engineering, with policy and financial support, can produce import substitute components for shipbuilding sector.

**Rising IT sector:** The IT sector of Bangladesh is also progressing, with the government providing a 10% cash subsidy on exports and designating it as a "thrust sector." With a shift from manual to IT-based design work leveraging IT sector, it is possible to maintain accuracy, ensure better quality, while also reducing design cost. Growing number of ports: The completion of Payra deep sea port and Matarbari deep sea port, two ongoing mega projects of the Bangladesh government, is expected to boost the country's shipbuilding industry. These ports will allow the industry to build and deliver high DWT ships, which they currently struggle to do due to the lower depth in the coastline area. The completion of these deep-sea ports in 2022 will increase the industry's export potential.

#### **Key threats**

**Lack of implementation of suggestions provided in Shipbuilding Industry Development Policy 2021:** Many of the provisions in the policy are not being implemented. In most cases tax breaks from NBR and working capital loans from banks and NBFIs with lower interest are not available. In stakeholder consultation, most of the participants have suggested to implement the Shipbuilding Industry Development Policy 2021. They further urged that the policy has a clear guideline for providing financial support, bank guarantee, and sovereign credit guarantee along with incentives and tax breaks from NBR which are not happening.

**High rate of interest on bank loan and guarantees:** Overseas buyers do not trust the guarantee offered by Bangladeshi commercial banks, which leads to a higher interest rate due to the requirement of a counter guarantee from foreign institutions. Shemon, S. W. (2019), recommended a bank guarantee of 16% (local 4% and foreign 4% for a two-year period) for the export of ships from Bangladesh. This bank guarantee requires an equivalent amount of advance payment and price of raw materials received by the builders from the importing company. Additionally, the commission charged by Bangladeshi commercial banks for opening import L/C is 1% per quarter, which is higher than the commission charged by banks in other competing countries like China, Korea, Japan, India, Vietnam, and Brazil (0.20%). As a result, Bangladeshi shipbuilding incurs an additional financial cost of 15 to 25% (bank interest 3 to 6%, guarantee 8 to 16%, L/C commission 4 to 8%, and other fees 1% higher than competing countries).

**Financing and bank guarantee challenges:** Shipbuilding orders are executed largely from the advances received from ship owners which start immediately after the signing of the contract. As the building work proceeds, more advances are received and usually, 70% of the contract price is received as advances. Payments are made available only against submission of bank guarantees from a first-class bank. Bari, A. (2013) urged that typically, 15% is the profit margin in shipbuilding sector. This leaves a requirement for the shipyard to arrange a working capital of 25% of the contract price to have a work in progress. And at least 10% over working capital is required to catch the payment stage.

In addition to 25% working capital, the shipyard needs to generate bank guarantees amounting to 75%<sup>88</sup> to receive advance payment for shipbuilding. The foreign ship owners do not accept guarantees issued by local banks and thus the same guarantees must be reissued by the first-class foreign bank on the guarantee issued by the local bank in favour of the foreign bank. The combined charges payable to the local and foreign bank are too high. The foreign banks get the major share of the commission with liability on their shoulder. In other competing countries, it is reportedly less than 1.5% per annum in place of our 8% which greatly reduces our competitiveness.

**High insurance premium and inappropriate insurance policy:** After the contract is made, if the ship cannot be assembled for whatever reason, then the contract becomes void. This happens mainly because raw materials and types of machinery for building ships need to be provided. Cost Insurance & Freight (CIF) basis import is not allowed due to some reasons but CIF basis import is a necessity for export-oriented businesses, to reduce the risk of the company as the case of CIF basis import, the supplier or manufacturer has to supply the complete package under his onus during any loss or damage of materials. So, the builder is on the safe side in CIF basis import.

**Custom related barrier for clearing raw materials from custom house in time:** Businesses are facing delays and higher costs while complying with custom documentation at the ports, despite the custom authority's efforts to implement custom modernization programs. Many stakeholders in the sector have urged for extra clearance time for imported goods and a reduction in the cost of documentary compliance, as most of the inventory and raw materials required for shipbuilding need to be imported. Businesses have also alleged that there are hidden costs involved in obtaining release orders for their imported products, which increases the production cost of ships. These challenges have hampered the export competitiveness of the sector, and it is important for the customs authority to address these issues in order to support the growth of the shipbuilding industry.

**Lack of investment friendly environment for FDI:** Simplified trade procedures through custom modernization and a business-friendly taxation system could help to reduce the cost of doing business in Bangladesh. In order to address the country's lack of machinery production for the shipbuilding industry, joint ventures that share machinery resources in exchange for low labor costs could be a viable solution for attracting foreign direct investment (FDI).

Japanese shipbuilding giant Mitsui Engineering and Ship Building Industry has already developed the first and largest joint venture shipyard with High-Speed Ship Building and Engineering Co. Ltd. at Fatullah, as revealed in stakeholder consultations. Other foreign companies from Denmark, Netherlands, and Germany are also looking for potential joint venture partners, but they expect the regulatory policies and authorities in Bangladesh to become more investment-friendly.

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<sup>88</sup> Bari, A. (2012), Present Scenario of Export Oriented Shipbuilding Industry in Bangladesh, Seminar Paper, EPB 2012

## Agro Products and Processed Foods

### Overview of the Agro Products and processed food sector

The agriculture sector has been a predominant driver of growth and rural development in Bangladesh, accounting for almost 13.02 percent of the gross domestic product (GDP) in FY 2020-21 and providing employment opportunities for more than 40.60 percent of the country's workforce.<sup>89</sup>

The export of agro products is still insignificant compared to the huge production. One of the reasons for the low export of those products is the inadequate capacity to comply with the Sanitary and Phytosanitary (SPS) requirements of the importing countries. If the appropriate SPS capacity can be developed, the export of agro-products and fisheries products will be increased significantly, which will result in export diversification. Geographically, Bangladesh is a small country, comprising an area of 1,47,570 sq. km where the cultivable land is only 88,28,266 hectares but the cropping intensity is 198%. The country has 2110,800 hectares of single-cropped area, 41,25,288 hectares of double-cropped area, 18,66,780 hectares of triple-cropped area, and 22,662 hectares of quadruple land. Bangladesh is in the range of 3-10 in world production of vegetables, fish, mango, potato, guava, etc. The staple food of Bangladesh is rice while a large portion of the population favors wheat-made products. Though wheat production is not remarkable the main crop rice production exceeds 336 million tons. A large portion of arable land is kept reserved for rice cultivation for meeting internal demand. The rest of the available land does not provide enough opportunities for cultivating export-oriented agro products.

### Global overview of the Agro-processing sector

*Table 17: Top global exporters of agricultural products and processed food (in million \$)*

Sl.	Exporter	Exported value in 2017	Exported value in 2018	Exported value in 2019	Exported value in 2020	Exported value in 2021
1.	European Union Aggregated	613.1	649.9	641.8	653.4	757.9
2.	United States of America	168.6	171.4	164.8	170.5	201.6
3.	Netherlands	106.9	112.3	110.4	112.4	129.0
4.	Brazil	87.8	92.9	89.1	93.2	111.1
5.	Germany	92.6	95.3	92.6	92.8	104.2
6.	China	78.4	82.8	81.7	78.2	88.5
7.	Canada	66.6	69.1	65.0	69.8	87.3
8.	France	72.6	77.3	75.5	73.4	86.2
9.	Spain	57.5	61.4	61.6	64.3	74.2
10.	Indonesia	49.3	46.0	43.2	46.9	65.1
11.	Italy	48.6	51.8	52.4	54.7	63.7
12.	Belgium	48.9	51.3	50.2	50.3	57.8
13.	New Zealand	27.5	28.8	29.3	29.2	54.5
14.	India	38.8	38.9	37.4	38.9	50.5
15.	Thailand	43.7	44.2	43.0	41.8	47.4
16.	Poland	33.8	37.6	37.9	41.2	47.1
17.	Australia	42.1	36.5	35.2	31.4	46.7
18.	Mexico	33.7	35.8	38.2	39.8	46.7
19.	Russian Federation	30.1	34.7	33.7	36.5	43.8
20.	Argentina	35.6	34.3	39.0	36.1	42.7
21.	Malaysia	28.6	26.8	26.3	27.2	36.6
22.	Viet Nam	30.2	30.4	29.9	29.6	33.9
<b>Total World Export</b>		1729.9	1805.8	1782.9	1803.7	2162.4

Source: ITC Trade Maps

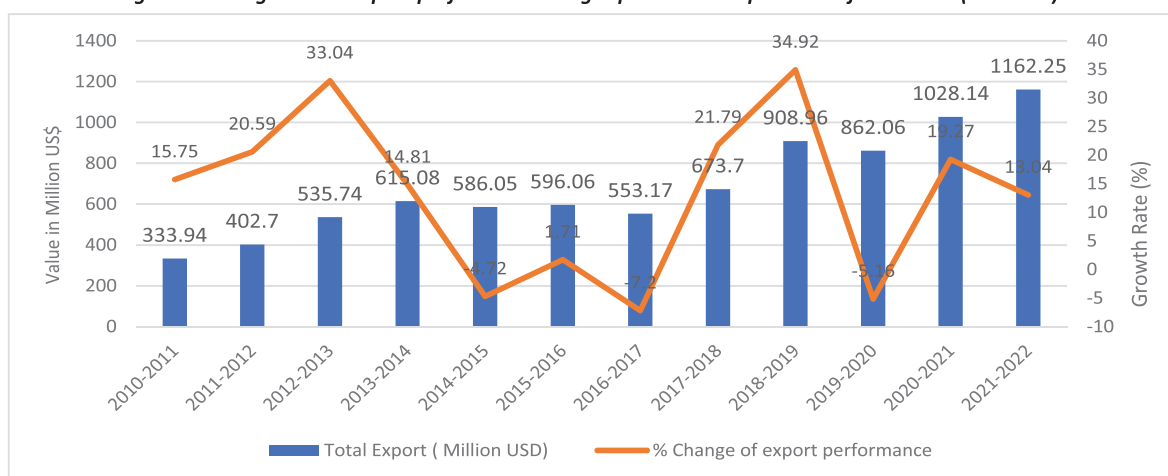
<sup>89</sup> BBS Statistical Yearbook (2021)

Agricultural development is associated with food security, poverty alleviation, improving standard of living, employment generation, growth of agro-based industries, providing inputs to many manufacturing sectors. In the global scenario, agricultural products worth US\$ 2162 billion were exported in 2021. Over the last 5 years, USA has consistently been the top global exporter, with US\$201.6 billion export in 2021. In the list of top 25 global exporters over the last 5 years, India stands 11<sup>th</sup> with export value worth US\$50 billion, followed by Thailand in the 15th position with US\$47 billion export, Malaysia 21<sup>st</sup> with US\$10 billion export. Bangladesh stands far from the top 25 exporters' list and was identified in the 91<sup>st</sup> position.<sup>90</sup> The main export items are tea, spices, fruits including dry fruits, vegetables, cut flowers and some other processed agricultural products. The agro-food processing industry in Bangladesh provides about 8.0 percent to manufacturing output (1.7 percent of GDP) and is currently valued at US\$ 2.2 billion. The agro-food processing industry's share of total exports now stands at around 1.5 percent.<sup>91</sup>

### Export trend in Bangladesh

More than 700 agro products are exported from Bangladesh among which about 63 are basic agro processed products. The products are exported to more than 140 countries.<sup>92</sup> Among the basic ones, fruits, vegetables, cut flower, dry food, spices, processed meat, frozen fish, cereal grains, tea, tobacco are noteworthy. Agro products are exported from Bangladesh under Harmonised System (HS) Chapters are mentioned in table (18). In Bangladesh, vegetables covered an area of 1121 thousand acres with per acre yield of 4110 kg and a total production of 4.6 million metric tons in FY 2020-21. Whereas fruits covered an area of 996 thousand acres and total production of 5.2 million metric tons. Due to the tropical climatic condition and environment Bangladesh is suitable for production of horticulture crops, fruits and vegetables. Sufficient number of fruits and vegetables with high varieties are grown every year.

**Figure 36: Bangladesh's export performance in agro products and processed food sector (HS 04-24)**



Source: EPB Data

With total export earnings of \$1.16 billion in the fiscal year 2021-22, the agricultural industry ranked fourth in export earnings, after the clothing, home textile and leather products. The main export items were tea, spices, fruits including dry fruits, vegetables, cut flowers and some other processed agricultural products.

<sup>90</sup> ITC Trade Map

<sup>91</sup> Bangladesh Regional Connectivity Project-1, 2021

<sup>92</sup> BIDA, Agro & Food Processing Industries, retrieved from,

<https://bida.gov.bd/storage/app/uploads/public/628/c73/ca9/628c73ca9b17a677576784.pdf>

The industry showed a 13.04% growth in FY 2021-22, while it was about 19.27% in FY 2020-21. The export earnings from this sector have been increasing steadily and total export value almost quadrupled from FY 2010-11 to FY 2021-22.

#### Product-wise export performance

**Table 18: Export value of vegetables, fruits and dry foods (in million USD)**

SL	Year	Export value of Vegetables (HS Code 07)	Growth Rate (%)	Export value of Fruits (HS Code 08)	Growth Rate (%)	Export value of Dry Food (HS Code 19)	Growth Rate (%)
1	2011-12	77.43	7.95	57.16	51.7	37.19	26.63
2	2012-13	110.34	42.5	71.89	25.77	45.24	21.65
3	2013-14	147.55	33.72	61.84	-13.98	72.6	60.48
4	2014-15	103.24	-30.03	38.48	-37.77	94.25	29.82
5	2015-16	104.34	1.05	20.23	-90.21	96.04	1.86
6	2016-17	81.03	-22.34	2.69	-86.7	109.61	14.13
7	2017-18	77.98	-3.76	2.24	-16.73	201.37	83.71
8	2018-19	99.68	27.83	0.33	-85.27	227.09	12.77
9	2019-20	164	64.53	0.49	48.48	193.71	-14.7
10	2020-21	118.73	-27.6	0.58	18.37	283.38	46.29
11	2021-22	99.91	-15.85	5.29	812.07	249.96	-11.79

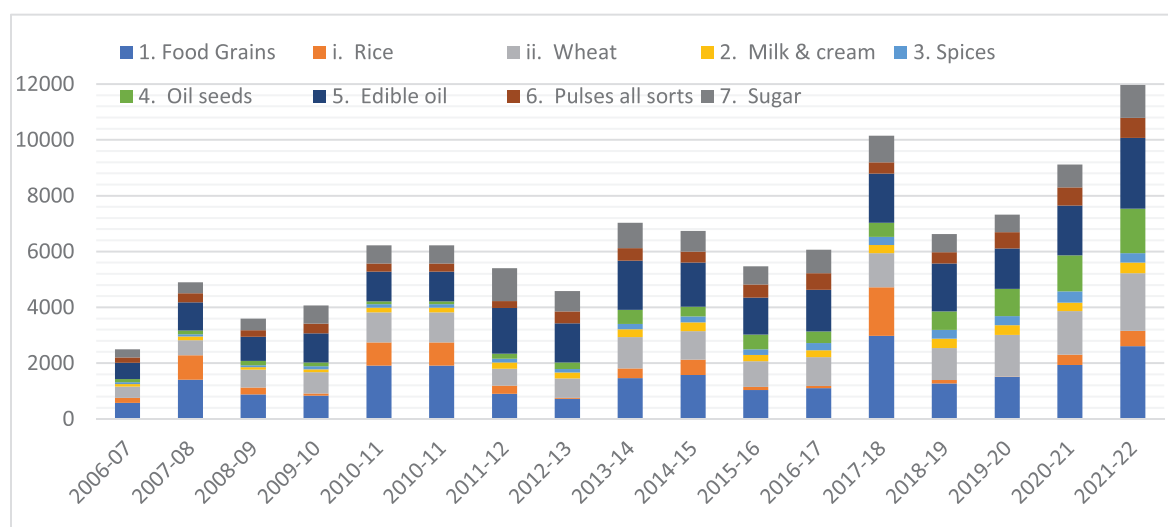
Source: EPB

There is huge demand of fruits, vegetables and dry foods in the global market. Table (18) shows Bangladesh's significant growth in the export of fruits over the last 03 years. Despite having positive growths in exports in the previous years, vegetables and dry food (processed food) have seen negative growth in the fiscal year 2021-2022.

#### Import trend

Bangladesh is heavily dependent on import for some of the agro food products. From FY 2006-07 to FY 2021-22, import of food grains (rice, and wheat) increased by almost 5 times from \$581 to \$2611 million.<sup>93</sup> Spices import increased by 5 times from \$76 to \$336 million. That of oil seeds and edible oil increased by 15 (from \$106 to \$1597 million) and 4 times (from \$583 to \$2533 million) respectively and sugar import increased by 4 times (from 294 to 1186 million USD).

**Figure 37: Import trend of agro-products and processed food (in million USD)**

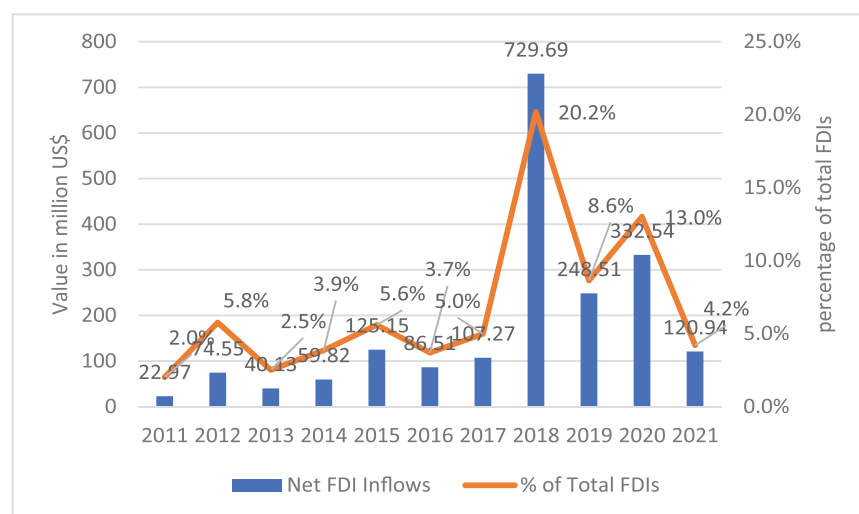


Source: Bangladesh Bank

<sup>93</sup> Bangladesh Bank

## FDI in the sector

Figure 38: Net FDI inflows of food products in Bangladesh



FDI in food products has seen considerable rise in the recent years. FDI data from the last 10 years show that the value of FDI in food products was the highest in the calendar year 2018 amounting to US\$ 729.69 million which was about 20.2 percent of the total FDI.<sup>94</sup> FDI trend has been downward from the past few years. As per the Bangladesh Bank's report, food products generated \$120.94 million FDI inflows in 2021 which was only 4.20% of total FDI.

## Destination analysis of Bangladesh and global perspective for selected agro products

Table 19: Destination analysis of Bangladesh and global perspective for selected agro products

S.L.	Top Export destination of Bangladesh (FY 2021-22)	Export value in million USD	Top Global Importers	Import in 2021 in million USD	Share of Import from Bangladesh (in %)
<b>HS code 07 (vegetables)</b>					
1	United Kingdom	22.97	United States of America	13488	0.00
2	Malaysia	19.91	Germany	8301	0.01
3	United Arab Emirates	11.45	United Kingdom	4273	0.54
4	Saudi Arabia	9.79	France	3897	0.02
5	Qatar	5.59	Canada	3507	0.02
<b>Fruits (HS 08)</b>					
1	United Kingdom	2.20	United States of America	22232	0.0003
2	Qatar	0.68	China	15910	0
3	United Arab Emirates	0.58	Germany	13090	0.0003
4	Vietnam	0.35	Netherlands	8479	0.0001
5	INDIA	0.34	France	6848	0.0006
<b>Dry Food (HS 19)</b>					
1	Saudi Arabia	42.83	United States of America	11043	0.15
2	Malaysia	33.22	China	6826	0.03
3	INDIA	28.30	Germany	5673	0.004
4	United Arab Emirates	23.60	United Kingdom	4765	0.4
5	United Kingdom	20.15	France	4636	0.04

Bangladesh's top export destination for vegetables in FY 2021-22 was the United Kingdom, with export earnings of US\$ 22.97 million. However, despite being the 3<sup>rd</sup> largest importer of vegetables, the United Kingdom only imported from Bangladesh a meager 0.54% of their total import. On the other hand, the USA, which is the largest importer of vegetables with \$13.4 billion total imports, had no vegetable imports from Bangladesh, indicating room for improvement in export market diversification.

<sup>94</sup> Bangladesh Bank



As for fruits, the USA is the highest importer but has a negligible amount of import from Bangladesh. The largest importers of fruits, including the USA, China, Germany, Netherlands, and France, could be potential export destinations for fruits from Bangladesh. For dry fruits, Saudi Arabia, Malaysia, India, UAE, and the United Kingdom are the main export destinations, with the USA, China, Germany, and France being potential markets for diversification.

### **Gender perspective in Agro Products and processed food sector**

In Bangladesh, women play a major role in the agricultural sector. In 2022, women accounted for 40.6% of the agricultural labor force, a significant increase from the 1980s when they only made up 27%. There are a number of reasons for this increase, including government investment in women's empowerment programs, the green revolution, and the rise of microfinance. The government of Bangladesh has been investing in women's empowerment programs for many years. These programs have helped to increase women's access to education, healthcare, and other resources. As a result, more women are now able to participate in the agricultural sector.

The green revolution has also led to an increase in women's participation in agriculture. The green revolution is a series of agricultural improvements that have led to increased crop yields. These improvements have created more jobs for women in the agricultural sector. Microfinance is another factor that has contributed to the increase in women's participation in agriculture. Microfinance is a type of lending that provides small loans to people who would otherwise not be able to access credit. This has made it easier for women to start their own businesses or to invest in their farms.<sup>95</sup> The total budget in 2022-23 for this ministry was USD 2,557.98 million among which 48.8 percent was allocated (USD 1,248.36 million) for women.<sup>96</sup>

In addition to these factors, the government of Bangladesh has also taken steps to support women in agriculture. For example, the Department of Agriculture Extension has trained 327,282 women in various agricultural technologies. The Bangladesh Agri Business Development Project has also distributed loans worth US\$ 42.94 million\* to 41,467 entrepreneurs for the development of agribusiness. Among these entrepreneurs, 52.80% are women. Finally, the government has also provided training for women in the production of versatile jute products at the small and cottage industry level.

About 25% women participate in the implementation of the "Building Modern Food Storage" project and the project to set up premix kernel machines and laboratories to ensure the nutritional quality of food crops. Additionally, till March 31, 2022, 34.50% women will benefit from food friendly program. The number of farmers receiving training on modern technology provided by the Department of Agricultural Extension is 16,81,606, of which 3,27,282 are women (19.46%); 1,79,740 farmers have been trained in post-harvest loss reduction, value chain, supply chain development, entrepreneurship development etc. under various projects implemented by the Directorate of Agriculture Marketing. Among them 53,922 (30%) are women and various projects and programs have so far resulted in the creation of 41,467 entrepreneurs, of those, 21,895 (52.80%) were women.

### **Environment aspects of agro products and processed food**

Chemical fertilizer use has been promoted to boost agricultural productivity and increase farmers' yields and income. However, the incorrect use of chemical fertilizers can negatively affect yields and harm the environment. Fertilizer that is overused or applied at the wrong time cannot be absorbed by the plants and can leach from soil to surface or ground water raising toxicity levels in water supplies or depositing into nitrous oxide and carbon dioxide, common greenhouse gases. On the other hand, failure to apply adequate amounts of fertilizer at the right times deprives crops of necessary nutrients and can negatively affect yields.

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<sup>95</sup> Women in Agriculture in Bangladesh, United Nations Food and Agriculture Organization (FAO), 2022 available at <https://www.fao.org/3/cb3439en/cb3439en.pdf>

<sup>96</sup> Gender Budget Report FY 2022-23, Finance Division, Ministry of Finance, 2022.

\*1 USD= 97.81 BDT, BBS 2022-23

### **Policies governing the sector**

Bangladesh's Export Policy 2021-2024 identified Agro and Agro-Food Processing sector (including fruits and cut flower) as one of the Highest Priority Sectors. Moreover, considering the potential of the sector for creating newer employment opportunities and export earnings, the Industrial Policy 2022 mentions the Agro and Agro-Food Processing sector as one of the export diversifications sectors. In addition, the government in its 8th Five Year Plan (FYP) 2021-2025, has emphasized on:

- Production of diversified agro products for the implementation of inclusive growth strategy.
- Diversification of processed foods and agro products including fruits and vegetables.
- Ensuring food safety.

The following acts, regulations and policies regulate the agro products and processed food sector.

### **Regulations**

According to Food and Agricultural Import Regulations and Standards Report, it is observed that for food and agricultural products imported to Bangladesh will comply with a range of laws designed to protect consumer, plant, and animal health.

• **The Food Safety Act, 2013** : Provisions for the establishment of an efficient and effective authority and for regulating, through coordination, the activities relating to food production, import, stock supply, marketing and sales, so as to ensure the rights toward access to safe food through appropriate application of scientific process, upon repealing and enacting the existing laws.

• **Food Additives Regulations, 2017**: Bangladesh has the Use of Food Additives Regulations, 2017, which were passed in February 2017 and are overseen by the Bangladesh Standard and Testing Institute (BSTI), Ministry of Industry, and Bangladesh Food Safety Authority (BFSA), Ministry of Food. The rules offer a list of food additives that can be used in a beneficial way.<sup>97</sup>

• **The Food Safety (Food Hygiene) Regulations, 2018**

### **Policies**

**The Export Policy, 2021-24**: According to the draft policy created by the Ministry of Commerce, the policy planned for three years intended to support the transportation of high-value items by maintaining standards and compliance as well as fostering contemporary, sustainable, and green technologies.

**National Agriculture Policy 2018**: The major goal of the Bangladesh Agricultural Policy 2018 is to provide a profitable, effective, environmentally friendly, long-lasting policy that aids in achieving growth.<sup>98</sup>

**Agro-food Processing Industry Promotion Policy 2022**: Agro-food Processing Industry Promotion Policy 2022 will guarantee industry's sustained, goal-oriented expansion. To increase production efficiency and product quality, create new goods, and encourage global collaboration and technological exchanges, the policy will offer guidance. The policy has fiscal incentives in the form of business loans, capital and interest subsidy, Tax & VAT incentives and other important facilities for the agro-processing sector.

In addition, National Agricultural Marketing Policy, 2021 and Bangladesh Good Agricultural Practices Policy 2020 have been formulated to facilitate this sector.

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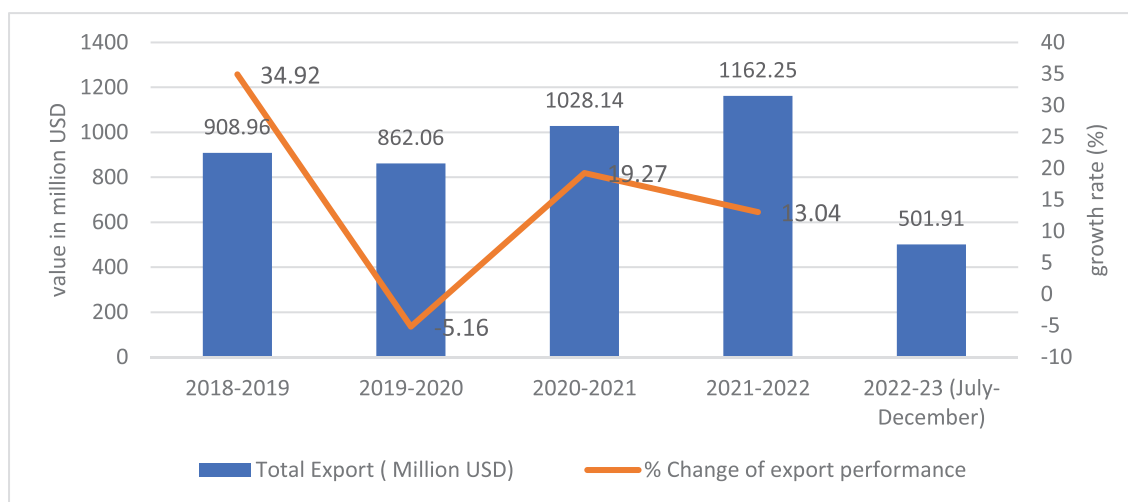
<sup>97</sup> Food and Agricultural Import Regulations and Standards Report, Office of Agricultural Affairs, USDA/Foreign Agricultural Service in Dhaka (2019)

<sup>98</sup> Ministry of Agriculture, Government of the People's Republic of Bangladesh, National Agriculture Policy 2018

### Impact of COVID-19 on the sector

COVID-19 pandemic affected the agro-food system, disrupted supply chains due to lockdown and limits on travel and social gatherings. This had a negative impact on the nation's overall food consumption situation, and the agriculture sector experienced a negative growth of 5.16 percent in FY 2019-20.<sup>99</sup>

**Figure 39: Impact of COVID-19 on export of agro products and processed food**



### Challenges and opportunities of the agro products and processed foods sector sector: findings from the SWOT analysis

SWOT analysis identified the following major strengths, weaknesses, opportunities, and threats that could impact the growth of the agro products and processed foods sector:

**Table 20: SWOT analysis of agro products and processed foods sector**

Strengths	Weaknesses
<ol style="list-style-type: none"> <li>1. Diversified and high yielding crop</li> <li>2. New technology related to Production, Processing, and, Marketing</li> <li>3. Availability of competitive labor force including women</li> <li>4. Extension services to farmers</li> <li>5. Favourable climatic condition</li> <li>6. Abundance of natural resources including Fertile land Water</li> <li>7. Consistent research and development</li> <li>8. Strong local industrial base</li> </ol>	<ol style="list-style-type: none"> <li>1. Shortage of infrastructure facilities and modern equipment in Post-harvest and Processing</li> <li>2. Meagre access to high-tech or enhanced farming technology</li> <li>3. Constraint in getting permission for contract manufacturing</li> <li>4. Inadequate multipurpose specialized cold storage and Cool Chain</li> <li>5. Lack of awareness regarding export requirements</li> <li>6. Dearth of skilled workforce</li> <li>7. Lack of value addition activities in agricultural products</li> <li>8. Insufficient accredited laboratory and packaging house</li> <li>9. Absence of a strong central organization for research and rural development</li> <li>10. Slow implementation of Good Agricultural Practice (GAP)</li> </ol>

Opportunities	Threats
<ol style="list-style-type: none"> <li>1. Export opportunities in processed food and fresh vegetables</li> <li>2. The forward and backward linkage</li> <li>3. Favourable government policies</li> <li>4. Scope of value addition in food processing</li> <li>5. Opportunities of demographic dividend</li> <li>6. Expanding demand of halal processed food</li> </ol>	<ol style="list-style-type: none"> <li>1. Export Subsidy may not be allowed to be provided after LDC graduation.</li> <li>2. Lack of access to loans from banks</li> <li>3. Natural disaster</li> <li>4. Higher transportation cost including air freight</li> <li>5. Presence of middlemen in marketing channel</li> <li>6. Unavailability of duty drawback</li> <li>7. Over utilization of ground water</li> <li>8. Lack of Support by financial Institutions in food processing technologies.</li> <li>9. Absence of mutual recognition agreement and certification with partner countries</li> </ol>

Source: BFTI findings generated from KII and Stakeholder Consultation

### Key strengths

**Diversified and High yielding crop:** Since independence, Bangladesh has seen huge progress in terms of crops diversification and production of high yielding crops. BRRI, BTRI, BINA, BARI developed 569 management technologies, 504 high yielding varieties of different crops. Moreover, various vegetables such as pumpkin, brinjal, parble, lady's finger, bitter gourd, kachur lati, longyard bean (barbati), green papaya, cauliflower, cabbage etc. and fruits such as mango, pineapple, banana, jackfruit, guava, papaya, tamarind, watermelon, cashew nut, etc. are produced.

**New technology related to production, processing and marketing:** The agricultural sector in Bangladesh has undergone significant changes over the past 40 years, despite various challenges and constraints. Bangladesh has more than tripled the production of rice in the space of 50 years achieving near-autarchy in rice ensuring the staple for the population. Technological advancements in the form of modern varieties, mechanization, irrigation, and management practices have led to a revolution in the sector. The government and private sector have played important roles in disseminating these technologies, which have contributed to the sustainable development of agriculture. The integration of various technologies, such as fertilizer, irrigation, and mechanization, has led to an increase in the yield of high-yielding varieties. The use of advanced chemical fertilizers and pesticides has also become popular among farmers over time. Power tillers, pumps, threshers, and rice mills are among the other technological advancements in the sector.

**Availability of competitive labor force including women:** Bangladesh has got abundant labor force with low wage rate. The involvement of women labour force in the sector has increased subsequently in the agriculture sector. According to the Labour Force Survey of 2016-17, the participation of women in agriculture has crossed 10 million out of total 80.30 million which was just 15,823 in 1974. A study by UKaid <sup>100</sup> revealed that while male laborers' wage ranges between Tk. 285 and Tk. 352 on average; female laborers' wage varies between Tk. 182 and Tk. 214 for the same tasks. This indicates a crucial discrimination against women. However, not only is the wage of female laborers low but the spread of wage across farm tasks is also low for female. This signifies the relative weak bargaining power of female workers in the agriculture sector in Bangladesh.

**Extension services to farmers:** Over the last three decades, the agriculture sector in Bangladesh has seen interventions in terms of extension services from both the government and the private sector and NGOs. Specific extension services were provided by organizations such as Bangladesh Rural Development Board (BRDB), Bangladesh Water Development Board (BWDB) to the target groups. Government organizations such as Department of Agriculture Extension (DAE) has been providing extension services related to crop sector.<sup>101</sup>

<sup>100</sup> UKaid (2020) Policy Brief on Recognition of Women's Role in Agriculture

<sup>101</sup> Islam. Saiful, Agro and Farming, Agricultural Extension Services in Bangladesh. Retrieved from, <https://agricultureandfarming.wordpress.com/2013/11/07/agricultural-extension-services-in-bangladesh/>

**Favorable climatic condition:** Bangladesh has geographical advantage for exports. , Strong forward and backward linkage, favourable climatic condition, favourable temperature, rainfall and available of natural resources including fertile land water which act as potential opportunities of the sector.

#### **Key weaknesses**

**Shortage of infrastructure facilities and modern equipment in Post-harvest and Processing:** Post-harvest management of horticulture commodities in Bangladesh requires improvement. Despite government efforts to upgrade the sector, small-scale farmers still rely on inexpensive, local technologies for pre and post-harvesting. This leads to losses due to inefficient harvesting, storage, and diseases. Post-harvest losses in food grains are estimated at 15%, while those in fruits and vegetables range from 20-25%. Developed countries have fewer losses due to accessible, advanced technologies, strict regulations, and skilled workers. In developing countries, improved post-harvest management practices have been introduced, such as packing houses with improved packaging and atmosphere modification. Reducing post-harvest losses is necessary to maintain affordable consumer prices and to increase availability.

**Meagre access to high-tech or enhanced farming technology:** High price of modern farming technologies make them unaffordable to farmers who are mostly smallholders. This affects farm productivity as well as farmers' income. An effective contract farming system could benefit both farmers in terms of getting supplies of inputs and a fair price, and for agro-processors required produces in right quality and volume for processing. This could be a win-win negotiation for both the parties that are in place in many developed and developing countries. Although, a couple of agro-processors ventured into contract farming with limited success, unfortunately that is yet to happen in on a large scale for lack of a workable contract-farming framework that works both the parties.

**Dearth of skilled workforce:** There is a serious dearth of skilled workforce in agro-processing sector. Moreover, retention of experienced/skilled workforce is a major challenge for the industry. Stakeholder consultation revealed that in many cases young people leave the sector and shift to other sectors because of comparatively higher salaries.

**Inadequate multipurpose specialized cold storage:** Despite having increasing demand globally, due to the absence of multipurpose cold storage system Bangladesh cannot export horticulture produces to an expected level. For example, Bangladesh stands 8th in the world in potato production with over 2.5 million to 3 million metric tons of exportable surplus. The cold storages now have capacity to hold around 4 million metric tons of potatoes, and it has to be cleared by November to accommodate 2 million metric tons of perishable vegetables.

**Lack of awareness regarding export requirements:** Exporters in Bangladesh face challenges due to a lack of knowledge about food standards and changing consumer demands, as well as strong competition from other countries with better product marketing. In addition, poor communication between donor organizations and the agricultural sector means that crucial needs are often not addressed. The sector also faces issues with the unavailability of duty drawback and the lack of value addition activities and strong central organizations for research and rural development. These factors contribute to a decline in exports, such as in the case of fruits and vegetables, cut flowers, and foliage in FY 2014-15, when harmful organisms were detected in 270 consignments from Bangladesh in the EU.



## Key opportunities

**Export opportunities in processed food and fresh vegetables:** The agro-food processing industry in Bangladesh provides about 8.0 percent to manufacturing output (1.7 percent of GDP) and is currently valued at US\$ 2.2 billion. The agro-food processing industry's share of total exports now stands at around 1.5 percent. More than 700 agro products are exported from Bangladesh among which about 63 are basic agro processed products to more than 140 countries. Among the basic ones, fruits, vegetables, cut flower, dry food, spices, processed meat, frozen fish, cereal grains, tea, tobacco are noteworthy.

**Expanding demand of halal processed food:** OIC countries imported total US\$ 279 billion in the year 2020, of which halal food sector shared 72%. Global halal processed food markets provide an additional opportunity for Bangladeshi industries. Bangladesh has a huge possibility to export halal products through exploring global halal markets; provided internationally accepted certification process is in place.

In addition, Bangladesh has significant export opportunities in the agriculture sector due to high global demand for its products. Maintaining quality, ensuring food safety, and reducing product loss are key factors for keeping up with global demand. The government has implemented favorable policies to support the sector's growth, and farmers are increasingly interested in value addition and food processing. Proper technology can help increase exports, Bangladesh's demographic dividend present additional opportunities for the sector.

## Key threats

**LDC graduation:** Export subsidy may not be allowed after LDC graduation. Currently the government provides 20% cash incentive on exports of agro products and processed food.

**Lack of accredited laboratory and packaging house:** A major challenge for the agricultural sector in Bangladesh is the lack of accredited laboratories and packing houses, resulting in the need to send products to other countries for quality certification, increasing costs and lead times. In 2016, the government built a central packaging house to address this issue, but more initiatives are needed to meet rising global demand. Other threats to the sector include limited access to bank loans, natural disasters, high transportation costs, lack of specialized raw materials, middlemen in marketing channels, and insufficient support from financial institutions for food processing technologies.

Lack of access to loans from banks, natural disasters, higher transportation costs including air freight, presence of middlemen in marketing channels, unavailability of duty drawback, and absence of mutual recognition agreement and certification with partner countries are also some of the constraints that threaten the industry.



## Fisheries and Livestock Sector

### Fisheries Sector

#### Overview of the sector

Bangladesh is ranked third in generating fish from inland waterbodies, fifth in producing fish for aquaculture, and eleventh in producing marine fish in the world. The GDP growth in the fisheries sector was 2.08 percent and the contribution of the fisheries sector in the overall agriculture sector was 21.83 percent in FY 2021-22.<sup>102</sup>

#### Export trend

Table 1: World fisheries sector exports during 2014-2021

(In million USD)

Year	Live Fish (HS-0301)	Frozen Fish (HS - 0300, 0302, 0303)	Shrimps and prawns (HS - 030617)	Crabs (HS - 030614, 030624)	Fisheries Sector
2014	24.59	57.31	588.86	45.78	716.5
2015	20.09	55.59	490.92	51.42	618.0
2016	20.06	38.58	542.09	63.29	664.0
2017	20.42	40.31	544.55	3.31	608.6
2018	24.30	46.64	460.85	4.77	536.6
2019	31.20	57.06	438.66	6.96	533.9
2020	15.52	72.32	378.77	6.55	473.2
2021	6.61	73.44	401.73	9.20	491.0

Source: ITC

The table (21) shows fisheries exports increased from US\$ 473.2 million to US\$ 491 million in 2020 to 2021 with a growth rate of 17.8%. Bangladesh exports fish and fish products to 52 countries including European Union, the USA, Japan, Russia, and China, among others.

#### Overview of fisheries sector of Bangladesh

The agriculture sector's contribution to the Gross Domestic Product (GDP) is 12% of which approximately 3.57 percent comes from the fisheries subsector. Due to the successful implementation of extensive planning and development initiatives carried out by the government, the fisheries production in FY 2020-21 was 4.621 million metric tons, which was a 50.91 percent increase over the production in FY 2010-11 (3.062 million MT). The FAO's Harmonized System (HS) is used to classify the export of fish products. Bangladesh's exports mostly the following categories: Fish, crustaceans, mollusks, aquatic invertebrates

According to Export Promotion Bureau (EPB) export data, Netherlands is Bangladesh's largest importer of fisheries and fisheries product. Netherlands's imports are worth US\$ 87.54 million in FY 2021-22 which is 20.23% of total export of fisheries of Bangladesh. In fiscal year 2021-2022, the export value of the fisheries sector was US\$ 532.94 million.<sup>103</sup> The top 15 export markets for the sector were Netherlands, Belgium, the United Kingdom, Germany, the United States, France, China, Japan, Portugal, Hong Kong, Russia, Thailand, Spain, Denmark, and Saudi Arabia. In FY 2021-2022, the total exports to the top 15 export markets accounted for US\$ 433 million contributing to about 81.25% of the sector's total export.

<sup>102</sup> Bangladesh Economic Review (2022)

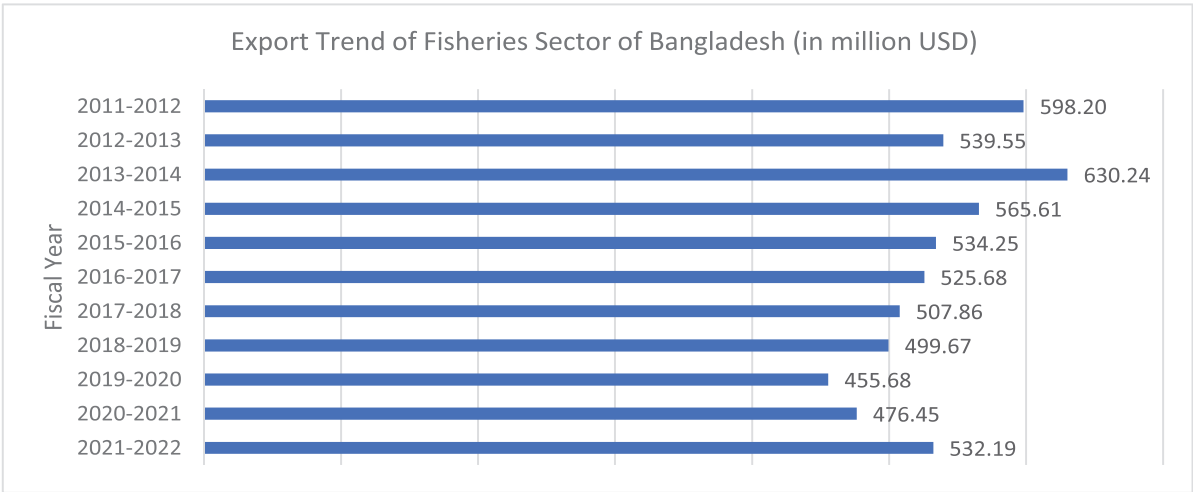
<sup>103</sup> Export Promotion Bureau (EPB) Export Data (2022). Retrieved from: [http://epb.gov.bd/site/view/epb\\_export\\_data/-](http://epb.gov.bd/site/view/epb_export_data/-).

It is also observed from Export Promotion Bureau (EPB) export data that live fish, frozen fish (fish, fresh or chilled; Fish, frozen, (excluding those of 03.04), Fish fillets and other fish meat, fresh, chilled or frozen, Fish, salted, dried...; smoked fish; fish meal fit for human consumption, Crustaceans, fresh or chilled or frozen), etc. are among the most commonly exported products from Bangladesh.

**Export trend of Fisheries sector of Bangladesh**

In fiscal year 2021-2022, the export value of the fisheries sector was 532.94 million USD.

*Figure 40: Export scenario of fisheries sector of Bangladesh*

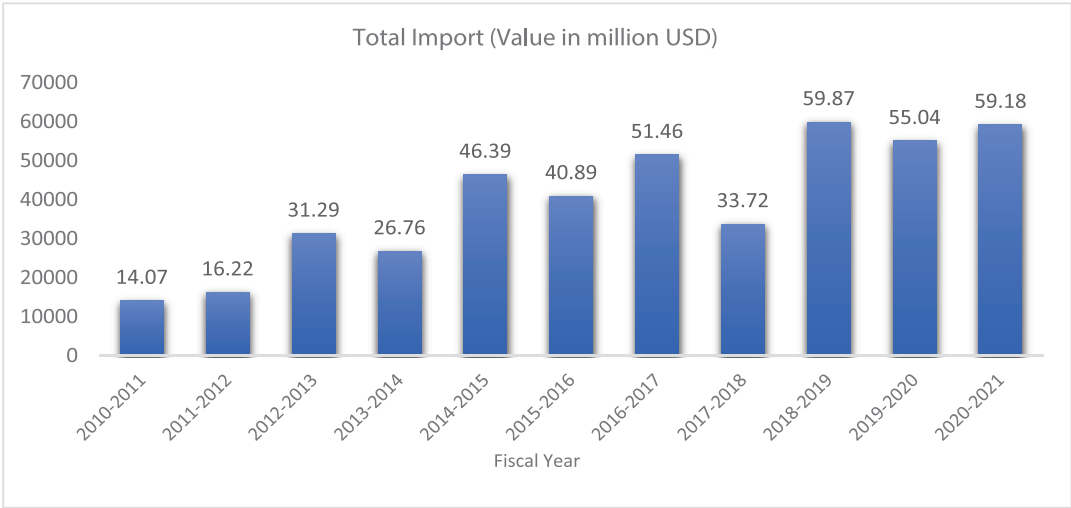


Source: Export Promotion Bureau (EPB)

**Import trend of Fisheries sector of Bangladesh**

The import payment figure (41) sourced from Bangladesh Bank showed that the imported goods of the fisheries sector include fish and mollusks & other aquatic invertebrates.

*Figure 41 : Import scenario of fisheries sector of Bangladesh*



Source: Bangladesh Bank

Data analysis showed that period from 2010-2011 to 2013-2014 proved to be promising as the import payment situation was moderate. However, from 2014-15 to 2017-18, the import payment for fisheries products was really high which showed dependency on imported fisheries products for Bangladesh. There were ups and downs in case of importing fish and mollusks & other aquatic invertebrates from the beginning to date.

## **Investment**

For steady growth and diversification of the fisheries sector, the Dutch government has partnered with Bangladeshi companies to invest 6 million euros to ensure the aquaculture sector in Bangladesh grows sustainably. Three centers of excellence will be established, experiments and research with farm-produced goods will be conducted, and technical support will be provided. However, the fisheries sector is yet to receive any foreign direct investment.

## **Gender perspective in Fisheries sector**

Currently, in Bangladesh, approximately 1.4 million women are involved in various activities in the fisheries sector, either directly or indirectly. In the fiscal year 2020-21, 5086 farmers received training on fish diseases and treatments, out of which 1017 were women, accounting for about 20% of trained fish farmers. Women constitute approximately 80% of the workforce in fish processing factories for export. The Department of Fisheries provides training to around 132 thousand people annually,<sup>104</sup> of which 11% are women involved in fish farming. Women make up approximately 80% of the workforce in fish and shrimp processing plants, while 45% of individuals involved in the production of fishing nets and tools are women. In terms of fisheries and management courses, women constitute approximately 25% of individuals obtaining these courses.<sup>105</sup>

It is worth noting that over half of the farmers nominated by the Department of Livestock for enhanced farm management programs through various schemes are women. In the fiscal year 2021-22, there were 73,052 women working in the fisheries sector, accounting for 52.56% of all workers. For the first time in any maritime training institute in Bangladesh, the Marine Fisheries Academy has included 8 female cadets for training from the academic year 2010-11, and currently, there are 12 female cadets undergoing training. Furthermore, in the first 10 batches, 60 female cadets have successfully graduated and secured employment.

## **Environmental aspects of fisheries sector**

Bangladesh has made significant social and economic progress over the past decade, but this has come at a cost to the environment. To promote sustainable development, Bangladesh government has been working together since 1980. They have developed plans and policies such as the 8<sup>th</sup> Five Year Plan, Delta Plan, Perspective Plan 2041, and Mujib Climate Prosperity Plan, to promote a green growth centered development pathway. The World Bank is helping the government by identifying policies and investment alternatives to support this transition. They have implemented various initiatives to promote sustainable fisheries, including alternative livelihood development activities for 60,000 households in 450 villages to reduce overfishing, providing training and conditional grants for 7,500 shrimp growers in 300 shrimp farming clusters. The Bank also supports the construction of a Joint Management Centre (JMC) to monitor fishing vessels for the safety of fishermen and combat illegal fishing. The Bank is collaborating with the government to implement green growth goals and empower women to promote environmental sustainability. The Bank is also focusing on pollution management and environmental risk management, as well as implementing programmes for ecological restoration of wetlands, sustainable fisheries management, and payment for ecosystem services in Chittagong, coastal shelterbelts, and the Sundarbans.

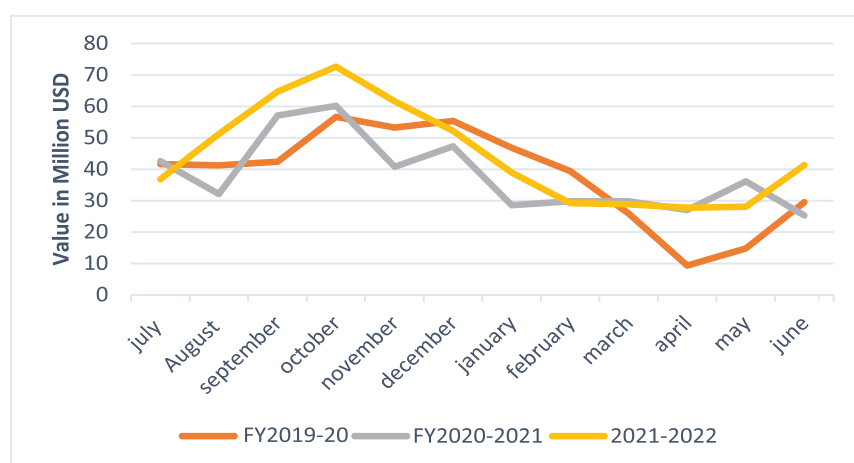
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<sup>104</sup> Gender Budget Report FY 2022-23, Finance Division, Ministry of Finance, 2022.

<sup>105</sup> Women's Participation, Constraints, and Opportunities for Trade in Bangladesh, Australian Aid, Partnership for South Asia, World Bank Group, 2016.

### Impact of COVID-19 pandemic on the fisheries sector

The fisheries sector in Bangladesh has experienced significant disruptions in the supply chain due to bottlenecks in transportation, trade, and labor, as the world economy had collapsed as a result of the Covid-19 pandemic. Fish farmers have suffered enormous losses due to the decline in demand for fish caused by the impact of Covid-19 lockdowns on household incomes. The production, sales, and prices of fish had fallen dramatically. Consequently, many individuals working in these supply chains, including fishermen, seafood merchants, processors, suppliers, and transport workers, were at risk of losing their jobs and businesses and means of subsistence.<sup>106</sup>



As depicted in the figure (42), the value of fish exports decreased from February 2020 to June 2020, but recovered in FY 2021-2022. The export value of fisheries products was US\$ 456.15 million in FY 2019-20, US\$477.37 million in FY 2020-2021 and US \$532.94 million in FY 2021-22.

### Policies governing the fisheries sector

The following acts, regulations and policies regulate the fisheries sector:

- According to Import Policy Order 2021-24 of Bangladesh, a number of previously controlled commodities have been moved to the prohibited list. Shrimps are among these items (all HS Code products under 03,06 HS Code)
- The Export Policy 2021-2024 of Bangladesh mentions the fisheries sector as one of the Special Development sectors (Value added frozen fish and live and processed Crab)<sup>107</sup>
- In addition, National Fisheries Policy-1998 facilitates and govern this sector.<sup>108</sup>

### Incentives for the fisheries sector

The government of Bangladesh offers a number of fiscal and non-fiscal incentives, privileges, and facilities to facilitate and encourage investment.

Cash incentive: For the first time ever in the country, the ice cover has been used to decide the cash incentive for frozen shrimp and other species. The table (22) depicts the existing cash incentive rates:

**Table 22: Cash incentives in Fisheries sector**

Ice cover rate in shrimp exports	Cash Incentive Rate
Up to 20%	10%
Above 20% to 30%	9%
Above 30% to 40%	8%
Above 40%	7%

<sup>106</sup> How has the Covid 19 Pandemic Impacted the Fisheries Sector? (2020). LightCastle Partners.

<sup>107</sup> Export Policy 2018-21-1 (1) EPB Report 25.05.2020.pdf

<sup>108</sup> Yearbook Of Fisheries Statistics of Bangladesh 2019-20, Department of Fisheries Bangladesh Ministry of Fisheries and Livestock.

Ice cover rate in other frozen fish exports	Cash Incentive Rate
Up to 20%	5%
Above 20% to 30%	4%
Above 30% to 40%	3%
Above 40%	2%
Export Subsidy	
Crab and monopterus cuchia (live, frozen and softcell)	10%

The frozen fish industry currently receives a monetary incentive of 7.0-10% on shrimp exports and 2.0 - 5.00% on other fish exports. Live and chilled food exporters association members currently export crab, eel fish, and chilled fish. Crab and eel fish exports currently receive a 10 percent export subsidy from the government.<sup>109</sup>

### Challenges and opportunities of the fisheries sector: findings from the SWOT analysis

SWOT analysis identified the following major strengths, weaknesses, opportunities, and threats that could impact the growth of the fisheries sector:

**Table 23: SWOT analysis of fisheries sector**

<b>Strengths</b> <ol style="list-style-type: none"> <li>1. Plenty of water bodies, rivers, and coastline</li> <li>2. waterbodies and kindred fisheries resources Intensification in Pond culture/Pisciculture /Shrimp culture</li> <li>3. Diverse species</li> <li>4. Supportive extension services at the farmer's level</li> <li>5. Adoptability of new technology</li> <li>6. Large workforce</li> <li>7. Significant export earnings</li> </ol>	<b>Weaknesses</b> <ol style="list-style-type: none"> <li>1. Lower productivity of shrimp culture</li> <li>2. Shortage of skilled human resources</li> <li>3. Insufficient deep-sea trawler for fishing</li> <li>4. Inadequate infrastructure and technological know-how</li> <li>5. Lack of multipurpose cold storage and cool chain</li> <li>6. Constraints in supply chain activities</li> <li>7. Lack of development of fish vaccines and disease management</li> <li>8. Inability to comply with global standards</li> <li>9. Post-harvest loss</li> </ol>
<b>Opportunities</b> <ol style="list-style-type: none"> <li>1. High demand and consumer acceptance</li> <li>2. Availability of new farming technology</li> <li>3. Increasing productivity through improved practices</li> <li>4. Implementation of development projects for increasing production and quality of fish products</li> <li>5. More people shifting from red meat to fish due to increased health awareness</li> <li>6. Approval of cultivating Vannamei Chingri</li> <li>7. Leveraging Marine aquaculture</li> <li>8. Scope of safe (i.e., organic) fish production</li> <li>9. Women's participation in aquaculture farming</li> </ol>	<b>Threats</b> <ol style="list-style-type: none"> <li>1. Scarcity of quality feed, seed and other inputs</li> <li>2. Preference erosion due to LDC graduation after 2026</li> <li>3. Uncertainty about cash incentives</li> <li>4. Impact of Climate changes</li> <li>5. Degradation of habitat through agricultural development, urbanization, and development of industries</li> <li>6. Water pollution due to indiscriminate disposal of single-use-plastics and other wastes</li> <li>7. Rising sea levels and changes in water temperature and salinity impacting fish habitats.</li> <li>8. Compliance to WTO agreements on Fisheries subsidies</li> </ol>

Source: BFTI findings generated from KII and Stakeholder Consultation

<sup>109</sup> Fisheries ministry seeks 25pc cash incentive on chilled fish export. The Financial Express. Retrieved December 8, 2022, from <https://thefinancialexpress.com.bd/trade/fisheries-ministry-seeks-25pc-cash-incentive-on-chilled-fish-export-1652322783>

### Key strengths

**Plenty of fisheries resources:** There are 260 kinds of freshwater fish and 475 types of marine fish. Approximately 12 exotic species are cultivated in the country.<sup>110</sup>

**Intensification in pond culture/pisciculture /shrimp culture:** Through the use of cutting-edge technology, such as the standardization of gher size, stocking density, the installation of an aeration system, the addition of fertilizers and feeds, and the amplification of culture operations, shrimp production in ghers may be greatly enhanced.<sup>111</sup>

**Availability of huge water bodies, rivers, and coastline:** Bangladesh is also endowed with vast inland culture (8,21,923 hectares), inland capture (38,90,282 hectares), and marine (1,188,81,300 hectares) water resources, with huge potential for fisheries output.<sup>112</sup>

**Supportive extension services at the farmer's level:** Currently DoF is providing such kind of extension services. Some of the services are service to office callers, farm visits, mail service, training and workshops, informal meetings.<sup>113</sup>

**Adaptability to new technology:** Currently Fish Farmers are using different kinds of new technologies in fisheries sector. Adoption of such advanced technologies are playing a significant role in the advancement of fisheries such as “pond preparation with lime”, “acclimatization of fish fry before stocking”, “appropriate stocking density”, “monosex tilapia”, “pangus cultivation”, “formulated feed supply into the pond”, “urea use” and “use of TSP” etc. <sup>114</sup> Some IT firms are also experimenting diagnosis of different water parameters such as pH level, etc. with the help of IoT devices.

### Key weaknesses

**Lower productivity of shrimp culture:** The challenging factor behind this lower productivity can be over-reliance on traditional mode of farming, lack of species diversity, improper site selection, insufficient attention paid on construction of ponds, inadequate pond preparation, poor pond management, use of poor-quality seed, poor dissolved oxygen management, insufficient water exchange, inadequate feeding, and inadequate management of pythons. <sup>115</sup>

**Shortage of skilled human resources:** There is a lot of untapped potential in the Blue Economy that we haven't been able to tap into because of our lack of knowledge and expertise. The blue economy cannot be tapped into without access to both trained workforce and cutting-edge technology/machinery.

As the notion of sustainable fisheries industry is socio-economic-cum-environmental, its operation and administration necessitate an ongoing interaction of diverse human knowledge in order to ensure its smooth direction and attainment of its objective. Consequently, the arrangement of various types and degrees of training and education is of utmost importance for the development of human resource participating in a sustainable fisheries industry as well as for raising environmental consciousness. <sup>116</sup>

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<sup>110</sup> About Department of Fisheries. Retrieved from: <http://www.fisheries.gov.bd>

<sup>111</sup> Chandra, K. J., Chowdhury, A. R., & Das, D. R. (2010). Shrimp culture practices at farmers level in Bagerhat District. *Progressive Agriculture*, 21(1-2), 173-185

<sup>112</sup> Dr. A K M Nowsad Alam (2010) Post-harvest Loss Reduction in Fisheries in Bangladesh: A Way Forward to Food Security, National Food Policy Capacity Strengthening Programme

<sup>113</sup> Ahmed, Z., Sarker, M. A., Rahman, M. Z., Lei, B., & Mukta, M. Z. N. (2018). Fisheries extension in Bangladesh and local extension agent for fisheries: A micro level assessment of farmers' Attitude.

<sup>114</sup> Sakib, H., & Afrad, M. S. I. (2014). Adoption of modern aquaculture technologies by the fish farmers in Bogra district of Bangladesh. *International Journal of*

*Agriculture Innovations and Research*, 3(2), 414-421.

Brojo Gopal Paul, Christian Reinhard Vogl (2011) Impacts of Shrimp Farming in Bangladesh: Challenges and Alternatives.

<sup>116</sup> Zamal, H., Das, U. K., & Barua, P. (2008). Human Resources Development for Sustainable Aquaculture in Bangladesh.



**Insufficient deep-sea trawler for fishing:** About 57,000 artisanal mechanized and non-mechanized wooden boats and 200 industrial steel body trawlers are engaged in fishing in the coastal seas up to 60 kilometers (within 40 meters of depth) from our coastline, with extremely limited ability to capture pelagic fishing-shoals closer to the surface. But below 50 meters, the ability to catch demersal fishes is extremely limited. It is impossible to catch fish with long lines in deep water. Crustaceans such as shrimp and lobster are caught in small numbers in the benthic zone, the deepest part of the ocean, but fishes close to the sea bottom, at a depth of approximately 150–550 meters, are off limits to industrial fishing.<sup>117</sup>

**Inadequate infrastructure and technological know-how:** It's estimated that between 30 and 33 percent of the fish harvested spoils and can't be used for human consumption.<sup>118</sup> The infrastructure facilities were inadequate and poorly maintained, as was discovered. Fish shelters were not sufficiently clean to safeguard the fish from contamination. The surface water drainage system was unblocked, which worsened the market's environmental condition. There was no distillation process for the supplied water, and electricity upkeep was inadequate. This infrastructure does not support hygienic conditions for the marketing of edible and high-quality fish, as required for a sanitary environment.<sup>119</sup>

**Lack of multipurpose cold storage and cool chain:** According to the Bangladesh Cold Storage Association, there are currently 20 multipurpose cold storage facilities in operation. The multipurpose cold storage still has a capacity of between 15,000 and 20,000 tonnes. Large opportunities exist for facilities that serve several purposes, such as ripening and packing houses.<sup>120</sup>

**Constraints in supply chain activities:** Bangladesh's fisheries sector suffers large post-harvest losses annually due to ignorance and negligence in handling and processing at all stages of the supply chain, from harvest to retail distribution. Additionally, there are limits in processing, marketing, and packaging.<sup>121</sup>

**Lack of development of fish vaccines and disease management:** In order to keep aquaculture economically and ecologically sustainable, disease prevention and control are essential. There is a paucity of knowledge regarding the current status of fish disease and health management strategies in rural aquaculture in Bangladesh. No diagnostic laboratories or support services are available for fish growers. Since farmers do not recognize the symptoms of illnesses, they do not report their occurrence. Consequently, the vast majority of infections in rural aquaculture went undiagnosed.<sup>122</sup>

### Key opportunities

**High demand and consumer acceptance for marine fish:** According to figures from the ministry of livestock and fisheries and the Bangladesh Frozen Foods Exporters Association (BFFEA), the country earned over US\$477 million by exporting 77,000 tonnes of processed shrimp and marine fish in fiscal year 2020-21. In contrast, the production of dried fish was 62,561 tonnes during this period. Compared to the nation's fish yields of more than 4.5 million tonnes, the production of processed fish increased to 0.139 million tonnes.<sup>123</sup>

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<sup>117</sup> Ocean/Blue Economy for Bangladesh, Ministry of Commerce

[https://mofl.portal.gov.bd/sites/default/files/files/mofl.portal.gov.bd/page/d1b6c714\\_aee6\\_499f\\_a473\\_c0081e81d7dc/BI](https://mofl.portal.gov.bd/sites/default/files/files/mofl.portal.gov.bd/page/d1b6c714_aee6_499f_a473_c0081e81d7dc/BI)

<sup>118</sup> Rahman, S., & Ahmed, K. K. (2002). Performance of fisheries sector planning in Bangladesh. *Outlook on Agriculture*, 31(4), 243-251.

<sup>119</sup> Rahman, M. M., Hossain, M. M., Rahman, S. M., & Alam, M. H. (2009). Fish marketing system in Khulna, Bangladesh. *Journal of Innovation and Development Strategy* 3 (5), 27-31.

<sup>120</sup> Bangladesh National Cooling Plan for the implementation of the Montreal protocol (UNDP)

<sup>121</sup> Dr. A K M Nowsad Alam (2010) Post-harvest Loss Reduction in Fisheries in Bangladesh: A Way Forward to Food Security, National Food Policy Capacity Strengthening Programme

<sup>122</sup> Faruk, Md & Alam, Md & M.M.R, Sarker & M.B, Kabir. (2004). Status of Fish Disease and Health Management Practices in Rural Freshwater Aquaculture of Bangladesh. *Pakistan Journal of Biological Sciences*. 7. 10.3923/pjbs.2004.2092.2098.

<sup>123</sup> Despite market demand, fish processing is limited to shrimp, dried fish. Available at- <https://www.tbsnews.net/economy/industry/despite-market-demand-fish-processing-limited-shrimp-dried-fish-365974>

**Availability of new farming technology like pen culture, cage aquaculture, cluster farming of shrimp, sea ranching etc.:** Currently inland aquaculture has undergone the most rapid growth, with the introduction of new technologies, species, and intensification and enhancement of farming, notably in pond aquaculture, over the entire nation (Planning Commission, 2016).<sup>124</sup>

**Increasing productivity through improved practices:** Adoption of scientific management practices is a prerequisite for enhancing fish farming. Farmers who utilize scientific management approaches will be able to boost the production and profitability of fisheries sector.<sup>125</sup>

**Implementation of development projects for increasing production and quality of fish products:** The government is implementing numerous initiatives to ensure the availability of animal protein through expanding fish stocks. Fish farming in open water, conservation of endangered fish species, construction of fish breeding and breeding sanctuaries, conservation of Jatka, and other initiatives are now under progress.<sup>126</sup>

This sector is executing many development initiatives, including habitat restoration, conservation of natural resources, community-based resource management, human resource development, and alternative income-generating activities, among others.<sup>127</sup>

### **Key threats**

**Scarcity of quality feed and seed:** Providing quality feed to the fish in aquaculture is crucial for maximizing productivity. However, according to a study more than half of the farmers cited "unavailability of quality feed components." Because of this, it has become a significant obstacle in pond fish farming. Most farmers only use urea fertilizers, cattle dung and rice bran to feed the fish in their ponds. Though ready-made fish feed is now available on the market, availability is inadequate and pricing is quite high, putting it out of reach for small and marginal fish farms.<sup>128</sup>

**Preference erosion and other challenges due to LDC graduation after 2026:** Bangladesh will no longer be considered an LDC once a year 2026 rolls around. Bangladesh, meanwhile, will lose its privileged status in a number of countries' markets due to loss of duty-free quota free access. Cash incentive may not be allowed to be provided after LDC graduation (The frozen fish industry currently receives a monetary incentive of 7.0-10% on shrimp exports and 2.0-5.00% on other fish exports from the Government.)

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<sup>124</sup> Shamsuzzaman, M. M., Islam, M. M., Tania, N. J., Al-Mamun, M. A., Barman, P. P., & Xu, X. (2017). Fisheries resources of Bangladesh: Present status and future direction. *Aquaculture and Fisheries*, 2(4), 145-156.

<sup>125</sup> Prodhan, M. M. H., & Khan, M. A. (2018). Management practice adoption and productivity of commercial aquaculture farms in selected areas of Bangladesh. *Journal of the Bangladesh Agricultural University*, 16(1), 111-116

<sup>126</sup> Bangladesh Economic Review (2022)

<sup>127</sup> Department of Fisheries

<sup>128</sup> -Barua, P., & Sarker, S. (2010). Operational problems of aquaculture technologies in Chittagong region of Bangladesh. *Fishing Chimes*, 30(8).

**Climate changes and manmade hindrances such as construction of unplanned flood dam, pollution of water, siltation etc.:** Increasing concentration of greenhouse gas in the atmosphere is creating a climate crisis on a worldwide scale. Climate change is having a significant impact on fisheries in Bangladesh, with rising sea levels, changes in water temperature and salinity, and more frequent extreme weather events affecting fish populations and the livelihoods of fishers.

**Degradation of habitat through agricultural development, urbanization, and development of industries:** There are competing demands for land in Bangladesh having very small land mass. Habitat degradation, urbanization, industrialization etc. are responsible for this. These obstacles can be overcome through the development of responsible fisheries eroding the potential for horizontal expansion of fisheries and appropriate utilization of water bodies.<sup>129</sup>

**Water pollution for the inland water bodies:** Bangladesh's fishing industry confront one of its greatest obstacles from water contamination.<sup>130</sup> Currently, the leather, garment, and tannery industries are contaminating rivers and several wetland areas. It is particularly true for the Buriganga River. Additionally, discharges of waste water from shrimp farms seriously pollute the local water supply.<sup>131</sup>

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<sup>129</sup> Islam, M. S., Jahan, H., & Al-Amin, A. A. (2016). Fisheries and aquaculture sectors in Bangladesh: an overview of the present status, challenges and future potential. *Journal of Fisheries and Aquaculture Research*, 1(1), 002-009.

<sup>130</sup> Mowla, K. G. R. Bangladesh Fisheries Industry: Growth, Prospects and Opportunities.

<sup>131</sup> Bangladesh National Conservation Strategy

## Livestock Sector

Bangladesh is the 12<sup>th</sup> largest holder of cattle inventory in the world.<sup>132</sup> Livestock sector has been contributing to improve the level of nutrition intake of people through providing adequate amount of meat and egg products. Milk, meat and eggs are three most vital products of livestock sector. For trend analysis, two digits of HS Code have been chosen. The products of livestock sector are as follows:

- Live Animals (01);
- Meat and edible meat offal (02);
- Dairy products, eggs, honey, edible animal products (04); and
- Products of animal origin excluding human hair (05).

To present the global overview of the sector, top ten importers' data, export & import trend are analyzed.

**Table 24: The top ten importers of livestock sector in 2021**

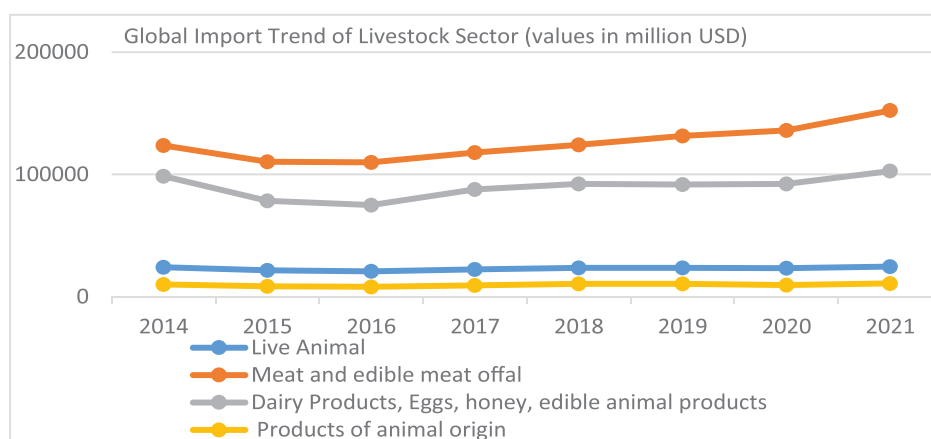
Sl.	(01) Live Animal		(02) Meat and edible meat offal		(04) Dairy Products, Eggs, honey, edible animal products		(05) Products of animal origin	
	Country	Import Volume in 2021 (in million \$)	Country	Import Volume in 2021 (in million \$)	Country	Import Volume in 2021 (in million \$)	Country	Import Volume in 2021 (in million \$)
1	United States of America	3354	China	31586	Germany	10636	Germany	1195
2	Italy	1885	United States of America	11996	China	9695	United States of America	1192
3	Germany	1527	Japan	10988	Netherlands	5223	China	1049
4	Netherlands	1431	Germany	7303	France	4975	Japan	636
5	Hong Kong, China	1266	Korea, Republic of	6057	Belgium	4779	France	538
6	China	945	France	5564	Italy	4412	Netherlands	529
7	Poland	732	Mexico	5212	United Kingdom	3682	Poland	340
8	Spain	705	United Kingdom	5101	United States of America	3298	Viet Nam	326
9	Viet Nam	663	Italy	5049	Russian Federation	2944	Spain	323
10	Belgium	648	Hong Kong, China	4717	Spain	2371	Italy	296

Source: International Trade Centre (ITC) data

The table (24) shows globally the top ten importer countries in livestock products including: live animal, meat, dairy and animal products. In 2021, the USA was the top importer of live animals. Germany was the top importer of dairy products and products of animal origin. China was the top importer of meat and edible meat offal. The top ten importer countries in the livestock sector are USA, Italy, Germany, Netherlands, Hong Kong, and China.

<sup>132</sup> The report "Agro & Food Processing Industries", 2020, Available at: <https://bida.gov.bd/storage/app/uploads/public/628/c73/ca9/628c73ca9b17a677576784.pdf>

**Figure 43: Global import scenario of livestock sector**

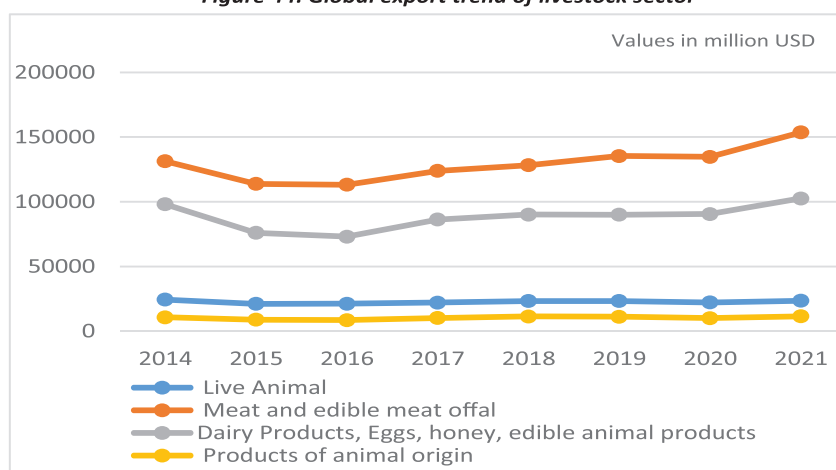


Source: International Trade Centre (ITC) data

This figure (43) shows the global import scenario of livestock sector. The figure also shows the increasing trend of dairy and meat products. The annual average import growth rate from the year 2014 to 2021 is 1.8%.

The figure below (44) shows the global export scenario of livestock sector. The figure shows the slightly increasing trend of dairy and meat products. The annual average export growth rate from the year 2014 to 2021 is 0.93%.

**Figure 44: Global export trend of livestock sector**



Source: International Trade Centre (ITC) data

OIC countries imported total US\$ 279 billion in the year 2020, of which halal food sector shared 72%. Global halal meat markets provide an additional opportunity for Bangladeshi industries. Bangladesh has a huge possibility to export halal products through exploring global halal markets; provided internationally accepted certification process is in place.

**Table 25: Production of milk, meat and eggs**

Product	Unit	Production			
		2017 -18	2018 -19	2019 -20	2020 -21
Milk	Million MT	9.41	9.92	10.68	11.99
Meat	Million MT	7.26	7.51	7.67	8.44
Eggs	Billion	15.52	17.11	17.36	20.58

In FY 2020-21, the total number of cattle and poultry in Bangladesh stood at 56.33 million and 365.85 million respectively.<sup>133</sup> The table (25) shows that the production of animal protein like milk, meat (beef, mutton and chicken) and egg has been increasing over the past several years. At present, local dairy industry is meeting around 65% of the total local milk demand of 15.2 million metric tons. The remaining demand for milk is met primarily through imports.<sup>134</sup>

<sup>133</sup> Economic Review 2022, Finance Division, Government of Bangladesh

<sup>134</sup> The report "Agro & Food Processing Industries", 2020, available at: <https://bida.gov.bd/storage/app/uploads/public/628/c73/ca9/628c73ca9b17a677576784.pdf>

**Table 26: Export scenario of livestock sector (value in million USD)**

Sl. No.	Financial Year	Live Animals	Growth (%)	Meat and Edible meat offal	Growth (%)	Dairy Products	Growth (%)	Products of Animal Origin excluding human hair	Growth (%)	Total	Growth (%)
1.	2017-18	0.022		0.55		1.72		14.56		16.85	
2.	2018-19	0.004	-80	0.73	34	2.29	33	19.10	31	22.13	31%
3.	2019-20	0.039	812	0.43	-41	1.94	-15	9.87	-48	12.27	-45%
4.	2020-21	0.006	-83	0.92	113	1.90	-2	13.05	32	15.87	29%
5.	2021-22	0.005	-28	0.64	-30	1.74	-8	20.43	57	22.82	44%

Source: Export Promotion Bureau (Yearly average growth 15%)

The table (26) indicates that the export of products of animal origin excluding human hair was US\$ 20.43 million in 2021. Export of dairy products, eggs, honey, edible animal products is US\$ 1.74 million in 2021 while it was US\$ 1.90 million in 2020. The table (26) also shows that in FY 2018-19 the total export growth was 31% while in FY 2021-22 the total export growth was 44%. The five years average growth from year 2017 to 2021 in livestock sector is 15%. The products of animal origin are exported more than the other products of livestock sector.

**Table 27: BD vs. global export scenario of livestock sector including 6 digits HS Code in FY 2021-22**

HS Code	Top 10 export products of BD	Export value in million USD	HS Code	Global top 10 export products	Exported value in million USD
0504 00	Fresh,chilled,frozen, salted,dried...,Guts, bladders and stomachs of animals (excl. fish)	14.74	0202 30	Frozen, boneless meat of bovine animals	28880.1
0505 10	Raw feathers for stuffing; down	1.69	0201 30	Fresh or chilled bovine meat, boneless	21505.9
0409 00	Natural honey	1.00	0406 90	"Cheese (excluding fresh cheese, incl. whey cheese, curd, processed cheese, blue-veined cheese	21444.9
0202 20	Frozen unboned bovine meat (excl. carcasses)	0.45	0203 29	Frozen meat of swine (excluding carcasses and half-carcasses, and hams, shoulders and cuts thereof	18066.0
0511 99	Animal products, nes; dead animals of chapter 1	0.31	0207 14	Frozen cuts and edible offal of fowls of the species Gallus domesticus	15247.0



HS Code	Top 10 export products of BD	Export value in million USD	HS Code	Global top 10 export products	Exported value in million USD
0405 90	Fats and oils derived from milk (excl. butter and dairy spreads)	0.28	0402 21	Milk and cream in solid forms, of a fat content by weight of > 1,5%, unsweetened	11269.3
0403 10	Yogurt	0.17	0203 19	Fresh or chilled meat of swine (excluding carcasses and half-carcasses, and hams, shoulders and	10142.7
0402 99	Sweetened milk and cream (excl. in solid form)	0.12	0402 10	Milk and cream in solid forms, of a fat content by weight of <= 1,5%	9832.8
0201 10	Fresh or chilled bovine carcasses and half carcasses	0.12	0406 10	"Fresh cheese ""unripened or uncured cheese"", incl. whey cheese, and curd"	8846.0
0402 21	Milk and cream in solid forms of >1.5% fat, unsweetened	0.09	0405 10	Butter (excluding dehydrated butter and ghee)	7646.5

Source: Export Promotion Bureau (EPB) and International Trade Centre (ITC) data

Table (27) shows Bangladesh and global export scenario of livestock sector including 6-digit HS Code in FY 2021-22.

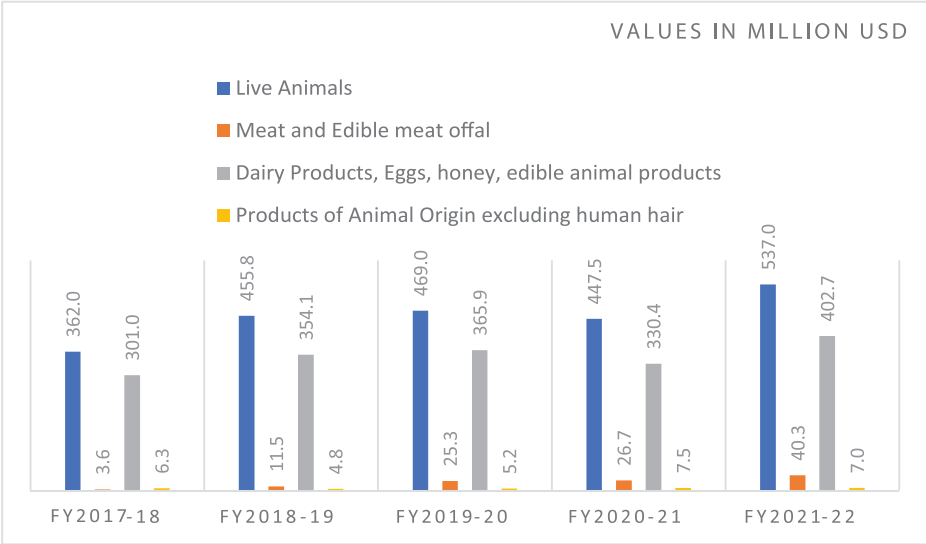
**Table 28: Destination analysis of Bangladesh and global perspective**

Sl. No.	Export Destination of BD	Export share (%)	Global Importer	Import share (%)
<b>01: Live animals</b>				
1.	MV: Maldives	92.9	United States of America	13.57
2.	AE: United Arab Emirates	2.5	Italy	7.63
3.	GB: Great Britain	2.0	Germany	6.18
4.	LK: Sri Lanka	1.1	Netherlands	5.79
<b>02: Meat and edible meat offal</b>				
1.	MV: Maldives	51.1	China	20.73
2.	KW: Kuwait	21.5	United States of America	7.87
3.	VN: Vietnam	8.4	Japan	7.21
4.	CN: China	0.2	Germany	4.79
<b>04: Dairy Products, Eggs, honey, edible animal products</b>				
1.	IN: India	30.9	Germany	10.35
2.	JP: Japan	26.9	China	9.43
3.	PH: Philippines	10.8	Netherlands	5.08
4.	BN: Brunei Darussalan	9.1	France	4.84
<b>05: Products of animal origin</b>				
1.	HK: Hong Kong	39.1	Germany	10.88
2.	VN: Vietnam	30.2	United States of America	10.85
3.	CN: China	11.0	China	9.56
4.	KR: Korean Republic of	7.4	Japan	5.79

Source: Export Promotion Bureau (EPB) and International Trade Centre (ITC) data

The table (28) indicates the country-wise export performance of livestock sector in FY 2021-22. Top 4 exporter countries are selected to show the export performance of each livestock product. Bangladesh’ top most exporter countries for exporting meat products are Maldives, Kuwait, Vietnam and Malaysia. Bangladesh exports dairy products to India, Japan, the Philippines, Brunei Darussalam, and USA.

Figure 45: Import scenario of livestock sector



The figure (45) indicates that the import of products of animal origin excluding human hair was US\$ 7 million in 2021. Import of dairy products, eggs, honey, edible animal products was US\$ 330.4 million while it was US\$ 365.9 in 2019. The figure also shows that in FY 2018-19 the total import growth was 23% while in FY 2021-22 the total import growth was 22%.

The five years average growth from year 2017 to 2021 in livestock sector is 11%. The figure, clearly shows that the volume of import of live animals and animal products and dairy products, eggs, honey, edible animal products are greater than that of other products of livestock sector.

According to Department of Livestock Services (DLS) analysis, Bangladesh's milk market is valued at US\$ 2.47 billion and is anticipated to expand by more than 5% yearly in the future years. It is a large market that merits local and foreign direct investment, as well as a lucrative industry for investment diversity.<sup>135</sup> Rangpur Dairy & Food Products, a producer of dairy and non-dairy products derived from milk in the country, has decided to invest USD 715.67 thousand to purchase machinery. The company, generally known as RD Food, projects a 15-18% boost in annual revenue as a result of the investment. The increased investment is expected to increase profits by 12 to 15 percent.<sup>136</sup> According to its financial statements, Rangpur Dairy & Food Products' typical annual sales is over USD 5.1 million and its net revenue is greater than USD 306.72 thousand\*.

In case of livelihood sector, in a significant boost to the nation's livestock industry, the FAO, DLS and Ministry of Fisheries and Livestock, announced that 5,500 farmer organizations will be established and receive funding very soon. These groups will increase livestock farmers' productivity, give them better access to markets, and strengthen their resistance to hazards like climate change. They will be organized into 61 districts and will consist of beef, goats, sheep, cattle, dairy buffalo, and poultry.<sup>137</sup>

<sup>135</sup> Bangladesh Dairy Industry: A Lucrative Sector for Investment Heterogeneity, publication of the Institute of Chartered Accountants of Bangladesh available at: <https://www.icab.org.bd/publication/news/4/449/Bangladesh-Dairy-Industry:-A-Lucrative-Sector-for-%20%20Investment-Heterogeneity>  
<sup>136</sup> Financial statements of Rangpur Dairy & Food Products', Available at: [https://rdmilk.com/themes/rd\\_milk/assets/psi-pdf/Annual-Report-2021-2022.pdf](https://rdmilk.com/themes/rd_milk/assets/psi-pdf/Annual-Report-2021-2022.pdf)  
<sup>137</sup> Development of livestock sector to be accelerated by investment in thousands of new producer groups, available at: <https://www.fao.org/bangladesh/news/detail-events/es/c/1455593/>  
\* Exchange rate: 1 USD= 97.81 BDT, BBS 2022-23

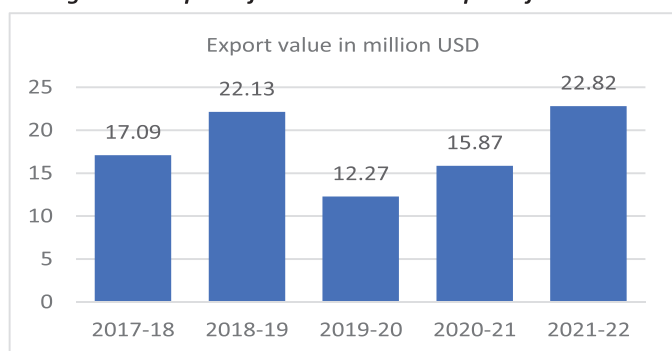
### Gender perspective in livestock sector

In rural areas, women are the main managers of small livestock and poultry farms. Every year, around 0.2 million people participate in these activities under the Department of Livestock, with women comprising about 25-30% of the participants. Women's participation in livestock and poultry farming activities is approximately 25%. The Livestock and Dairy Development Project (LDDP) is being implemented in 61 districts of 8 divisions from January 2019 to December 2023. The scheme has a total of 1,91,000 beneficiaries, of which 50% (95,000) are women beneficiaries. In the fiscal year 2021-22, 154,254 women worked in the livestock sector, representing 44.80% of all workers. In the fiscal year 2022-23 in the livestock sector the total budget was USD 402.12 million among which 43.78 percent (USD 176.04 million) for women.<sup>138</sup>

### Impact of COVID-19 on the livestock sector

The main markets for livestock sector have been severely buffeted by COVID-19. By looking at the yearly variation in export performance of livestock sector, the impact of COVID-19 pandemic on the sector is shown in the figure (46) below. The export value was falling from FY 2019-20 but exporting of the sector gained momentum again in FY 2020-2021. In FY2019-20, export of livestock products fell to 12.27% from 22.13% export in FY 2018-19.

**Figure 46: Impact of COVID-19 on the export of livestock sector**



Source: Export Promotion Bureau

Bangladesh Bank, vide ACD Circular No. 01/2020, had formed re-finance scheme of USD 511.20 million from its own fund for horticulture, fisheries, poultry, dairy and livestock. This loan had been provided to the farmers/farms at 4 percent interest by the banks and the banks would get refinance at 1 percent from BB.

### Policies governing the livestock sector

The following regulations, acts and policies regulate the livestock sector:

#### Regulations

**Bangladesh Animal Feed Rules 2013:** Animal Feed Rules 2013 were issued by the Ministry of Fisheries and Livestock to regulate the quality and standard of animal feed and its manufacture, import, export, preservation, marketing, and use. The Rules address licensing requirements and procedures, approving the quality of feed and its contents, including conventional food, maintaining feed quality with sufficient energy, protein, and nutrition, as well as age-specific standards for various animal species.<sup>139</sup>

#### Policies

**The National Livestock Development Policy 2007:** The National Livestock Development Policy 2007 addresses ten key policy areas. These are: Dairy Development and Meat Production, Poultry Development, Veterinary Services and Animal Health, Feeds and Fodder Management, Breeds Development, Hides and Skins, Marketing of Livestock Products, International Trade Management for this sector, Access to Credit and Insurance, and Institutional Development for Research and Extension.<sup>140</sup>

<sup>138</sup> Gender Budget Report FY 2022-23, Finance Division, Ministry of Finance, 2022.

<sup>139</sup> Bangladesh: Bangladesh Animal Feed Rules 2013, available at: <https://www.fas.usda.gov/data/bangladesh-bangladesh-animal-feed-rules-2013>

<sup>140</sup> Portal of Ministry of Finance, Government of Bangladesh

[https://mof.portal.gov.bd/sites/default/files/files/mof.portal.gov.bd/budget\\_mof/d9f53c16\\_c377\\_420a\\_9ba4\\_271ef1396986/G-1\\_09\\_144\\_Fisheries\\_English.pdf](https://mof.portal.gov.bd/sites/default/files/files/mof.portal.gov.bd/budget_mof/d9f53c16_c377_420a_9ba4_271ef1396986/G-1_09_144_Fisheries_English.pdf)

**The Export Policy, 2021-24:** Halal meat and meat products are identified as a special developmental sector in export policy 2021-24.

**Import Policy Order, 2021-24:** The main features of the Import Policy Order, 2021-24 are: In case of importation of ducks, chickens and birds, a free form of Avian Influenza certificate issued by the appropriate authority of the exporting country should be submitted to the custom authority. In case of importation of meat, a form of 'Mad Cow Disease Free' certificate issued by the appropriate authority of the exporting country should be submitted to the custom authority. In case of importation of meat and bone meal from other animal sources, the free form including: Bovine Spongiform Encephalopathy (BSE), Transmissible Spongiform Encephalopathy (TSE), anthrax and tuberculosis certificate issued by the appropriate authority of the exporting country should be submitted to the custom authority.

#### **Subsidy/cash incentives for the livestock sector**

20% export subsidy/cash incentive is applied for 100% halal meat and 100% halal processed meat products. 10% export subsidy is applied for the export of bovine guts, horns and tendons (excluding bones) of cattle and buffaloes. Exemptions of import duty is applied on several dairy and poultry feed capital machineries.<sup>141</sup> Moreover, livestock rearing and poultry are exempted from Corporate Income Tax (CIT) for different income slabs.

#### **Challenges and opportunities of the livestock sector: findings from the SWOT analysis**

SWOT analysis identified the following major strengths, weaknesses, opportunities, and threats that could impact the growth of the livestock sector:

*Table 29: SWOT analysis of livestock sector*

<b>Strengths</b>	<b>Weaknesses</b>
<ol style="list-style-type: none"> <li>1. Abundance of poultry and livestock</li> <li>2. Diversified Livestock Production</li> <li>3. Strong government support</li> <li>4. Favorable environment for rearing</li> <li>5. Educated entrepreneurs</li> <li>6. Improved cross breed development</li> <li>7. Availability of potential indigenous genetic resource</li> <li>8. Availability of high yielding cow</li> <li>9. Low cost of housing for livestock (can be made with traditional housing materials)</li> <li>10. Availability of crop by-products as feed</li> <li>11. Increase of domestic livestock production</li> </ol>	<ol style="list-style-type: none"> <li>1. Low availability and high price of feed and fodder</li> <li>2. Inadequate milk collection and processing facility</li> <li>3. Limited grazing space for animal resources</li> <li>4. Poor waste management practices (feed waste) spread contagious disease in animals, poultry and dairy</li> <li>5. Limited R&amp;D facilities</li> <li>6. Lack of implementation and enforcement of compliance and traceability system</li> <li>7. Inadequate qualified veterinary medical personnel</li> <li>8. Lack of quality control facilities for medicine, vaccines, feed and feed ingredients, chicks, eggs, birds etc</li> <li>9. Absence of system for providing market information to smallholders</li> <li>10. Poor quality of slaughter houses</li> </ol>

<sup>141</sup> Agribusiness Sector Profile, Available at- <https://bida.gov.bd/storage/app/uploads/public/625/658/1db/6256581db4fd1719994967.pdf>

Opportunities	Threats
<ol style="list-style-type: none"> <li>1. High demand for quality livestock products</li> <li>2. Emergence of newer &amp; stronger varieties through crossbreeding of commercial livestock</li> <li>3. Women's empowerment and involvement in the livestock</li> <li>4. Employment opportunities</li> <li>5. Introduction of Halal certification</li> <li>6. Use of number of livestock as an instrument in getting access to Conditional Cash Transfer (CCT) Programs of the government.</li> <li>7. Online training for livestock farmers and telephone-based solution and app-based knowledge sharing platforms</li> </ol>	<ol style="list-style-type: none"> <li>1. Absence of disease diagnosis and treatment facilities including biosecurity</li> <li>2. Lack of physical security of animal resources</li> <li>3. Limited access to finance, particularly to MSMEs</li> <li>4. Seasonal influence and risk of animal-based pandemics (e.g. bird flu, swine flu)</li> <li>5. Constraints in ensuring food safety for the consumers</li> <li>6. Small livestock (e.g., goat) susceptible to water related injuries and death</li> </ol>

Source: BFTI findings generated from KII and Stakeholder Consultation

### Key strengths

**Abundance of poultry and livestock:** Livestock sector plays a dynamic role in rural economic development and a significant number of people in Bangladesh depend on the cattle and chicken sector because they can rear chickens and cows at home. According to the Bangladesh Poultry Industry Central Council (BPICC), Bangladesh's poultry sector currently contributes 1.5 to 1.6 percent of the country's GDP.

**Favorable environment for rearing:** Bangladesh's climate is perfect for nurture cows, chickens and other animals. Despite the challenges, cattle and poultry can be effectively raised in rural areas on commercial basis.

**Educated entrepreneurs:** In Bangladesh the number of educated entrepreneurs in cattle and poultry business increases with time. As a result, a large number of the country's young people are now earning their livelihood by opening cattle and poultry farms rather than sitting jobless after graduation. According to Frontiersin, over 93% (92.6) of layer poultry farms and more than 78% (78.3) of broiler chicken farms have higher academic credentials ranging from secondary level. Educated farmers can manage their farms with updated knowledge and technology, adequate supply feed, and administer required medications. As a result, they are reaping big profits, and the sector is expanding rapidly.

**Availability of crop by-products as feed:** In Bangladesh, large scale animal production is general based on commercial feeds rather than the provision of fodders. On the other hand, small and marginal farmers feed their livestock with different crop residues and grasses. The feed milling industry is remarkably dependent on imported concentrate feeds for the animal ration. The manufacture of the core crops is huge all year round which offers an abundant opportunity to use the by-products of these main crops as animal feed commercially if appropriate techniques are followed.

The other strengths of the livestock sector are improved cross breed development, availability of Potential Indigenous genetic resource, availability of high yielding cow and low cost of housing for livestock (can be made with traditional housing materials).

### Key weaknesses

**Low availability and high price of feed and fodder:** The country has insignificant percentage of its cultivable area under fodder production. Area under permanent pastures has been decreasing steadily. Most of the animals depend on the agricultural bi-products like green grass, straw and cereal milling by-products. Fodder cultivation is not a common practice in Bangladesh.



The cattle in the small farms are supplied with green grasses mostly grown on fallow lands, crop field boundaries, embankments and side of roads. The situation becomes very worse during flood and dry season. Hence the price of feed and fodder are increasing gradually.

**Limited R&D:** There is a lack of R&D facility which constrains the availability of quality breed animals and required knowledge and technological know-how for maintaining the quality breed varieties.

**Lack of qualified veterinary medical personnel, inadequate medicine and vaccine:** Animal diseases are also among the most important constraints to livestock development in Bangladesh. In fact, animal disease alone constitutes half of the causes of death of all livestock population. But in Bangladesh, inadequate coverage of animal health services. There is lack of veterinary medical personnel, inadequate medicine and vaccine to protect livestock sector from animal diseases.

**Absence of system for providing market information to smallholders:** Selling farm produce is an important problem, particularly for the smallholders in Bangladesh. In Bangladesh, there is no developed formal marketing network and market information system for livestock products to support small holder commercial farmers in the rural area.

**Inadequate grazing space for animal resources:** In Bangladesh, there is lack of grazing space and physical security of animal resources. Grazing lands have been declining steadily. Traditional bathan or grazing lands, which have been used for milk production and cattle, are now converted into ponds and croplands etc. In rainy season, there is limited grazing facilities.

The other weaknesses of the livestock sector are limited milk collection and processing facility, lack of improved waste management practices (feed waste) spread contagious disease in animals, poultry and dairy, lack of R&D facilities, lack of implementation and enforcement of compliance, lack of skilled labor and qualified personnel and poor quality of slaughter houses.

#### **Key opportunities**

**High demand for quality livestock products:** Cattle and chickens of various brands are graded and sold in supermarkets in Europe and America. Although there is no defined brand for poultry goods in our nation yet, Bengal has concentrated on branding chicken and meat products in recent years. Some start-ups, such as Protein Market and Royal Meat, offer branded chicken products, and meat online.

**Emergence of newer & stronger varieties through crossbreeding of commercial livestock:** The Central Cattle Breeding and Dairy Farm (CCBDF) established in 1960 at Savar under the Department of Livestock Services (DLS) has been pursuing a breeding programme involving several imported breeds and maintain a large number of breed lines. Newer and stronger varieties of cattle and poultry are produced through crossbreeding. Due to the phenomenon of hybrid vigor, the special features including: disease resistance, increased fertility, feed efficiency and longevity animal are produced.

**Women 's empowerment and involvement in the livestock:** 2.5 million people are engaged in the poultry business nearly and implicitly engages 3.5 million people, having women accounting for 40% of the workforce.<sup>142</sup>

The other opportunities of the livestock sector are employment opportunities, introduction of halal product certification, use of livestock as an instrument in getting access to Conditional Cash Transfer (CCT) Programs of the government and online training for livestock farmers and telephone-based solution and app-based knowledge sharing platforms.

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<sup>142</sup> Self Sufficiency in Protein: Poultry Industry in Bangladesh, available at:  
<https://businessinspection.com.bd/poultry-industry-in-bangladesh/>



### **Key threats**

**Absence of disease diagnosis and treatment facilities:** Animal disease diagnostic tools and services are almost absent. There is lack of facilities for animal diagnosis center. In Bangladesh, shortage of manpower in cattle and poultry disease diagnosis, management are one of the main challenges in livestock sector. Veterinary diagnosis services so far are based on the clinical diagnosis.

**Seasonal influence and risk of animal-based pandemics (e.g. bird flu, swine flu) in the livestock sector:** Livestock sector has been affected by various type of seasonal influences and pandemics. In 2007, 2009, 2011, and 2017 poultry industry was attacked by Avian Influenza. Therefore, the poultry industry endured a loss of USD 62.31 million\*. There are numerous diseases that affect cattle throughout the year, such as worms, scurvy, PPR, aquaphobia, blood dysentery etc.

The other threats of the livestock sector are lack of physical security of animal resources, small livestock (e.g., goat) susceptible to water related injuries and death, limited credit support from banks, constraints in ensuring food safety for the consumers, lack of quality control facilities for medicine, vaccines, feed and feed ingredients, chicks, eggs, birds etc.

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\*Exchange rate: USD 1= BDT 97.81, BBS 2022-23

## Software & IT related Services Sector

### Overview of the sector

Software development and IT-enabled services are well embodied in the Bangladeshi IT industry. These services are acknowledged as having one of Bangladesh's most promising export-potential industries, supported by an ample young, cost-competitive workforce that is fluent in English, as well as an increasingly dependable communication and power infrastructure.

Broadly, computer services include software, data processing and hosting, installation, maintenance and repair of computers and peripheral equipment, consultancy and information services contain information services for news agency and other than news agency (citizens, clients, service receivers). To be specific, in this study the computer services and information services term will be used interchangeably with software and IT-related services sector.

The information technology (IT) services market comprises services used by organizations to create, manage, and deliver services, next to assisting with other business functions. The market is divided into four segments IT consulting & implementation, Business Process Outsourcing, IT Outsourcing, and Other IT Services.<sup>143</sup>

The software and IT-related services sector will keep growing in importance as a component of the business. The sector, followed by Business Process Outsourcing and Application Outsourcing, has contributed most to the market growth due to the ongoing digital transformation and automated business operations.

Policymakers have identified some points to realize the objective of developing a Smart Bangladesh. 'Smart Bangladesh 2041' focuses on smart education, smart health care, smart agriculture, smart trade, smart transportation, and so on. Thus, 'Smart Bangladesh' includes 'smart citizens, smart economy, smart government, and smart society'.

Bangladesh government has identified software and IT-related services as a "thrust sector" as it represents likely successful reforms, job creation, industry growth and high spillover effects to other sectors as well as improving governance and facilitating inclusion. The sector in Bangladesh, especially the software and IT-related services, is moderately small compared to the dimension of its national trade, and the size of the national economy. However, the software and IT-related services sector in this country has started promptly growing in recent times. It also can be a great means to create employment for the educated youth of this country without creating much pressure on its environment and limited resources. Moreover, it can play an important role in women's empowerment too in a way. Some facts that there are more than 750 thousand ICT professionals, 650 thousand registered freelancers and 4500 IT/ITES firms.<sup>144</sup> Furthermore, there are 126.18 million <sup>145</sup> internet subscribers (mobile+ ISP & PSTN) till October 2022 (BTRC, 2022) with wide range of 4G internet coverage and initiative for 5G internet is on the progress. Information and communication sector including software and IT-related services contributed 1.29% to GDP in FY 2020-21.<sup>146</sup> A milestone for Bangladesh is Bangabandhu Satellite-1 which is the first Bangladeshi geostationary communications and broadcasting satellite. By using its bandwidth and frequency, it is possible to provide high-speed internet facilities in areas deprived of internet such as hilly and haor areas.

### Global Overview of the sector

The world import demand for software and IT-related services amounted to \$499.34 billion in 2020 (ITC) when Bangladesh contributed 0.06 per cent. In terms of export, the software and IT-related services exports grew on average (CAGR) by 11.54% from 2006 to 2020.

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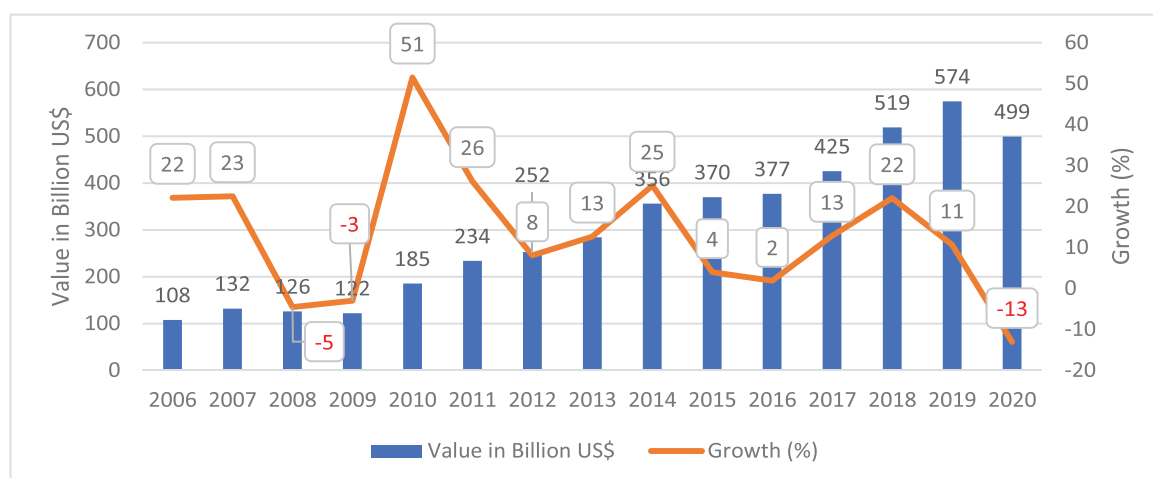
<sup>143</sup> <https://www.statista.com>, available at: <https://www.statista.com/outlook/tmo/it-services/worldwide>

<sup>144</sup> Bangladesh Investment Development Authority (BIDA), Retrieved on December 15, 2022

<sup>145</sup> Bangladesh Telecommunication Regulatory Commission, Retrieved on 15 December 2022

<sup>146</sup> Gross Domestic Product (GDP) of Bangladesh 2021-2022 (p), Bangladesh Bureau of Statistics (BBS), Retrieved on 15 December 2022Export status

**Figure 47: World export scenario of software and IT-related services**



Data source: International Trade Centre (ITC)

The sector experienced volatile export growth trends from FY 2015-16 to FY 2021-22 (in 7 fiscal years) in Bangladesh. Although, the sector attributed an average of 4.5 per cent growth during the same period of service export earnings. The global demand for data processing, hosting, and consultancy services were stoked by the coronavirus pandemic, and Bangladesh's export of computer services fetched \$592.06 million in fiscal 2021-22, up 94.91 per cent year-on-year and revenues from the sales of software, IT-enabled services like hosting and data processing, installation, maintenance and repair of computers and peripheral equipment services and computer consultancy services. But information services export dropped around 64 per cent year-on-year to \$0.36 million in FY 2021-22 (data source: EPB).

### Import status of Bangladesh

Bangladesh has negligible telecommunication and information services import demand which was about US\$ 108 million in FY 2016-17 and US\$ 104 million in FY 2020-21. In FY 2016-17, import of telecommunication and information services constituted 1.45% of total service import which was 2.37% in FY 2020-21 (data source: BB).

### Market access

One of the most frequently committed business and professional services categories for WTO members is computer-related services (CRS). Additionally, compared to other service sectors, it is one of the areas where cross-border supply (mode 1)<sup>147</sup> has fewer if any, restrictions and greater commitments. This reflects the industry's openness at the time the great majority of market access promises were made, in the middle of the Uruguay Round discussions, in the 1990s. Additionally, it acknowledges the reach and connections across IT organizations on a global scale.

### Investment including FDI

The country has received about US\$28 million per fiscal year of foreign direct investment during the past decade for the computer software and the IT sector. The FDI in computer software and the IT services sector attracted 1.33 percent of total FDI inflows in services to Bangladesh in 2021 (data source: BB).

<sup>147</sup> Mode 1 — Cross border trade: from the territory of one member into the territory of any other member such as a user in country A receives services from abroad through its telecommunications or postal infrastructure. Such supplies may include consultancy or market research reports, tele-medical advice, distance training, or architectural drawings.

### Gender perspective in Software and IT sector

The representation of women in the IT sector is still low, with few holdings leadership or ownership positions. According to BASIS (2017), women made up 19.6 percent of all IT sector employees in 2017, with only 2-3 percent being women entrepreneurs and 12 percent being professionals in the sector. Women are underrepresented in top positions (14.4 percent) but constitute a larger proportion of employees in entry (23.3 percent) and mid-level (18.5 percent) positions. The Ministry of Commerce has developed an action plan as part of the National Digital Commerce Policy, 2018, which includes providing specialized training for women entrepreneurs to facilitate their participation in digital commerce.<sup>148</sup> This will enhance women's inclusion in digital commerce and make their path towards employment smoother. The Export Policy 2021-2024 aims to increase women entrepreneurs' participation in exports by fostering effective linkages with export-oriented industries, developing their information technology and export-related skills, providing training for their participation in e-commerce, offering unsecured loans with easy terms and low-interest rates, and providing special and preferential incentive packages announced by the government. Additionally, loan disbursement facilities will be made available to women entrepreneurs.<sup>149</sup>

The Ministry of Commerce (MoC) provided general training activities to 66 women and 174 men during the fiscal year 2021-22. Additionally, 5625 women are currently benefiting from the Ministry's activities under the E-Commerce Build Your Own Business project. As per MoC the total budget in 2022-23 for this department was \$57.54 million among which 17.98 percent (\$10.35 million) for women. However, there is a significant potential for women to take advantage of the expanding opportunities in the IT sector, including through public training programs. The Women ICT Frontier Initiative (WIFI) by UNESCAP has developed ICT training modules for women, which are being translated into Bangla and expected to reach 25,000 women. Additionally, the Women's Forum on Women in IT by BASIS is working towards developing the professional capacity of women employed in the IT sector and those leading IT firms.

### Policies governing the sector

Bangladesh government declared "ICT products and services" as "National Product of the Year 2022" at the Dhaka International Trade Fair (DITF) aimed at encouraging product-based export and also simultaneously stressed the need for taking appropriate measures to strengthen the software and IT-related services sector and help explore its export potential.

**8<sup>th</sup> Five-Year Plan:** The 8FYP has given special emphasis on the export of ICT services, including software development. A program of digitizing public services, which includes employee training, will facilitate a quicker acceptance of e-services in the public sector. A special effort will be made to improve ICT education and employee availability. Through investments in technology parks and government funding of ICT research and development, a focus will be placed on the production of ICT soft goods for export. 8<sup>th</sup> FY plan also includes a special section for telecommunication sector strategies which has included digital transformation, fourth industrial revolution (4IR), future networks and 5G, domestic and international transmission capacity, utilizing the potential of space technology, ensuring digital security and privacy, bridging the standardization gap, creating internet of things (IoT) and machine to machine (M2M) communication ecosystem, cloud infrastructure for future computing needs, bridging 'digital divide', address the changing demands for digital skills, enhance research and development and manufacturing of telecommunication and IT equipment and products and restructuring institutional framework.

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<sup>148</sup> Gender Budget Report FY 2022-23, Finance Division, Ministry of Finance, 2022.

<sup>149</sup> Women's Participation, Constraints, and Opportunities for Trade in Bangladesh, Australian Aid, Partnership for South Asia, World Bank Group, 2016.

**Export Policy, 2021-24:** The software and IT-related services sector is the top prioritized sector in service. Several points are mentioned in the policy including the supply of investment credit at a reduced rate of interest on a high-priority basis; moratorium on income tax along with others.

**National Industrial Policy 2022:** The software and IT-related services sector has been considered one of the highest-priority service sectors.

**Other Policies and Strategies related to the Sector:** National Digital Commerce Policy, 2018, Digital Business Identity (DBID) Registration Guide 2022, National Blockchain Strategy: Bangladesh (2020), Data Centre Guide 2020, National Internet of Things Strategy Bangladesh (2020), National Strategy for Artificial Intelligence Bangladesh (2020).

Sector-Specific Incentives:

- 10% export subsidy for the export of software, ITES and the individual freelancer gets 4% export incentives against software and ITES;<sup>150</sup>
- Lower custom duty (CD) in cellular phone parts and machinery imports for manufacturers (SRO-116-AIN/2021/05/Customs);
- Lower duty and taxes in importing computer parts, accessories, PCB, PCBA, and related digital goods for local manufacturing (SRO-127-AIN/2021/16/Customs);
- Up until June 30, 2024, there is a tax holiday for income from the nationwide telecommunication transmission network (NTTN), information technology-enabled services providers, and operators;<sup>151</sup>
- Producers of hardware products such as motherboards, cases, UPSs, speakers, sound systems, power supplies, USB cables, CCTVs, and pen drives are eligible for a 10-year tax break.

#### **Impact of COVID-19 on the sector**

Although, the markets for computer and information services exported from Bangladesh to the world are limited. All of the major markets have been severely buffeted by COVID-19. The major impacts of Covid-19 in a holistic approach might be a fall in revenue, rises in net operating losses of ICT firms and the possibility of bankruptcy, sudden shock and fall in productivity, high rate of unemployment, fall in investments, a major blow to the freelancers, lower bandwidth, disruption of revenues of the ISPs, the rise of import of digital devices and rise in time shipment's arrival due to global supply chain breakdown, and fall in the local production of digital device.

Smaller spending for software solutions as a result of businesses tightening their belts during the economic downturn caused the market to decrease in 2020. However, the pandemic has also helped businesses understand how urgent it is to become digital. Beyond the continued increase anticipated for 2021, which will see expenditure on business software moving closer to the 500 billion US dollar benchmark, the software will continue to play an increasingly larger role as the engine of digital transformation in the years to come.<sup>152</sup>

#### **Challenges and opportunities of the software and IT-related service sector: findings from the SWOT analysis**

SWOT analysis identified the following major strengths, weaknesses, opportunities, and threats that could impact the growth of the software and IT-related service sector:

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<sup>150</sup> Bangladesh Bank (BB), available at: <https://www.bb.org.bd/mediaroom/circulars/fepd/sep192022fepd26.pdf>

<sup>151</sup> <https://bida.gov.bd/information-technology>

<sup>152</sup> Statista.com available at <https://www.statista.com/markets/418/topic/484/software/#statistic1>.



**Table 30: SWOT analysis of software and IT-related service sector**

<b>Strengths</b> <ol style="list-style-type: none"> <li>1. Cost-competitive young workforce</li> <li>2. Low infrastructure cost (i.e., internet cost, electricity, hardware, etc.)</li> <li>3. Setup of Hi-Tech Park at different levels</li> <li>4. Capacity to adapt new technology</li> <li>5. Quick learning</li> <li>6. Social contributions through applications, web portals and other digital initiatives like Surokkha, MyGov, a2i, Union Digital Centre etc.</li> </ol>	<b>Weaknesses</b> <ol style="list-style-type: none"> <li>1. Insufficient supply of quality ICT HR</li> <li>2. Low level of training and skills in the workplace</li> <li>3. Limited collaboration between academia and industry</li> <li>4. Lack of IT friendly curriculum at school, college</li> <li>5. Inadequate power supply</li> <li>6. Insufficient Cyber security</li> <li>7. High attrition rate</li> <li>8. insufficient mechanism for quality testing, certification and accreditation.</li> <li>9. Absence of widely used international payment solutions like PayPal</li> </ol>
<b>Opportunities</b> <ol style="list-style-type: none"> <li>1. Demographic dividend</li> <li>2. Growing IT infrastructure Including establishment of IT village</li> <li>3. Nationwide connectivity</li> <li>4. A favorable policy structure (SMART Bangladesh, top priority sector in Export Policy 2021-2024, incentives, etc.)</li> <li>5. Reduction of VAT and exemption from corporate income tax</li> <li>6. An increasing domestic and international demand</li> <li>7. Startup and Freelancing opportunity</li> <li>8. NRB (Non-Resident Bangladeshi) community</li> <li>9. To some extents, low-cost market entry</li> <li>10. Expanding scope of e-commerce</li> <li>11. Leveraging 4IR technology</li> </ol>	<b>Threats</b> <ol style="list-style-type: none"> <li>1. Stringent imposition of IPR (intellectual property rights) due to LDC graduation after 2026</li> <li>2. Unregulated entry of foreign firms in Bangladesh to source local IT human resource (HR)</li> <li>3. Brain drains to foreign countries</li> <li>4. Language barrier</li> <li>5. Unfavorable labour law</li> <li>6. Bottleneck to access finance</li> <li>7. Lack of friendly start-up ecosystem</li> <li>8. Costly imported materials</li> <li>9. Lack of cross-border eCommerce policy and data protection policy</li> </ol>

*Source: Ranked based on stakeholders' prioritization from Stakeholder Consultation*

### Key strengths

**Cost-competitive young workforce and low infrastructure cost:** The study identified that a cost-competitive young workforce and low infrastructure cost (i.e., internet cost, electricity, hardware, etc.) are the key strengths of the sector.

**Setup of Hi-Tech Parks:** Hi-Tech Parks set up by the government also strengthened the industrial base of this sector. Bangladesh Hi-Tech Park Authority has been working for socio-economic development by establishing Hi-Tech Parks/ Software Technology Parks /IT Training and Incubation Centers in different areas of the country to ensure employment of the country's huge youth population and create skilled human resources. 28 Hi-Tech Parks (HTP)/Software Technology Parks (STP)/IT Training and Incubation Centers across the country have been set up so far.

**Capacity to adapt new technologies and quick learning:** Entrepreneurs' capacity to adapt to new technology and quick learning ability are also regarded as the strengths of this sector. An educated, trainable and young workforce working in this sector possesses the required skill sets to compete in the global scenario.

Moreover, this sector made significant contributions through applications, web portals and digital initiatives like Surokkha, MyGov, a2i, Union Digital Centre, etc. to the national and social development of Bangladesh.



### Key weaknesses

**Insufficient supply of quality ICT HR and inadequate training and skills in the workplace:** The study found that there is a lack of qualified personnel in various activities of the ICT sector, which includes data entry, software development, graphics animation, communication and other ICT-related activities. The majority of the current workforce excels in pure technical tasks, such as programming and networking. The industry faces the shortage of a strong pool of mid-level product/project managers due to training inadequacy.

**Limited collaboration between academia and industry and lack of IT-friendly curriculum at school, and college:** Though every year a large number of IT graduates enter the market, most of them are not well acquainted with the industry needs due to lack of proper training and industry-oriented education. Lack of IT-friendly curriculum at school, and college, limited collaboration between academia and industry and insufficient training and skills development activities are creating skill gaps in this sector.

Moreover, issues like inadequate power supply and insufficient cyber security are limiting this sector's prospects. Additionally, the absence of widely used international payment solutions like PayPal and other online payment systems is restricting access to the global IT industry.

### Key opportunities

**Growing IT infrastructure Including establishment of IT villages:** The establishment of IT villages can be a major opportunity for the software and IT-related services sector in the future. Construction of Hi-Tech Parks, Software Technology Parks, IT Training and Incubation Centers across the country is underway which will facilitate FDI, Human resource development to ensure IT skilled resources to lead the Hi-tech and software technology sector.

**Nationwide connectivity:** Nationwide internet and cellular connectivity and tech-savvy young workforce are providing ample opportunities for entrepreneurship, outsourcing and freelancing in this sector.

**Favorable policy structure:** Favorable policy structures like SMART Bangladesh vision, designation as a top priority sector in Export Policy 2021-2024, incentives, reduction of VAT and exemption from corporate income tax present opportunities for entrepreneurship and IT business development as well as expansion. Driven by the government's SMART Bangladesh vision, demand for digitalized and IT products is increasing in the domestic market.

Also, global demand for IT products and services is accelerating as the study found out that the software and IT-related services exports grew on average (CAGR) by 11.54% from 2006 to 2020. Moreover, the government has drafted a digital commerce act experiencing the phenomenal growth of this sector which may impact IT sectoral growth profoundly.

### Key threats

**Stringent imposition of IPR:** Stringent imposition of IPR (intellectual property rights) due to LDC graduation after 2026 is likely to create many challenges for sustaining the growth of the IT sector.

**Brain drains to foreign countries:** Insufficient opportunities and facilities for qualified IT experts result in a brain drain curbing the sector's capacity to provide advanced IT services. Not only do the developed countries have more advanced and growing technology markets, but they also offer relevant training and education programs. As a result, a prospective software engineer, data analyst, or IT expert sees a much brighter and more valuable future abroad than in a country like Bangladesh, where the Fourth Industrial Revolution is just starting to take hold.

**Unfavorable labour law:** Existing labour law has not adequately addressed the labour-related issues of this sector including flexible working hours, work from home, benefits systems, etc. that may lead to violation of labor rights.

Moreover, unregulated entry of foreign firms in Bangladesh to source local IT human resources threatens the IT sector with potential adversities. IT personnel lack adequate language skills which limits their scope to explore international markets. IT entrepreneurs face challenges to get access to traditional collateral-based loans which hinders their business expansion. Lack of cross-border eCommerce policy and data protection policy challenge the seamless operations of IT businesses.

## Tourism Sector

### Overview

Tourism is a potential and growing industry in Bangladesh but yet it has not been flourished as expected compared to the neighboring countries in South and South East Asia. Tourism sector of Bangladesh has grown with the pace of economic growth in the past decade, as many people are having sizeable disposable income. Total contribution of tourism and travel sector to the GDP of Bangladesh was USD 8.59 billion in 2016 (4.3 percent of the GDP) and was forecasted to rise by 7.1 percent per annum raising the total amount to USD 18.2 billion by 2027 <sup>153</sup> (4.7 percent of the GDP) (WTTC, 2017). In FY 2020-21, <sup>154</sup> the export of travel sector was amounting to USD 218.69 million which was USD 188.41 million in the previous year of the same period. It implies an annual growth of 52% since after the breakout of Covid-19 pandemic and the sector is rebounding back to its growth path.

Along with many other sectors, tourism has a huge but unrealized potential. It could become one of the major exports earning service sectors of Bangladesh if its potentials could be properly realised. Tourism sector is closely interconnected with many other service sectors, and has the capacity, by its very nature, to generate positive effects on various areas of socio-economic development of the country. In addition, cultural diversity and the inherent welcoming nature of Bangladeshi people have created a favourable environment to attract foreign tourists and augment foreign exchange earnings. To expand the tourism sector country-wide, the government of Bangladesh has designed several policies, like the Mid-Term Budgetary Framework (MTBF) under the umbrella of the 7<sup>th</sup> FYP. In addition, the government also declared tourism as an industry, and the year-2016 as the “Tourism Year” with several fiscal and monetary incentives for the development of this sector. Tourism is also considered as a special development service sector under the Export Policy 2021-2024.

According to World Travel and Tourism Council (WTTC), the direct contribution of Travel and Tourism to world GDP increased by US\$1 trillion (+21.7% rise) in 2021. In 2019, the Travel & Tourism sector contributed 10.3% to the global GDP. The direct contribution of Travel and Tourism to GDP was USD 7,833 million (2.2% of total GDP) in 2021 for Bangladesh and its total contribution to employment was 1.73 million (2.6% of total jobs). Along with this, international visitors spent USD 167.2 million in 2021 in Bangladesh. <sup>155</sup>

**Table 31: Overview of tourism sector**

Feature	2019	2020	2021
Total contribution of Travel & Tourism to GDP and Employment in Bangladesh			
GDP	3.00% BDT 835.0 BN USD 9813.7 MN	1.90% BDT 529.9 BN USD 6227.8 MN	2.20% BDT 666.5 BN USD 7833.4 MN
Employment	1.86 MN 2.9% of total jobs	1.61 MN 2.6% of total jobs	1.73 MN 2.6% of total jobs
Domestic vs International Spending			
International visitors spend in Bangladesh	USD 369.6 MN 0.7% of total export	USD 197.5 MN 0.5% of total export	USD 167.2 MN 0.4% of total export
Inbound Arrivals	India (53%)		India (60%)
	China (16%)		Saudi Arabia (8%)
	Pakistan (8%)		Malaysia (5%)
	United States (8%)		Thailand (4%)
	South Korea (5%)		Kuwait (3%)
	Rest of the world (11%)		Rest of the world (3%)
Outbound Departures	India (60%)		India (44%)
	Saudi Arabia (8%)		Saudi Arabia (12%)

<sup>153</sup> World Travel & Tourism Council (WTTC) data 2017

<sup>154</sup> EPB Export Data 2020-21

<sup>155</sup> WTTC, “Travel and Tourism Economic Impact 2021

Feature	2019	2020	2021
	Malaysia (5%)		United Arab Emirates (10%)
	Thailand (4%)		Kuwait (6%)
	Kuwait (3%)		Singapore (3%)
	Rest of the world (20%)		Rest of the world (24%)

Source: World Travel and Tourism Council (2021), “Bangladesh 2022 Annual Research: Key Highlights

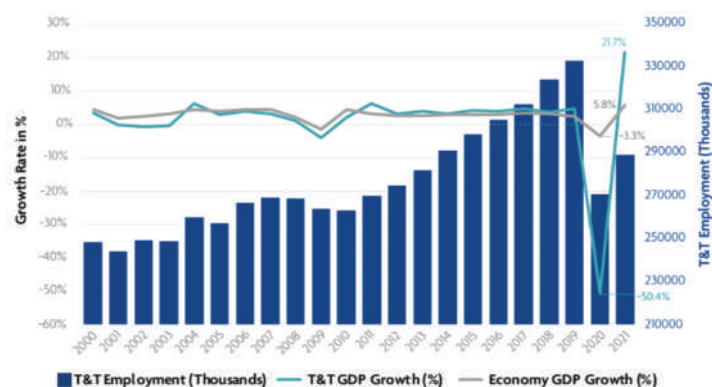
The country is endowed with stunning coastlines and beaches, archeological sites, historical landmarks, and religious locations, as well as hills, islands, woods, and jungles. It also has a picturesque interior with numerous waterways and agricultural fields. It boasts lovely heritage and historical treasures, as well as stunning beaches, notably the world's longest beach. In order to best utilize its natural resources, the nation has created amenities including modern hotels, motels, rest house, youth hostels, restaurants, and communication technologies that can be found at practically all tourist destinations. Some of the better-known tourist spots are: Sundarbans - home of the Royal Bengal Tiger, Sylhet - the land of two leaves and a bud, Mahastangarh - the ancient seat of Buddhist rule, Mainamati - the seat of lost dynasties, Kuakata - where the sun rises and sets in the sea, Cox's Bazar - the tourist capital and St. Martin's Island - pearl in the sea. The only coral island of Bangladesh, Saint Martin's is situated in about 8 km west of the north-west coast of Myanmar at the mouth of the Naf River. The people of Saint Martin's Island called this island as 'Narikel Jinjira'. The Mouza name of this island is 'Jinjira Dwip'. There is surrounding in another coral island of Saint Martin's – which is Chera Dwip.

### Overview of global tourism sector

According to World Travel & Tourism Council (WTTC), tourism has directly or indirectly contributed to creating 1 in 4 jobs across the world, implying 10.3% of all jobs amounting 333 million jobs are created by the tourism sector. The sector also comprises 10.3% of global GDP amounting US\$9.6 trillion in 2021. Meanwhile, WTTC Economic Impact Report shows that international visitors spent US\$1.8 trillion in 2019 which is 6.8% of total export across the globe. After the break out of Covid-19 pandemic, the tourism sector faced acute loss amounting to US\$4.9 trillion in 2020. It was estimated by the report that in 2020, 62 million jobs were lost due to pandemic. After that in 2021, the tourism sectoral contribution to GDP increased by US\$ 1 trillion

It is depicted in the Travel and Tourism Economic Impact Report 2022 that before the pandemic breakout, the growth rate of Travel & Tourism sector outpaced the growth of the global economy for nine consecutive years. After a devastating fall of 50.4% in the pandemic period, the sector recovered by 21.7% in 2021 as shown in the figure 48. Meanwhile the global economy bounced back by 5.8%

Figure 48: Travel & tourism (T&T) economic impact timeline, 2000 – 2021



Bangladesh is a middle-income country; where tourism can play a vital role in its GDP growth. Tourism is a growing industry in Bangladesh which has a bright prospect. Meanwhile, the direct contribution of Travel and Tourism to GDP was USD 7,833 million (2.2% of total GDP) in 2021 and its total contribution to employment 1.73 million (2.6% of total jobs).<sup>156</sup> In 2019, the Travel & Tourism sector contributed 10.3% to global GDP<sup>157</sup> while it becomes 5.3% in 2020 and 6.1% in 2021.

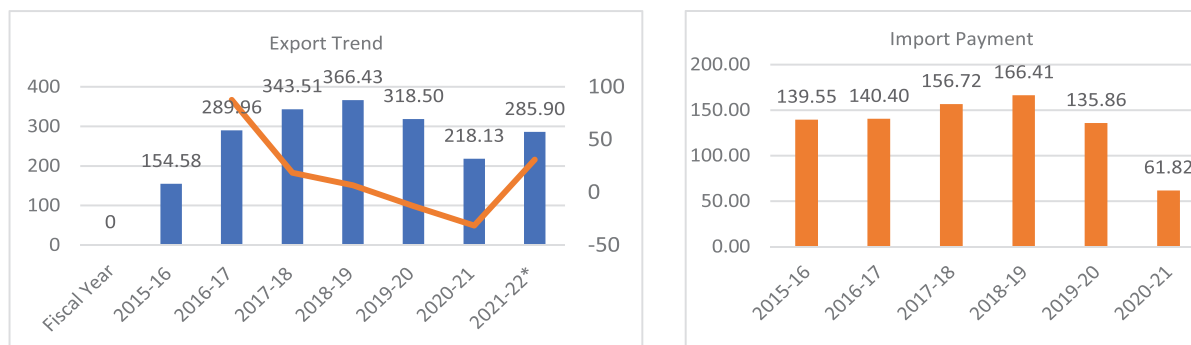
<sup>156</sup> World Travel and Tourism Council (2021), “Bangladesh 2022 Annual Research: Key Highlights” PP 1-2

<sup>157</sup> World Travel and Tourism Council (2021), “Travel and Tourism Economic Impact 2021

### Export-import trend of tourism sector

Bangladesh has earned USD 218.13 million from foreign traveler in FY 2020-21. This was increased by 31.07% to USD 285.90 million in FY 2021-22. From Bangladesh Bank Statistics, tourism import data is available since FY2015-16. Here, a downward trend is seen in expenditure of Bangladeshi tourist.<sup>158</sup> In FY 2019-20, Bangladeshi travelers spent USD 135.86 million which was decreased by 54.5% to USD 61.82 million in FY 2020-21.

**Figure 49: Tourism export and import payment in USD million**



Source: EPB and Bangladesh Bank Import Payment of Services

### Gender perspective in Tourism Sector

Women's involvement in the tourism sector is very low in Bangladesh though the participation of women has been steadily increasing in recent years. While there are still socio-cultural barriers that limit women's participation in the industry, there has been a positive shift towards greater inclusion and empowerment. In the hospitality sector, women have been able to find employment in a variety of roles, including as hotel staff, such as receptionists and housekeeping staff. However, there is still a need for increased participation of women in other areas such as tour guides, operators, and travel agents. To address this, the government and various organizations are providing training and education opportunities to women interested in these fields. Overall, there is a growing recognition of the value and importance of women's involvement in the tourism sector, and efforts are being made to create a more inclusive and diverse industry.<sup>159</sup>

### Impact on Environment

Tourism has some environmental impacts also. Sometimes, pollution is caused by emissions from vehicles and boats used for tourists. By discarding waste or fuel overboard, waterborne vessels also produce an unacceptably high level of noise, which can be classified as pollution. Moreover, discarding waste or fuel overboard, waterborne vessels also cause pollution to Bangladesh's fauna, the Bay of Bengal's water quality, the coastal regions.

<sup>158</sup> Bangladesh Bank

<sup>159</sup> Tourism as a Driver for Promoting Gender Equality? A Case Study of Participation of Women in the Tourism Labour Market in Cox's Bazar, Bangladesh, Thomas GOMES, Adam BLAKE, Journal of Hospitality and Tourism Issues 2(2), 178-189, 2020.

### **Policies regulating the tourism sector**

Bangladesh government has reformulated the National Tourism Policy 2010 with some major changes based on the previous policy of 1992 to make the policy effective and create employment opportunities in the tourism sector. The Government of Bangladesh has prescribed controlled ecotourism as a protective form of tourism, especially for the key biodiversity areas and protected areas, including the coastal and maritime areas. Consequently, various formal documents have recognized controlled/managed ecotourism, including several legal documents (e.g., the National Tourism Policy, 2010; Coastal Development Strategy, 2006; Vision 2041; Seventh and Eighth Five Year Plans; National Forestry Policy, 1994 and 2016 (draft); National Biodiversity Strategy and Action Plan of Bangladesh, 2016–2021, and so on).

**Bangladesh tourism policy 2010 & Bangladesh tourism board act 2010:** The tourism policy is formulated with guidelines for development objectives and marketing tactics, offering the right framework for overall decision-making that begins at the individual level. In order to provide direction for the development of Bangladesh's tourism industry, the Bangladesh Tourism Policy 2010 was adopted. The National Tourism Policy still hasn't been implemented after 12 years of its formulation. The policy calls for the Cox's Bazar-Teknaf, St. Martin's Island, and Sonadia Islands to be promoted as premier tourist destinations.

**Export Policy 2021-24:** Currently, Bangladesh is prioritizing an export-led growth strategy to retain the momentum of ongoing economic development. To this end, the Ministry of Commerce recently formulated a new export policy for the FY 2021-2024, emphasizing Bangladesh's transformation to developing nations club, the challenges of the Fourth Industrial Revolution (4IR), and offsetting the potential impacts on the economy posed by the pandemic. To facilitate product diversification, the policy identifies ICT, Software, BPO, freelancing, and tourism as the most potential sectors.<sup>160</sup>

### **Incentive for tourism sector**

National budget of fiscal year 2022-2023 proposed following initiatives:

- An incentive package amounting to US\$102.24 million for the tourism industry, to help it recover from the impacts of the Covid-19 pandemic.
- Steps to set up Sabrang Tourism Park, Naf Tourism Park and Sonadia Eco-Tourism Park in Cox's Bazar with accommodation and recreational facilities maintaining international standards.

### **Covid-19 impact on tourism sector**

To reduce the spread of this Covid-19 pandemic, all countries-imposed lockdowns, restricted domestic and international travels. Meanwhile, Banna, H. (2020) pointed out that travel restriction and tourism activities remained closed from Mid-March of 2020. However, COVID- 19 has brought about a marked change in the lifestyle and economy of Bangladesh<sup>161</sup> as Bangladesh government announced lockdowns that brought most businesses to a close. Travel and tourism were two of the first business sectors to be affected by COVID-19. Travel restrictions were imposed on all tourist destinations. Hotel, motel, restaurant, and transport sector activities were mostly postponed due to the country-wide lockdown.

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<sup>160</sup> Export Policy 2021-24

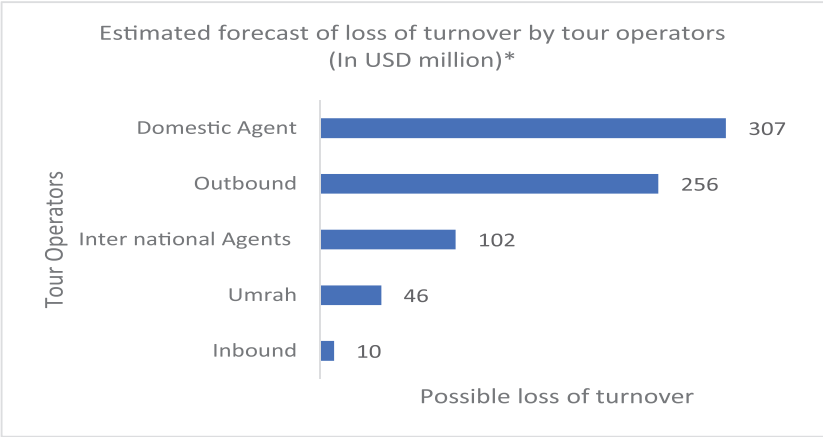
<sup>161</sup> Banna, H. (2020). "Minimizing the economic impact of Coronavirus in Bangladesh".



According to the Tour Operator Association of Bangladesh (TOAB), as of April 2020, tour operators had lost close to US\$153 million and had eliminated 5000 jobs. In Bangladesh, the tourism and travel industries employ over 4 million people directly or indirectly.

According to the International Air Transport Association (IATA), the worldwide air transport industry's income had been declined by 11% in 2020, or US\$163 billion (IATA, 2020). Up until June 30, 2020, there were more than two million flight cancellations. The IATA (2020) predicted that roughly 25 million aviation-related jobs were at risk globally, with the aviation sector responsible for approximately 65.5 million jobs. The UNWTO predicted that the Bangladeshi tourist sector would lose USD 470 million in 2020. Pacific Asia Travel Association’s (PATA) Bangladesh Chapter has estimated that more than 0.3 million people working in the travel and tourism sectors were at risk of losing employment.<sup>162</sup>

Figure 50: Estimated loss of turnover by tour operators in Bangladesh



Source: Pacific Asia Travel Association (PATA)

With restricted travel and cancellation of business flights, the luxury hotel industry has faced the domino effect of economic fallout. The occupancy rates of luxury hotels declined by staggering amounts in April. While the hotels would have witnessed occupancy rate of 80% in usual times, the COVID-19 plunged to an average of 30%.<sup>163</sup> The figure shows the change in occupancy level of luxury hotels in Bangladesh due to COVID-19.<sup>164</sup>

### Challenges and opportunities of the tourism sector: findings from the SWOT analysis

SWOT analysis identified the following major strengths, weaknesses, opportunities, and threats that could impact the growth of the tourism sector:

Table 32: SWOT analysis of tourism sector

Strengths	Weaknesses
<ol style="list-style-type: none"> <li>1. Potential tourism growth in coastal and maritime zone</li> <li>2. Attractive tourist spots including cultural, archaeological heritage and historical places</li> <li>3. Attractive tourist spot including its natural beauty, greenery and hospitality of people</li> <li>4. Religious tourist spot (Buddhist, Islamic, etc.)</li> <li>5. Available accommodation and restaurant facilities at tourist sites</li> <li>6. Stimulating growth in related sectors</li> <li>7. Increasing communication network</li> <li>8. Longest coastline along with the facilities of the blue tourism</li> </ol>	<ol style="list-style-type: none"> <li>1. Lack of entertainment facilities</li> <li>2. Inadequate service personnel having multilingual skills and product knowledge</li> <li>3. Lack of Security</li> <li>4. Inadequate tourism-based product development</li> <li>5. Under-promoted tourist destination</li> <li>6. Problems related to hygienic food</li> <li>7. Absence of foreign investment in the tourism sector of Bangladesh</li> <li>8. Higher cost of products, services and imported tourist vehicles</li> <li>9. Lack of cooperation between the tour operators and service providers</li> </ol>

<sup>162</sup> COVID-19 impact on the Tourism Industry in Bangladesh – Pacific Asia Travel Association (PATA)  
<sup>163</sup> <https://www.lightcastlebd.com/insights/2020/06/covid-19-tourism-a-tragic-end-to-the-thriving-industry/>  
<sup>164</sup> IATA (2020). “IATA Updates COVID-19 Financial Impacts -Relief Measures Needed.” Available at: <https://www.iata.org/en/pressroom/pr/2020-03-05-01/>  
 \* 1 USD = 97.81 BDT, BBS 2022-23



Opportunities	Threats
<ol style="list-style-type: none"> <li>1. Social and Cultural values for sustainable tourism development</li> <li>2. Economic growth with increasing purchasing power</li> <li>3. Expansion of religious tourism</li> <li>4. Globalization and digital dissemination of information to brand tourism sector</li> <li>5. Scope for expansion of tourism both domestic and international (inbound and outbound)</li> <li>6. Potential tea, coastal, backwater and marine tourism</li> <li>7. Upcoming three tourism special zones</li> <li>8. Utilizing digital platform for branding and promotion</li> <li>9. Investment in tourist destinations</li> </ol>	<ol style="list-style-type: none"> <li>1. Underdeveloped tourism infrastructure</li> <li>2. Backdated legislation and policy related to tourism</li> <li>3. Strong competition within the SAARC region</li> <li>4. Current global economic recession</li> <li>5. VISA complexity for foreign tourists and takes longer time for on-arrival visas</li> <li>6. High rate of VAT and IT/AIT is applied in the tourism business</li> <li>7. Lack of payment system in foreign currency</li> </ol>

Source: BFTI findings generated from KII and Stakeholder Consultation

### Key strengths

**Potential tourism growth in coastal and maritime zone:** Bangladesh's coastal and maritime zone has enormous potential for tourism growth. The country's longest sea beach, Cox's Bazar, attracts thousands of tourists each year, and other beautiful beaches such as Kuakata and Saint Martin's Island offer additional opportunities for seaside tourism. The Sundarbans, the world's largest mangrove forest, is another major attraction in the coastal region, with its unique flora and fauna drawing nature enthusiasts and researchers from around the world. Additionally, the Bay of Bengal offers opportunities for adventure tourism such as water sports, fishing, and boating. However, there is a need for infrastructure development, particularly in transportation, accommodations, and facilities, to fully realize the potential of the coastal and maritime zone for tourism. With the right investments and policies, the coastal and maritime zone of Bangladesh can become a major tourism destination, contributing to the economic development of the country and the preservation of its natural and cultural heritage.

**Table 33: Attractive tourist spots including cultural, archaeological and historical places**

Name of the division	Location in Bangladesh	Places to visit
Barisal	Southwest	Kuakata
Chittagong	Southern	Patenga Sea Beach, War Cemetery, Port, Cox's Bazar, St. Martins Island, Himchori and Inani Beach, Parki beach, Lalmai, Moinamoti and Shalbon Bihar, Chittagong Hill tracks (Rangamati, Khagrachari, Bandarban and Kaptai)
Dhaka	Capital city	Shaheed Minar, Jatiyo Smritisoudho, Ahsan Manzil, Jatiya Sangshad Bahavan
Khulna	Southwest	Sundarban
Rajshahi	Northern	Mahasthangarh, Varendra Museum
Rangpur	Northern	Kantagir Temple, Sayedpur railway junction
Sylhet	Northeast	Jaflong, Ratargul, Madhabkunda waterfall, Satchari National Park, Bisanakandi, Srimongal, Lawacherra Rain Forest

Coastal and Maritime Tourism (CMT) Bangladesh has huge potential. Estimations have indicated that the overall tourism sector will grow at an annual rate of 6.1% from 2017 to 2027. Though all the tourism are not treated as a part of the blue economy (WTTC 2017), CMT is likely to play an important role in such growth considering its current contributions and potential. The Organization for Economic Co-operation and Development (OECD, 2016)<sup>165</sup> projected the global growth of CMT is likely to be 9.3% per year from 2018 to 2027. Additionally, tourism in urban areas will experience considerable growth during this period, which will ultimately lead to CMT development on various beaches, like Patenga, Cox's Bazar, Himchori, Inani, St. Martin, Moheshkhai, the Sundarbans, Kuakata, Bhola, and Monpura.

**Increasing communication network expand the growth of tourism:** Train service between Dhaka and Cox's Bazar will facilitate tourism. By tying the Cox's Bazar district to Bangladesh's railway system, the Asian Development Bank argued, this project will not only help the country's economy by developing the beach town into a popular tourist destination, but it will also make it easier for people to access sub-regional markets and trade. The initiative will improve Cox's Bazar's tourism, which will in turn improve the socioeconomic conditions of the area. Similar opportunities have emerged thanks to the completion of the Padma Bridge which links 21 districts in the southeastern region creating opportunities to boost tourism.

**Stimulating growth in related sectors:** The tourism value chain can stimulate growth of other sectors that are organically connected such as transportation, food and beverage, hotels & restaurants, handicrafts, etc. Therefore, tourism can have a significant positive economic impact on Bangladesh. Bangladesh's graduation to a middle-income country is expected to further fuel this growth. It can significantly contribute to the creation of employment opportunities, particularly in rural areas where unemployment rates are high. Additionally, tourism generates revenue for the government through taxes and fees. As tourism grows, it can also encourage private sector investment, further boosting economic growth. Furthermore, tourism can promote cultural exchange and understanding, leading to the preservation and promotion of Bangladesh's unique heritage and traditions. Overall, the economic benefits of tourism in Bangladesh have the potential to make a significant impact on the country's development.

#### **Key weaknesses**

**Lack of entertainment facilities:** Shortage of required infrastructure, international standard accommodations, and smooth transportation affects both the domestic and international tourists. Tourism sector should be provided with an effective transportation system, lodgings, and infrastructure that meet international standards in order to promote sustainable tourism in Bangladesh. The beach environment is hardly welcoming to western tourists. Since westerners are accustomed to specific beach clothing do not go with social and religious conservatism. Many tourist destinations lack hotels, motels, restaurants, pubs, and transportation according to international standards. The tourism industry in Bangladesh should provide visitors with contemporary recreational facilities for the tourists such as boating, wind surfing, horse racing and other amusements.

**Inadequate skilled human resources:** Skilled human resources are still a big challenge for sustainable tourism development in Bangladesh. The trained and expert Bangladeshi human resources are serving foreign country's tourism sector, while our tourism related industries are depended on foreign human resources. To address this problem, local communities and stakeholders need to be familiar with and be sensitive to cultures and life style of other countries for attracting foreign tourists. In order to develop skilled human resources Bangladesh Parjatan Corporation (BPC) established National Hotel & Tourism Training Institute (NHTTI) in 1974. Since then, NHTTI has been offering 2-year diploma courses in hotel management. In 2003, among Private Universities, IBAIS University has come forward to provide higher education in Tourism & Hotel Management by introducing Bachelor of Tourism & Hotel Management program. Later, Dhaka University also has introduced BBA, MBA and Ph.D. programs in Tourism and Hospitality Management. But there is a gap between academia and the industry. In addition, effective communication, being sensitive to different cultures and values, are crucial in tourism. More institutions should be established in public and private sectors to cater to this critical need.

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165 OECD. 2016. The Ocean Economy in 2030. Paris: OECD.

**Underdeveloped domestic tourism:** The cost of hotel rooms in Cox's Bazar has significantly increased in the past three years, with a medium-sized room now costing TK 1500 per day compared to TK 800 before. The rent of air-conditioned rooms has also risen from TK 1500 to between TK 2200 to 2500. Additionally, the price of food in restaurants and transportation to and from Cox's Bazar has increased. Despite the price hikes, there has been no improvement in the quality of services. The beach area that attracts tourists is only five kilometers out of 120 kilometers and is in disrepair, with no protection set up for travelers in the remaining area. Tourists also face security issues and erratic electricity service after dusk. The situation is similar in Sylhet, another popular tourist destination, where travelers face hassles despite the increased prices of food, lodging, and transportation.

**Under-promoted tourist destinations in Bangladesh:** Bangladesh Parjatan Corporation (BPC) publishes advertisements in specialized journals and special interest magazines. According to BPC representatives, Bangladesh is not promoted as a tourism destination on any international TV channels, foreign newspapers, or respectable national news magazines. Even the local TV and print media advertisements have been dramatically reduced.

### **Key opportunities**

Bangladesh's graduation to a developing country will offer enormous opportunities for the development of tourism, both internal and external. With its rich cultural heritage, diverse landscape, and vibrant cities, the country offers a unique experience for travelers. The longest sea beach in the world, Cox's Bazar, and the world's largest delta, the Sundarbans, are just a few of the country's stunning natural attractions. Additionally, Bangladesh has a rich history with numerous archaeological sites which provide a glimpse into the country's past. Despite challenges, including infrastructure development, safety and security, and environmental concerns, the government of Bangladesh has taken steps to promote tourism and encourage investment in the sector. As a result, the prospect of tourism in Bangladesh is bright, with the potential for significant growth in the coming years.

**Upcoming three tourism special zones:** BEZA (Bangladesh Economic Zones Authority) has been working to establish three Special Tourism Parks in Bangladesh's Cox's Bazar district: a) Sonadia Eco-Tourism Park, b) Naf Tourism Park, and c) Sabrang Tourism Park. Developers from Thailand, Singapore, Japan, and Bangladesh have also expressed interest in constructing the NAF and Sabrang Tourism Park. Through the creation of tourism parks, it is expected that Bangladesh's existing tourism status would improve from three to two digits (The Travel & Tourism Competitiveness Index 2019 ranking). The establishment of these parks will employ around 200,000 people over the next eight years and produce over USD 2.5 billion in annual financial activity.<sup>166</sup>

**Religious & historical tourist spots (Buddhist, Islamic, etc.):** Religious tourism is also huge potential for Bangladesh. Religious tourism is a popular type of travel around the world with millions of people taking part in pilgrimages each year. Travelers engage in various religious activities such as visiting holy sites, attending religious festivals or ceremonies, or participating in spiritual retreats. Religious tourism provides opportunities for travelers to strengthen their faith, connect with like-minded individuals, and gain a better understanding of different cultures and traditions. Popular religious destinations include Jerusalem, Mecca, the Vatican, and the Ganges River in India.

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<sup>166</sup> Bangladesh Economic Zone Authority, <https://www.beza.gov.bd/special-tourism-park/>

Religious tourism in Bangladesh is a significant aspect of the country's tourism industry. Bishwa Ijtema which takes place every year is a unique congregation of Muslims from around the world. The country's dominant religion is Islam, and many visitors come to explore its Islamic heritage and religious sites. One of the most popular destinations is the Baitul Mukarram Mosque, the national mosque of Bangladesh, in Dhaka. Other notable sites include the Lalbagh Fort, which features an impressive mosque and tomb, and the Shah Jalal Shrine in Sylhet, which attracts both Muslim and non-Muslim visitors. Bangladesh also has a significant Hindu population, and travelers may wish to visit the Dhakeshwari Temple, one of the oldest temples in the country. There are also Buddhist Monasteries in several places that should attract people of Buddhist faith from around the world while Armenian Church is also a religiously important for religious tourism.

**Extended promotion opportunities across the globe through digital platform:** The digital platform now-a-days is the most accessible means to plan and execute seamless travels around the world in terms of helping tourists buy travel products (Benckendorff and Black, 2000). Using Internet, tourists can select destinations, forward orders, buy airline tickets and make payments through electronic process. Similarly, tourism firms can post their tour packages; illustrate pictures of destinations and hotel rooms; send booking-confirmation notices and invoices.

### Key threats

**Underdeveloped Tourism Infrastructure:** Travel and Tourism Competitiveness Report published by World Economic Forum in 2019, ranked Bangladesh 120 amongst the 140 countries. Bangladesh is at the bottom of the table if ranked in the context of South Asia, where India (34), Sri Lanka (77) and Nepal (102) are—not surprisingly—ahead of us, and we only have Pakistan behind us, ranked 121. The research claims that, Bangladesh's infrastructure for tourist services is among the worst in the world. Bangladesh's ranking in this particular category has remained stable at 133 over the past two years making no appreciable progress in constructing infrastructure in this sector.

**E-Visa procedures and lack of facilities in the payment system for foreign currency:** Difficulties faced by tourists in getting visas discourage them to visit Bangladesh. Bangladesh government should make visa policy easier for foreign citizens to grow their interest to visit Bangladesh. E- Visa procedures and facilities of the payment system in foreign currency should be introduced for reducing visa complexities of foreign tourist.

**Higher VAT and taxes are levied at various levels:** As described earlier, Tourism is a rapidly growing sector globally. However, in Bangladesh, VAT and taxes are levied at multiple levels, including service sub-sectors associated with tourism, resulting in double taxation for service providers and receivers. The BPC pays a total of 25 percent VAT and taxes, including 15 percent VAT on the value of services rendered, 5 percent on supply tax on the purchase of goods for providing services, and 5 percent on revenue receipts. The total burden of VAT and income tax on the organization's income, as well as the salaries and allowances of employees, make it impossible for the organization to sustain.

**Backdated legislation and policy related to tourism:** Bangladesh Tourism Board Act, 2010 does not have new dimensions of product development, marketing and operational management regarding present tourism industry perspective. The power in the act is insufficient to make the board fully functional, especially in terms of decision-making, implementing projects and capacity building of the relevant stakeholders. The stakeholders further suggested to include the sufficient power in this act like the Nepal Tourism Board. Tourism Sector is expanding in Bangladesh and now the sector has many diversified products along with new services. National Tourism Policy 2010 lacks policy support options for the sector like income tax rebates, duty exemption on imported equipment, tourist buggies, and restaurant equipment, and reduced duty on imported liquor and beer. Moreover, the policy lacks indicative ideas about financing especially lower-interest loans with easier conditions.

**Strong competition within the SAARC region:** Many of Bangladesh's South Asian neighbors face political unrest, terrorist attacks, bomb explosion. Despite that, their tourism industry has been continuously flourishing and contributes a significant share to country's GDP. <sup>167</sup> Bangladesh has a lot to learn from its neighbours in terms of fostering the growth of tourism sector. It is important to rightly position the country to the world on one hand, and a strategic approach on the other, to attract specific segments of the international tourists and customize the facilities that cater to their touristic aspirations.

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<sup>167</sup> Current Status of Tourism Industry in Bangladesh: An Empirical Evaluation, page 46, retrieved from Scientific Research Journal (SCRJ), Volume 1, Issue 1, August 2013



## Nursing and Midwifery Services

### Overview of the sector

#### Global scenario

Globally, nurses make up 59% of health professionals, with a present stock of 27.9 million nursing personnel. The nursing workforce is relatively young, but there are differences in age structures across regions, with the Americas and Europe having substantially older age structures. One out of six nurses globally are expected to retire in the next 10 years, with 17% of nurses being aged 55 or over. To address nursing shortages by 2030, an 8% increase in the total number of nurse graduates per year is required, alongside improved capacity to employ and retain graduates. Additionally, 31 high-income OECD countries are projected to have a potential shortfall of up to 3.2 million nurses by 2030.<sup>168</sup> An average of around a 10% increase per year in the number of nursing graduates is required to address the shortage, and an improved labour market absorption capacity could result in an average increase of 8.8% per year in graduates.<sup>169</sup>

#### The current trajectory towards 2030

On current trends, there will be a global shortage of 5.7 million nurses by 2030, with Bangladesh and some other low and lower middle-income countries facing the largest shortages.

Additionally, 31 high-income OECD countries are projected to have a potential shortfall of up to 3.2 million nurses by 2030. An average of around a 10% increase per year in the number of nursing graduates is required to address the shortage, and an improved labour market absorption capacity could result in an average increase of 8.8% per year in graduates.<sup>170</sup>

**Table 34: Fact sheet current status of nurses and midwives in the world evidence in 2020**

The global nursing workforce is 27.9 million, of which 19.3 million (69%) professional nurses, 6.0 million (22%) associate professional nurses and 2.6 million (9%) who are not classified either way.
The world does not have a global nursing workforce commensurate with the universal health coverage and SDG targets. Over 80% of the world's nurses are found in countries that account for half of the world's population. The global shortage of nurses was estimated to be 5.9 million nurses in 2018. An estimated 5.3 million (89%) of that shortage is concentrated in low- and lower middle-income countries, where the growth in the number of nurses is barely keeping pace with population growth, improving only marginally the nurse-to-population density levels.
Ageing health workforce patterns in some regions threaten the stability of the nursing stock.
About 97% of countries reported that the minimum duration for nurse education is a three-year programme, when 53% of those reported having advanced practice roles for nurses
One nurse out of every eight practices in a country other than the one where they were born or trained. The international mobility of the nursing workforce is increasing.
Nine out of 10 nurses globally are female, with important regional variations: in the African Region the female–male ratio is 3:1.
One out of six of the world's nurses are expected to retire in the next 10 years; this percentage is substantially higher in the Region of the Americas (24%), posing a further replenishment challenge.
Nurses represent on average 59% of health professionals, ranging between 49% in the Eastern Mediterranean Region and 68% in the Western Pacific Region.
As 17% of nurses globally are aged 55 years or over and therefore expected to retire within the next 10 years 4.7 million new nurses will have to be educated and employed over the next decade just to maintain the status quo.
A total of 71% countries reported having a national nursing leadership position with responsibility for providing input into nursing and health policy.

<sup>168</sup> <https://mobinajaffer.ca/blog/2020/05/20/facts-about-the-nursing-industry/>

<sup>169</sup> State of the World's Nursing, Investing in education, jobs and leadership, WHO, 2020

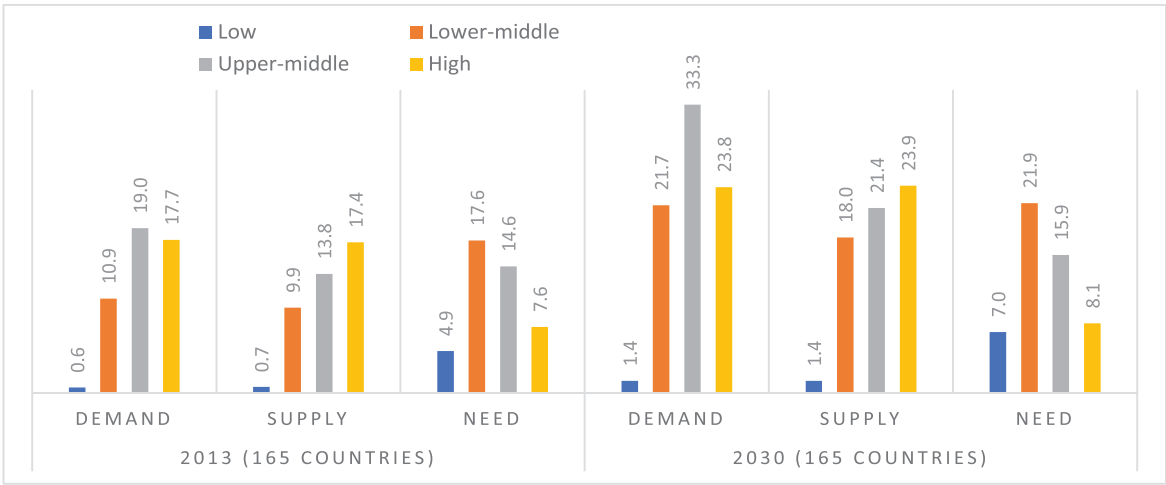
International nurse migration and mobility

International mobility of health professionals has increased in recent decades due to trends in demography, epidemiology, finance, and health policy; this mobility is predicted to continue to accelerate. One in eight nurses (13%) were born or received their nursing education in a different country. High-income countries have a higher percentage (15.2%) of foreign-born or foreign-trained nursing staff compared to other income groups (<2%). There is a need for proper education and training to match the current and anticipated needs of health systems for nursing services to be exported. The duration of nursing education globally is predominantly three or four years, but there is considerable variety in minimum education and training levels. Capacity constraints, such as faculty shortages, infrastructure limitations, and availability of clinical placement sites, also pose challenges.<sup>171</sup>

Addressing the shortage of nurses, collaborative approaches, such as pooling resources and expertise can help alleviate the global shortage of nurse educators. For example, Thailand's Programme of Higher Nursing Education Development collaborates with China and has expanded to 10 countries in East and South-East Asia.<sup>172</sup> One of the approaches is building global skills partnerships. The adoption of global skills partnerships is a central tenet of the Global Compact, aimed at building bilateral agreements to leverage opportunities from migration by matching the demand for and supply of workers with targeted educational support in countries of origin.<sup>173</sup> The harmonization of education standards and licensure examinations across various countries is exemplary. For instance, efforts to harmonize nursing degree structures in the EU began in the late 1970s and have resulted in a three-cycle educational structure with harmonized academic qualifications across all disciplines, achieved through sectoral directives and the Bologna Agreement.<sup>174</sup>

Supply and demand for nurses and care providers

Figure 51: Estimated global demand and supply of health workers, by WHO/World in income group, 2013 and 2030 (in million)



Source: Global Health Workforce Labor Market Projections for 2030, World Bank Group, 2016

170, 171 State of the world's nursing 2020: investing in education, jobs and leadership, WHO, 2020.  
172 State of the world's nursing 2020: investing in education, jobs and leadership, WHO, 2020  
173 <https://alabrava.net/the-world-will-be-short-18-million-nurses-by-2030/>  
174 <https://www.coursehero.com/file/p7mnpvv/may-also-be-an-incentive-to-migrate-Push-factors-include-absence-of-job/>State of the world's nursing 2020, WHO,2021



The demand for healthcare workers in low-income countries is projected to increase from 0.6 million in 2013 to 1.4 million in 2030, while the supply is expected to remain constant at 1.4 million. In high-income countries, the demand for healthcare workers is expected to increase from 17.7 million in 2013 to 23.8 million in 2030, with a corresponding increase in supply from 17.4 million to 23.9 million.<sup>175</sup> In the world Bank report, it is estimated that there was a total demand for 48.2 million healthcare professionals (nurses, midwives, doctors and others) and the supply is 41.8 million, and a need of 6.4 million. By 2030, the demand is expected to increase to 80.2 million, the supply to 64.7 million, and the need to 15.5 million.<sup>176</sup>

**Table 35: Estimated global health workforce supply versus “need” as defined by WHO for 2013 and 2030.**

Regions	2013 (165 countries)			2030 (165 countries)		
	Supply (S)	Need (N)	Diff (S-N)	Supply (S)	Need (N)	Diff (S-N)
<b>WHO Region</b>						
Africa	1,874,830	5,891,071	-4,016,241	3,066,666	8,910,473	-5,843,806
America	8,385,480	5,439,623	2,945,857	12,742,856	6,246,463	6,496,393
Eastern Mediterranean	2,690,443	3,797,769	-1,107,326	4,611,408	5,055,625	-444,217
Europe	12,692,401	5,628,533	7,063,868	16,803,264	5,786,268	11,016,996
South-East Asia	5,772,250	12,433,083	-6,660,833	10,168,591	14,712,987	-4,544,397
Western Pacific	10,294,627	11,538,553	-1,243,926	17,261,342	12,270,476	4,990,867
<b>WB Region</b>						
East Asia and Pacific	11,141,638	13,692,899	-2,551,261	18,250,702	14,734,499	3,516,203
Europe and Central Asia	12,594,176	5,578,223	7,015,953	16,640,618	5,722,567	10,918,050
Latin America	4,140,233	3,287,004	853,229	5,784,767	3,825,876	1,958,892
Middle East & North Africa	2,570,885	2,354,695	216,190	3,846,948	3,032,910	814,038
North America	4,245,248	2,152,619	2,092,629	6,958,089	2,420,587	4,537,501
South Asia	5,357,579	11,745,586	-6,388,007	10,293,688	14,248,390	-3,954,702
Sub-Saharan Africa	1,660,273	5,917,606	-4,257,333	2,879,315	8,997,462	-6,118,146

Source: Global Health Workforce Labor Market Projections for 2030, World Bank Group, 2016

**Table 36: Number of nurses globally and density per 10 000 population, by WHO region, 2018**

WHO REGION	Number of countries reporting headcount/total	Number of nursing personnel <sup>a</sup> in millions	Density per 10,000 population
<b>Africa</b>	44/47	0.9	<b>8.7</b>
<b>Americas</b>	35/35	8.4	<b>83.4</b>
<b>South-East Asia</b>	11/11	3.3	<b>16.5</b>
<b>Europe</b>	53/53	7.3	<b>79.3</b>
<b>Eastern Mediterranean</b>	21/21	1.1	<b>15.6</b>
<b>Western Pacific</b>	27/27	6.9	<b>36.0</b>
<b>Global</b>	<b>191/194</b>	<b>27.9</b>	<b>36.9</b>

According to WHO guidelines, Table (36) represents the number of nurses worldwide and their density per 10,000 population. The survey revealed that African countries had the lowest number of nurses, while Eastern Mediterranean countries ranked second with only 1.1 of nursing personnel per one million population. In contrast, the number of nursing personnel per one million in the American countries was 8.4, which was the highest number during the survey.

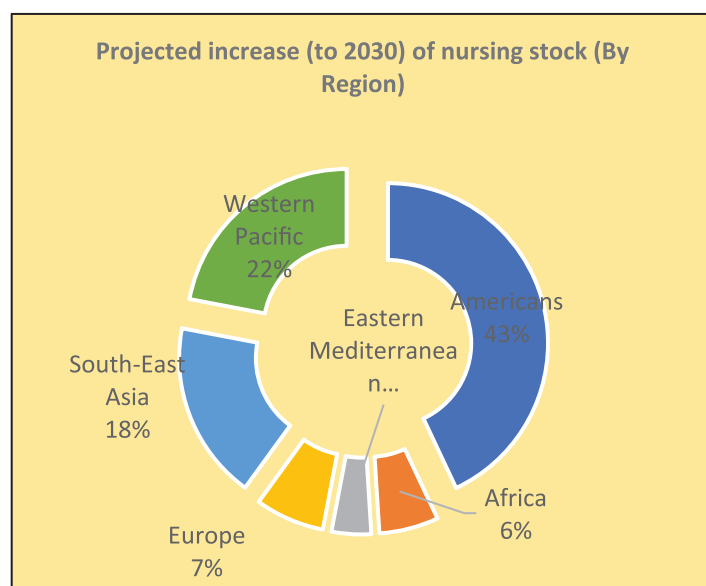
a. Includes nursing professionals and nursing associate professionals.

**Note:** stock data were not available for Cameroon, Comoros and South Sudan.

**Source:** NHWA 2019. Latest available density reported by countries between 2013 and 2018. For countries with a headcount reported between 2013 and 2017, to standardize all countries to year 2018, the headcount was reported by applying their latest available density to 2018 populations. The population size for each country and year used to compute density values was extracted from the 2019 revision of the *World population prospects* of the United Nations, Department of Economic and Social Affairs (263).

175, 176 Global Health Workforce Labor Market Projections for 2030, World Bank Group, 2016

Figure 52: Projected increase (to 2030) of nursing stock, by region



There is a projected shortage of 5.7 million nurses in African, South-East Asia, and Eastern Mediterranean regions by 2030, which can be addressed by increasing the number of nurse graduates by 8% per year on average. Without this increase, the world would have only 36 million nurses by 2030. WHO estimates that the number of nurses will increase by different percentages across regions, with the America seeing a 43% increase, while the Eastern Mediterranean region will only see a 4% increase. Figure (52) shows that there is a significant demand for nurses in the Eastern Mediterranean, Europe, and Africa.<sup>177</sup>

### Global scenario of midwifery sector

Table 37 : Historical data number of midwives from Year 1970 to 2020 by region per 1000

Regions	Number of Midwives (Year 1970-2020) (In Million)
Africa	1.48
Americas	0.32
Eastern Mediterranean	0.70
Europe	10.10
South-East Asia	4.62
Western Pacific	1.58
<b>Total</b>	<b>18.80</b>

Source: WHO Data

Globally, there are approximately 27 million nurses and midwives, which represents nearly 50% of the workforce in global health. Table (37) shows that there were 1.48 million midwives in Africa, 0.32 million in the Americas, and 0.70 million in the Eastern Mediterranean as of 2020. South-East Asia has the second-highest number of midwives, followed by European countries. The World Bank data shows that till 2020 there was about 18 million midwiferies working in world and UNFPA estimates that a global shortage of 900,000 midwives, projected to fall to 750,000 by 2030 if all countries continue their current trajectory.<sup>178</sup>

<sup>177</sup> State of the world's nursing 2020: investing in education, jobs and leadership, WHO, 2020.

<sup>178</sup> The State of the World's Midwifery 2021, WHO. <https://doi.org/10.1186/s12960-021-00694-w>

## Demand of different types of nurses and midwives

The demand for nursing professionals is on the rise due to several factors. One such factor is the aging global population, which requires increased healthcare services. Additionally, the COVID-19 pandemic has highlighted the crucial role of nurses in providing care and has led to an increase in demand for their services. Another factor contributing to the demand for nursing is the increasing prevalence of chronic illnesses, which require ongoing care and monitoring. Furthermore, advancements in healthcare technology and treatments have created new opportunities for nurses to specialize in various areas of healthcare, further driving demand. Overall, the demand for nursing professionals is expected to continue growing in the coming years, creating ample career opportunities in the field. There are different types of nurses in demand in the global market, such as Nurse Practitioners (NPs), Certified Registered Nurse Anesthetists (CRNAs), Certified Nurse Midwives (CNMs), Clinical Nurse Specialists, Registered Nurses (RNs), and Licensed Practical Nurses (LPNs)/Licensed Vocational Nurses (LVNs).

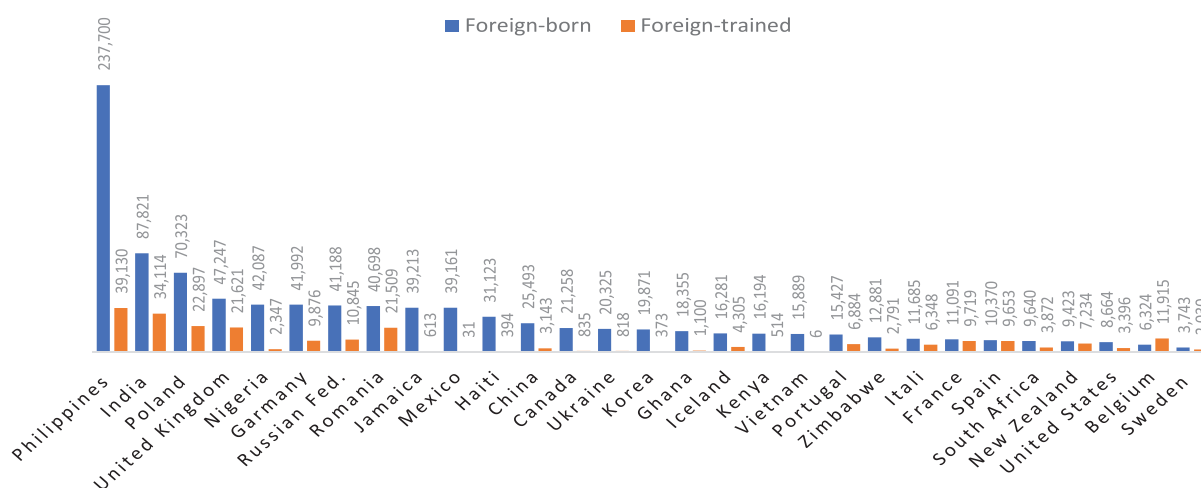
There is a huge demand of nurses and midwives for aging global population. According to WHO the global population of people aged 80 or above is expected to reach 4% by 2050, which is five times of the current figure. Around one in eleven people in more developed regions will be 80 or above by 2050. The population of individuals aged 60 or above will double to 2.1 billion by 2050. The percentage of elder generations in the global population is estimated to be 22% by 2050. In selected industrialized countries, approximately 16% of males and 37% of females aged above 80 live alone and require continuous care from a trained caregiver.<sup>179</sup>

US Bureau of Labor Statistics predicts a 9% job outlook for registered nurses until 2030, with approximately 194,500 job opportunities every year. General medical and surgical hospitals employ the most RNs, comprising 31% of the workforce in the industry. Other common work environments for nurses include:

- Physician offices: 7% of nurses, or 192,300 RNs
- Home health care services: 11% or 173,790 RNs
- Outpatient care centers: 15% of nurses, roughly 147,720 RNs
- Nursing care facilities: 9% of the workforce, or 131,320 RNs<sup>180</sup>

## Export and import scenario of nursing and midwifery sector

Figure 53: Top 20 countries of origin comprise non-OECD as well as the OECD or EU countries.



Source: Health at a Glance 2021: OECD Indicators

<sup>179</sup> World Population Ageing, Department of Economics and social Affairs, UN, 2019

<sup>180</sup> <https://post.edu/blog/the-demand-for-nurses/>

About one-third of physicians and nurses working in OECD countries are mostly from the Philippines, with approximately 2337.7 thousand being foreign-born and about 39 thousand being foreign-trained. India ranks second in terms of the number of foreign-born or trained healthcare professionals working in OECD countries, while Poland ranks third.<sup>181</sup> Another one-third of foreign-born or trained physicians and nurses in OECD countries come from non-OECD higher middle-income nations. Lower-middle-income nations contribute about 30% of migrant doctors and nurses, while low-income nations contribute 3-6% of the total.<sup>182</sup>

**Table 38: Top countries for immigrant registered nurses**

Country of Origin	Number of Registered Nurses	Share of All Immigrant RNs	Share of All RNs
Philippines	142,800	29.3%	4.5%
India	32,400	6.7%	1.0%
Nigeria	21,200	4.4%	0.7%
Jamaica	21,200	4.3%	0.7%
Mexico	18,900	3.9%	0.6%

The Philippines is the leading exporter of registered nurses (RN) worldwide, accounting for 29.3% of all immigrant RNs and 4.5% of all RNs. India and Nigeria follow in second and third place with 6.7% and 4.4% of immigrant RNs, respectively. The Philippines is also the top exporter of healthcare professionals, including RNs, home health aides, physicians, and surgeons, comprising 13.5% of all foreign-born healthcare workers and 2.2% of all healthcare workers. Mexico ranks second and India ranks third in the export of healthcare workers. In Saudi Arabia, 43% of nurses were foreign-born and 55% were Saudi nurses, in line with the data that indicated that 50% of midwives were both Saudi and foreign-born.

**Table 39: Top five countries to import nurses**

SL	Country	Total nursing staff	% foreign nurses total	Total number of foreign nurses	Export Country
1.	USA	2,689,000	14%	364,000	Philippines, India, Canada, Nigeria
2.	UK	648,003	10%	364,000	Philippines, India, South Africa
3.	Italy	341,015	2%	6,730	Romania, Poland, Albania, Tunisia
4.	Malaysia	42,613	2%	813	Albania, Bangladesh, India, Indonesia, Myanmar, Pakistan, Philippines
5.	Singapore	14,831	16%	2,397	Malaysia, China, Philippines, India, Myanmar

The United States is the leading country in terms of importing nurses, with imported nurses comprising 14% of its total nursing workforce. The United Kingdom is in second place, importing 10% of its total nurses from other countries. Italy ranks third in terms of importing nurses.

Source: Malaysia, Thailand, Singapore: Ayaka Matsuno. Nurse Migration: The Asian Perspective. ILO/EU Asian Programme on the Governance of Labour Migration Technical Note. 2011

<sup>181</sup> Health at a Glance 2021: OECD Indicators, OECD Publishing, Paris, <https://doi.org/10.1787/ae3016b9-en>, OECD 2021.

<sup>182</sup> Contribution of migrant doctors and nurses to tackling COVID-19 crisis in OECD countries, OECD, 2020.

## Bangladesh Overview

### Export of nurses from Bangladesh

*Table 40: Nurse migration for overseas employment (1985-86), 1991-2004 and 2021-22*

Destination	1985-1986		1991- 2004		2021-2022
	Number	%	Number	%	Number
Saudi Arabia	364	38.24	957	80.08	
Kuwait	348	17.76	24	2.01	1000
Libya	223	16.98			
Iran	223	10.88			
Bahrain	166	8.11	23	12.80	
Iraq	165	8.04			
Oman			20	1.67	
UAE			14	1.17	
Malaysia			153	12.80	
Others			4	0.33	
	2050	100	1195	100	1000

Source: Rosie Majid Ahsan and AS Najmul Ahmad, 2000 and BMET 2004, KII

Between 1991-2004, 20,825 female workers migrated from Bangladesh through formal channels. Almost half of these workers were unskilled, working as housemaids and cleaners, while around 44% were semi-skilled as garment and factory workers. Only 5.74% of the female migrant workers were nurses, with the majority (87%) going to Middle Eastern countries and the rest to the Far East, particularly Malaysia. Comparison of time series data shows a sharp decline in the numbers and in the destinations of nurses from Bangladesh over the years.<sup>183</sup>

### Demand for Bangladeshi Nurses

The study reveals a significant need for skilled nurses in Middle Eastern countries, particularly in Saudi Arabia, the UAE, Oman, and Kuwait. Saudi Arabia has a particularly high demand for nurses, estimated at around 25,000 per year.<sup>184</sup> This demand is expected to continue for the next 20 years. While there is also a high demand for nurses in Kuwait, Bangladesh cannot fulfill this need as the basic requirement is a BSc in nursing. Immigrant nurses in the UAE are required to pass a challenging professional exam, which no Bangladeshi nurses have attempted in recent times .

### Existing Demand, Supply and Capabilities of Nursing Institutions in Bangladesh

*Table 41: Summary statistics of current status of Bangladeshi nurses, midwives and institutions*

SL	Name of the Course	Govt. (DGNM)		Autonomous/ Military Nursing Institute		Private		Total
		No of Institutions	No of seat	No of Institutions	No of seat	No of Institutions	No of seat	
1	Diploma in Nursing Science and Midwifery (03 Years Duration)	46	2730			335	16,780	19,510
2	Diploma in Midwifery (03 Years Duration)	60	1775			105	3810	5,585
3	B.Sc in Nursing (04 Years Duration)	13	1200	7	235	148	7180	8,380

<sup>183</sup> Migration of Skilled Nurses from Bangladesh: An Exploratory Study, Salahuddin M Aminuzamman, Development Research Centre on Migration, Globalisation and Poverty University of Sussex, 2007.

<sup>184</sup> Health Report of Saudi Arabia, MoH, 2022

Reportedly there are about 86,800 doctors in Bangladesh. If international standards are to be reached and maintained, this would demand 258,000 nurses. According to BNMC, there are reportedly 83,955 registered nurses and midwives in the country. The international standard for nurse-patient ratio is 1:4 for general care and 1:1 for intensive care whilst the international nurse-doctor ratio is generally reversed, at about 2:1. In the case of Bangladesh, the general nurse-patient ratio is 1: 13. According to WHO, for every 1000 people there is need of 3 nurses, however, currently Bangladesh has 0.5 nurses per 1000 people. <sup>185</sup> Bangladesh has four primary nursing education systems, which include: (i) Bachelor's and Master's degrees in nursing, (ii) a three-year diploma in nursing, (iii) a one-year diploma in midwifery (for women), and (iv) a diploma in orthopedic nursing (for men). These programs are accredited by the Bangladesh Nursing Council and follow a curriculum that was last updated in 1990. The Nursing College, affiliated with the University of Dhaka, provides a four-year undergraduate program in General Nursing and Public Health Nursing, as well as a Master's degree in Clinical Nursing. Currently, Bangladesh has the capacity to produce approximately 40,000 nurses and midwives across the public and private sectors in 720 institutes .<sup>186</sup>

**Comparison of nursing and midwifery education systems of Bangladesh and the Philippines**

The nursing and midwifery education systems in Bangladesh and the Philippines have both similarities and differences. They are both regulated by national bodies, but differ in the structure and duration of programs. The major comparisons are as follows-

In Bangladesh, nursing education and training are provided by public and private nursing institutes and colleges, and the four-year Bachelor of Science in Nursing program focuses on theoretical knowledge and practical skills. Meanwhile, midwifery education is a two-year diploma program offered at nursing institutes and colleges.

In contrast, the Philippines offers nursing education through a four-year Bachelor of Science in Nursing program in universities and colleges, while midwifery education is available as a separate two-year program or as a degree option within the Bachelor of Science in Nursing program.

Overall, the nursing and midwifery education systems in Bangladesh and the Philippines share some commonalities but differ significantly in structure and duration. These differences may reflect the specific healthcare needs and priorities of each country.

**Access to International Market**

The table (42) shows the technical requirement for nursing positions in the US and Canada. Most other developed countries have similar requirements.

*Table 42: technical requirement for nursing positions in the US and Canada*

United States of America	Canada
<ul style="list-style-type: none"> <li>◆ Education, registration and license (a recognized nursing degree)</li> <li>◆ Qualifying the Commission on Graduates of Foreign Nursing Schools (CGFNS) Examination</li> <li>◆ Qualifying the NCLEX-RN examination</li> </ul>	<ul style="list-style-type: none"> <li>◆ Credential verification</li> <li>◆ Qualifying in Canadian Registered Nurse Examination</li> <li>◆ Language proficiency (IELTS academic module and gain a mark of 6.5)</li> </ul>

<sup>185</sup> Labor Market in South Asia: Skill Gap Analysis for HRD Policies in Health Sector, Hina Sheikh, Mariam Anees (PhD), Dr. Arshad Mahmood Uppal, Abdul Haseeb, SAARC Human Resource Development Center, Islamabad-Pakistan, 2007.

<sup>186</sup> BNMC Statistics



United States of America	Canada
<ul style="list-style-type: none"> <li>◆ IELTS score of 7 in speaking and an overall band of 6.5.</li> <li>◆ Visa screen certificate.</li> <li>◆ At least two years of experience.</li> </ul>	<ul style="list-style-type: none"> <li>◆ A three-year diploma in Nursing (15 total years of education), and Nursing License in your home country <i>or</i> a two-year diploma in Nursing (14 total years of education), &amp; Nursing License in your home country or aboard</li> <li>◆ At least a two-year university degree at the Bachelor's level (14 total years of education), and Nursing License in your home country.</li> </ul>

### Gender perspective in Nursing and Midwifery Sector

Over the past three years, the recommendations of the Public Service Commission (PSC) have led to the recruitment of 15,000 senior staff nurses, of whom 90% are women. In order to accomplish the Sustainable Development Goals (SDG) targets for eliminating maternal and child mortality established by the Honorable Prime Minister, 2,600 midwives who have completed the Diploma in Midwifery have also been recruited.

To ensure high-quality patient care, approximately 12,000 newly recruited nurses have received foundation training over the past three years, including 1,080 women. Furthermore, 870 nurses have received specialized training in intensive care units (ICU) to develop specialized nurses in the country to handle the Covid-19 situation, with 800 of them being women. Overall, women constitute 90% of the department's activities, with 76,454 women employed. The Department of Nursing and Midwifery has taken several measures to improve the healthcare sector of the country. One such initiative is increasing the number of women health workers. Additionally, the grade of nurses has been elevated to second class, resulting in better opportunities and benefits for them.

As of March 31, 2022, there were 76,454 registered nurses and 6,285 midwives working in various public and private healthcare facilities and post-graduate institutions throughout the country. These skilled professionals play a crucial role in providing quality healthcare services to the people.

Moreover, a total of 16,351 Community Health Care Providers (CHCP) have been trained to work in community clinics, improving women's access to health care at the local level. Community-Based Health Care (CBHC) Outpatient (OP) is divided into two categories: CBHC (community clinic related) and Upazila Health Care (Upazila related). UHC OP, for instance, has increased the capacity of upazila health complexes. In the fiscal year 2022-23 the total budget for this sector was \$ 800.65 million among which 63.2 percent (\$506.98 million) for women.<sup>187</sup>

### Policies governing the sector

**The nursing services act for armed forces, 1952:** Under this Act, the College of Nursing was established along with post basic nursing course for diploma nurses. Directorate General of Nursing (DNS) was established and recruitment rules for DNS were developed.

**The Ordinance of Bangladesh Nursing Council (BNC), 1983:** The ordinance established guidelines for nursing and allied health qualifications, including minimum standards for basic and post-basic training, course durations, teacher qualifications and experience requirements, and standardized examination mechanisms.

<sup>187</sup> Gender Budget Report FY 2022-23, Finance Division, Ministry of Finance.

Nurses and Midwives Act 2011: National licensing exam for BSc Nursing graduates started.

BNMC-Act—2016: BNC upgraded to Bangladesh Nursing and Midwifery Council (BNMC) and DNS to a separate Directorate General of Nursing and Midwifery.

National Policy Guidelines for Midwives, 2018: This policy ensures excellence in midwifery education and facilitates a functional and dynamic midwifery workforce capable of providing quality services related to reproductive health, pregnancy, birth, and newborn.

### **Government's general incentive for nursing and midwifery sector**

sector specific incentives and policies: Health care service providers will enjoy a tax holiday on their first ten years on income from health care services. This will be only applicable for businesses that will start providing services between July 1, 2021 and Jun 30, 2030. (BIDA), though there are some conditions as follows-

- Hospitals should be located outside Dhaka, Narayanganj, Gazipur and Chattogram district
- Exemption will be allowed for income from treatment and diagnostics services only, other income (if any) will not be eligible
- The hospital should have a minimum of 250 beds with separate units available for children and newborns, women and maternal health, oncology and well-being, and preventive medicine Or, must be a specialized hospital with at least 200 beds

### **Covid-19 effect of the Sector**

The COVID-19 pandemic had demonstrated, the performance of any health system depends critically on the availability of an adequate number of skilled and motivated healthcare professionals. The COVID-19 crisis had highlighted the crucial function and commitment of frontline healthcare workers while also shedding attention to the pervasive problem of staff shortages. Some of the major findings are given bellow:

- During the Covid-19 there was considerable disparity between the number of doctors and patients. WHO estimated that only 3.05 doctors and 1.07 nurses were working per 10,000 people in Bangladesh.
- Among all the frontline service providers during Covid, the highest rate of death was observed for doctors in Bangladesh.
- During and after Covid-19 a higher number of people were affected mentally with four major mental health issues. Rates of loneliness, depression, anxiety and sleep disturbance were 71%, 38%, 64% and 73%, respectively.
- The rate of nurses graduating also slowed down and the demand for nurses increased.<sup>188</sup> The number of graduating nurses is supposed to be 40,805 every year if the enrollment is done properly.<sup>189</sup>

### **Challenges and opportunities of nursing and midwifery sector: findings from the SWOT analysis**

SWOT analysis identified the following major strengths, weaknesses, opportunities, and threats that could impact the growth of the nursing and midwifery sector:

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<sup>188</sup> Protective measures against COVID-19 for nurses and midwives in Bangladesh, Mohammad Abbas Uddin, Rabeya Basri, Mala Reberio, MedCrave, 2022. Impact Of Covid-19 On Essential Health Services In Bangladesh, Brac, 2020

<sup>189</sup> Analysis of the health, economic and environmental impacts of COVID-19: The Bangladesh perspective, Sneha Gautam Shamsunnahar Setu Mohd Golam Quader Khan Md. Badiuzzaman Khan, Evilser, 2022.

**Table 43: SWOT analysis of nursing and midwifery sector**

<p><b>Strengths</b></p> <ol style="list-style-type: none"> <li>1. International standard curriculum and high quality of education on nursing and midwifery at undergrad, post-graduation and diploma level</li> <li>2. Capacity to enroll 35000 nurses annually</li> <li>3. Strong infrastructure (Institutional and clinical capacity, IT access, etc.)</li> <li>4. Strong partnerships of the management with local clinical agencies</li> <li>5. Easier entry to profession through relevant education and training.</li> <li>6. Strong local health system through community clinic</li> <li>7. Strong collaboration between govt., private sector and NGOs</li> </ol>	<p><b>Weaknesses</b></p> <ol style="list-style-type: none"> <li>1. Inadequate faculties to implement specific curriculum</li> <li>2. Lack of utilizing available resources</li> <li>3. Lack of knowledge and inadequate information required for licensing examinations of nurses set by the destination countries</li> <li>4. Limited clinical space for hands-on training and practice as per educational need</li> <li>5. Lack of knowledge on second/foreign language and communication skills</li> <li>6. Shortage of skilled nursing and midwifery trainer</li> <li>7. Absence of enabling environment and motivation at the workplaces</li> <li>8. Limited scope to improve professional knowledge and skills at the workplaces</li> <li>9. Lack of continuous assessment of the ongoing global market demand</li> <li>10. Absence of effective platforms to facilitate export of services</li> </ol>
<p><b>Opportunities</b></p> <ol style="list-style-type: none"> <li>1. High demand of job placement for the nurses and midwives at home and abroad.</li> <li>2. High demand of elder care services</li> <li>3. Government policy support to the nursing and midwifery professionals in case of both education and service</li> <li>4. Competitive salary at abroad</li> <li>5. Social and professional acceptance at abroad</li> <li>6. Increasing number of specialized nurses</li> <li>7. Increasing social support</li> <li>8. Opportunities for higher education such as M.Sc, MPH and PhD in Nursing</li> <li>9. Accreditation of nursing education programs</li> </ol>	<p><b>Threats</b></p> <ol style="list-style-type: none"> <li>1. Imposition of safeguard measures by WHO on exporting nurses from Bangladesh.</li> <li>2. Stiff competition in international health workforce</li> <li>3. Social restrictions and mindset disfavoring the professional image.</li> <li>4. Less compliance of International Labour Organization (ILO) conventions about social safety of the professionals of this sector in some countries.</li> <li>5. Lack of promotional activities both home and abroad</li> <li>6. Insecurity of workplace</li> </ol>

Source: BFTI findings generated from KII and Stakeholder Consultation

### **Key strengths**

**International standard Curriculum and high quality of education on nursing and midwifery at undergrad, post-graduation and diploma level:** The nursing and midwifery programs in Bangladesh are developed in collaboration with international organizations such as WHO, UNFPA, and Canadian Association of Schools of Nursing, and follow international standard curriculum. The stakeholders of this sector agreed that the programs maintain excellent quality. Capacity to enroll 35000 nurses annually: As per BNMC statistics, currently Bangladesh has 859 public and private institutes and capacity to enroll 35,000 nurses annually.

**Strong infrastructure (institutional and clinical capacity, IT access, etc.):** Nursing and midwifery institutes are well equipped with clinical capacity for practice, IT access for online admission and other educational facilities. Major public nursing and midwifery institutes are sufficient with qualified faculties and infrastructures.

**Strong partnerships of the management with local clinical agencies:** Bangladesh has the strong local community clinic across the country and the local people can get minimum level of clinical facilities and KII findings reveal that the local private and government clinics have a strong partnership of the management.

**Easier entry to profession through relevant education and training:** Ministry of Health, DGNM and BNMC follow a standard procedure for entrance examination for nursing and midwifery graduation level they offer different short term (six and one year) course and they can have easier access to profession in private clinics.

**Strong local health system through community clinic:** Bangladesh has established more than 13,000 community clinics (CCs) to provide primary healthcare with a plan of each covering a population of around 6,000, <sup>190</sup> with this strong local health system, people can have minimum level of clinical service all over Bangladesh.

**Strong collaboration between govt., private and NGOs:** DNMC, BNMC, MoH all are closely working with WHO to provide international standard health service across Bangladesh. Stakeholders revealed that Save the Children, BRAC and other community based private NGOs have strong collaboration with the government in this regard.

### **Key weaknesses**

**Inadequate faculties to implement specific curriculum:** The KII findings revealed that the number of specialized curriculums for specialized courses are introduced at minimum level and the nursing and midwifery institutes do not have adequate number of faculties.

**Lack of utilization of available resources:** Different stakeholders from different nursing institutes expressed concern about the utilization of available resources of public institutes. The findings show that the nursing institutes have enough resources but they do not have adequate number of skilled workforces.

**Lack of knowledge and information required for licensing examinations of nurses set by the destination countries:** During the KII the stakeholder and nursing students expressed their concern that they have limited information on licensing examinations of nurses set by the destination countries and they have limited resources too.

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190 Community clinics in Bangladesh: A unique example of public-private partnership, Baizid Khoorshid Riaza , Liaquat Ali , Sk. Akhtar Ahmad, Md. Ziaul Islam , Kazi Rumana Ahmed, Sharmin Hossain, Heliyon, <https://doi.org/10.1016/j.heliyon.2020.e03950>, Science Direct, 2020

**Limited clinical space for hands-on training and practice as per educational need:** The nursing and midwifery service have two sectoral dimensions - one is publicly owned institutes and another is private owned institutes. Publicly owned institutes have satisfactory level of clinical space for hands-on training and practices, however private owned institutes have limited clinical space for hands-on training and practices.

**Lack of knowledge on second/foreign language and communication skills:** If Bangladesh wants to export more nurses and midwives, the nurses and midwives should know the export destinations' countries' language, curriculum and examination processes. The KII findings revealed that there is a gap about second/foreign language and communication skills.

**Lack of skilled nursing and midwifery trainer:** Public and private nursing and midwifery institutes greatly feel the limitation of skilled nursing and midwifery trainer and both private and public stakeholder agreed that the faculties have limited skilled trainer.

**Absence of enabling environment at the workplaces:** Numerous stakeholders have brought up the shortage of night shift nurses in hospitals and clinics during public consultations. As a result of this shortage, the working environment for nurses may occasionally be unsatisfactory.

Limited scope to improve professional knowledge and skill at the workplaces, lack of continuous assessment of the ongoing global market demand, lack of motivation in working place, absence of effective platforms to facilitate export of services and lower male-female ratio of nurses and midwives are the other major weaknesses of the sector.

### **Key opportunities**

**High demand of job placement for the nurses and midwives in home and abroad:** As of the end of 2019, there were 255 public hospitals, 5,054 private hospitals and clinics, and 9,529 diagnostic centers under the registration of Directorate General of Health Services (DGHS) <sup>191</sup> and globally there is huge demand too. As nursing and midwifery is technical profession and there is high guarantee of job placement in the hospitals and clinics.

**Government policy support to the nursing and midwifery professionals in case of both education and service:** Government has initiated different policy support for nurses and midwives like enrollment in the government position, availability of scholarship, etc. to support the nursing and midwifery professionals in case of both education and service.

**Competitive salary at abroad:** The average starting salary of hospital and community registered nurses between 2006-16 was over 40,000 USD <sup>192</sup> as well as according to the U.S. Bureau of Labor and Statistics (BLS), registered nurses in the United States in 2020 made an average salary of \$75,330. The information shows a great prospect of competitive salary abroad.

**Social and professional acceptance abroad:** Nursing and midwifery service are noble profession in the world, in abroad there is no social stigma about nursing and midwifery profession. The high-income group countries tend to have more nurses than the lower income countries.

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<sup>191</sup> Healthcare, BIDA, available at <https://bida.gov.bd/healthcare>

<sup>192</sup> International Council of Nurses Workforce Forums, Howard Catton, ICN Director, Nursing and Health Policy, 2018

**Increasing number of specialized nurses:** As discussed before, there are currently six different types of specialist nursing courses offered by DGNM, and that number is steadily growing. The results of the KII and public consultations suggest that there is a growing need for specialized courses, and nurses are particularly interested in doing specialized nursing courses.

**Increasing social support:** The study suggests that, there is a rising interest among the general public in the nursing profession, particularly in rural areas, where interest is higher than in urban areas.

**Opportunities for higher education such as M.Sc, MPH and PhD in Nursing:** Now DGNM offers higher education such as M.Sc, MPH and PhD in Nursing which enabling the nurses grow their careers and find better job replacement in home and abroad.

### **Key threats**

**Imposition of safeguard measures by WHO on exporting nurses from Bangladesh:** As per WHO rule, for every 1000 people 3 nurses will be needed; as per World Bank data till 2020, Bangladesh has 0.5 nurses for every 1000 people, thus a safeguard measure is imposed by WHO on exporting nurses form Bangladesh.

**Stiff competition in international health workforce:** Philippines is the leading country in exporting nurses worldwide, contributing 29.3% of all immigrant RNs and 4.5% of all RNs worldwide. India is second with a 6.7% share of immigrant RNs and 1% of all RNs worldwide. Nigeria comes in third with 4.4%, while Bangladesh is facing stiff competition in the international health workforce.

**Social restrictions and mindset disfavoring the professional image:** Nursing and midwifery professions in Bangladesh face social stigma and are considered lower-level jobs, which negatively impacts the profession's image and discourages people from pursuing it.

**Less compliance with ILO conventions about social safety of the professionals:** According to ILO, The Nursing Personnel Convention, 1977 (C 149) and the Nursing Personnel Recommendation, 1977 (R 157), is not implemented properly and this is a negative compliance issues for Bangladesh.<sup>193</sup>

**Lack of promotional activities both at home and abroad:** The lack of significant promotion by the government or private sector is a major threat to Bangladesh's potential to export a large number of nurses and midwives.

**Insecurity at workplace:** Workplace bullying of nurses is a widespread and worsening issue with negative impacts on healthcare organizations, the health system, and employee performance.<sup>194</sup>

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<sup>193</sup> ILO Nursing Personnel Convention No.149, International Labour Organization, 2005

<sup>194</sup> Workplace bullying among nurses in Bangladeshi government hospitals, Liton Roy and A.K.M. Dawlat Khan, Asian Journal of Medical and Biological Research, ISSN 2411-4472 (Print) 2412-5571.



## Sector specific LDC graduation related challenges

Following table represents the challenges that each of the 12 sectors are likely to experience after LDC graduation:

*Table 44: Sector specific LDC graduation related challenges*

SL	Sectors	LDC graduation related challenges
1.	Ready Made Garments (Knitwear and Woven)	<ul style="list-style-type: none"> <li>◆ May cause significant decrease in Bangladesh exports of apparel to the EU, Canada, Australia, UK, Japan, South Korea etc due to loss of preferential tariff.</li> <li>◆ The rules of origin will be more stringent.</li> <li>◆ Bangladesh will not be able to provide cash incentives for export.</li> </ul>
2.	Pharmaceuticals & API	<ul style="list-style-type: none"> <li>◆ The Pharmaceuticals sector may face significant hurdle as it mainly depends on the Trade-Related Aspects of Intellectual Property Rights (TRIPS) of WTO which provides special exemption in patent protection and licensing requirements for pharmaceutical products of LDCs till 1 January 2033.</li> <li>◆ Bangladesh will lose access to special technology transfer schemes and will have to comply with the full requirements for the use of special Compulsory Licensing to export medicines.</li> <li>◆ Bangladesh will have to also bear higher fees of global IP registration systems such as the Patent Cooperation Treaty.</li> </ul>
3.	Leather and Leather Goods	<ul style="list-style-type: none"> <li>◆ Based on WTO Tariff Analysis Online (TAO) in the EU market leather goods are now enjoying zero tariffs but after LDC graduation MFN tariff rate (5%) will be applied.</li> <li>◆ Similarly in Japan's market preferential tariff of 4.04% will be replaced by MFN rate of 10.57% after LDC graduation.</li> <li>◆ However, after the graduation both zero tariff and export incentives will cease to exist which will increase the product price decaying the appeal to current markets.</li> <li>◆ After graduating from LDC status, Bangladesh will no longer enjoy the rules of origin benefits in GSP facilities provided by different countries.</li> </ul>
4.	Non-Leather Footwear	<ul style="list-style-type: none"> <li>◆ Bangladesh is likely to face increased tariff rates in exporting nations due to stricter rules of origin.</li> <li>◆ Bangladesh won't be eligible to provide export subsidies, which may result in a significant reduction of export earnings and slow sector growth for non-leather footwear exporters.</li> <li>◆ Bangladesh will lose access to duty-free markets in several countries like the EU, UK, Japan, Canada, Russia, and Australia, etc. which may put profits from these markets at risk.</li> </ul>
5.	Light Engineering Including Electronics and Electrical Sector	<ul style="list-style-type: none"> <li>◆ The LE sector may face uncertainty as the preference to the major export markets will be withdrawn</li> <li>◆ it will ultimately surge the pressure in terms of export competitiveness.</li> </ul>

SL	Sectors	LDC graduation related challenges
6.	Plastic sector	<ul style="list-style-type: none"> <li>◆ Bangladesh's export may suffer due to loss of the Duty-free, Quota-free (DFQF) market access in different countries like EU, UK, Japan, Canada, Russia, Australia and etc.</li> <li>◆ Plastic sector will face stringent Rules of Origin in most of the developed and developing countries.</li> <li>◆ Bangladeshi plastic products may face repercussions becoming less competitive in the international markets.</li> </ul>
7.	Shipbuilding Sector	<ul style="list-style-type: none"> <li>◆ Bangladesh will no longer be eligible to provide export subsidies on non-agricultural products, including the 10% export subsidy on ships.</li> <li>◆ Bangladeshi products will be less competitive in international markets.</li> <li>◆ After graduating from LDC status, complying with human rights and labor rights conventions will be challenged.</li> </ul>
8.	Agro Products and Processed Foods	Bangladesh will not be able to provide cash incentives for agro products after graduation.
9.	Fisheries Sector	<ul style="list-style-type: none"> <li>◆ Subsidies on fuel for marine fishing trawlers may not be provided.</li> <li>◆ Cash incentives for export of sea borne fisheries will not be continued.</li> <li>◆ Bangladesh will no longer be eligible for grants and low-interest loans under official development assistance (ODA) from developed nations.</li> </ul>
10.	Livestock Sector	<ul style="list-style-type: none"> <li>◆ Bangladesh will not be eligible to provide export subsidies after graduation. This may lead to sluggish growth of the sector, since govt. support is still required for livestock sectors.</li> <li>◆ Bangladesh will lose duty-free market access in different countries like UK, EU, Japan, Canada, United Arab Emirates, Canada, Thailand, Maldives, Kuwait, Australia etc.</li> <li>◆ Bangladeshi meat and dairy products will be less competitive in the international markets once the preferential treatment for Bangladeshi products is no longer applicable.</li> <li>◆ Bangladesh will no longer be eligible for grants and low-interest loans under official development assistance (ODA) from developed nations.</li> </ul>
11.	Software & IT related Services Sector	<ul style="list-style-type: none"> <li>◆ Bangladesh will need to ensure computer and related services (CRS) related to compliance required under the TRIPS agreement as well as other international treaties.</li> </ul>
12.	Tourism Sector	Sector specific challenges are found but no LDC graduation specific challenges are evident.
13.	Nursing and Midwifery Services	Sector specific challenges are found but no LDC graduation specific challenges are evident.

### **Trade Roadmap for sustainable graduation and implementation matrix**

In light of the upcoming graduation-related challenges, a roadmap for 12 sectors has been proposed that aims to provide a detailed guideline of the steps that need to be undertaken to combat the challenges and overall development of the sectors to increase competitiveness. Some of the interventions proposed as a part of the roadmap would require multi-sectoral support for successful implementation. This roadmap incorporated actions and interventions based on the stakeholders' opinions and feedback. The roadmap is presented in a tabular format with six separate columns that provide an overview of required actions in terms of Objectives, Recommended Intervention(s), Specific Action (s), Lead Ministries/Agencies, Supporting Ministries/Agencies and a specific timeline. Proposed trade roadmap for sustainable graduation is available in the Annexure.

### **Implementation arrangement**

The implementation of the trade roadmap of 12 sectors in Bangladesh requires a well-coordinated effort between various government agencies, ministries and stakeholders. The trade roadmap recommends specific interventions with clear objectives for each sector and outlines specific actions to achieve those objectives. The trade roadmap also recommends lead ministries/divisions for each sector, as well as their supporting ministries/divisions. It also indicates the lead ministry/division is responsible for implementing monitoring the roadmap in association with supporting ministries/divisions within the proposed timeline. The main tasks of the lead agencies will be to identify priority areas of trade roadmap, review the actions and timeline of the roadmap including implementation of the action plans.

### **Resource mobilization plan**

A resource mobilization plan is essential for implementing the trade roadmap as it enables the identification and allocation of resources necessary to achieve the desired goals and objectives. The lead ministries or agencies may primarily assess the required, available and expected funding sources and funding gaps for the implementation of the trade roadmap. According to the assessment, the lead agencies may prepare a resource mobilization plan considering their allocated budget and request Finance Division for allocating additional fund, if required. The Finance Division will assess the funding request and allocate the resources available. Moreover, The Economic Relations Division (ERD) may negotiate with development partners for necessary financial support as required by the lead ministries.

### **Monitoring & Evaluation mechanism**

An effective monitoring and evaluation (M&E) mechanism is crucial to implement the trade roadmap successfully. The trade roadmap has included specific actions and a timeline to measure progress towards achieving its goals and objectives. In addition, the lead agency will constitute a committee to monitor the progress of the implementation of the roadmap. A focal person may be engaged from the lead Ministry/Division who can coordinate the monitoring activities. The lead agencies should regularly collect data, analyze it, and report on progress to ensure that the roadmap is on track. A central coordination committee led by Ministry of Commerce comprising relevant ministries/divisions can be established for ensuring effective monitoring and evaluation of the implementation of the roadmap. The committee may meet in every six months to monitor and evaluate the progress of the roadmap. The central committee of the Ministry of Commerce will apprise the National Committee on LDC Graduation under Prime Minister's Office about the progress of the roadmap. Establishing clear communication and collaboration among the stakeholders are crucial to the success of the M&E mechanisms.

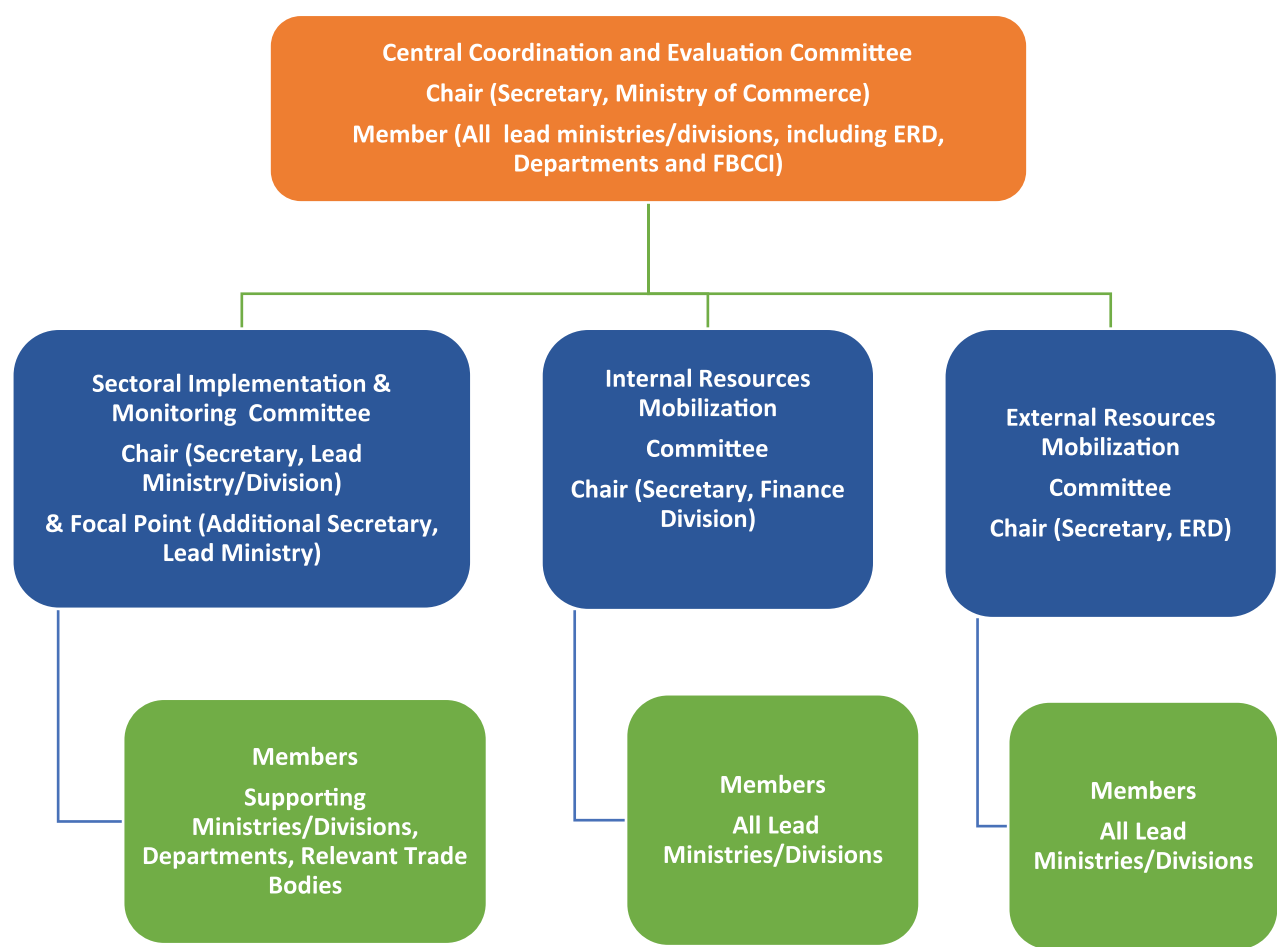
**Integration in national plans and budget**

It is imperative to integrate the trade roadmap into the country's national plans and budgets to ensure the successful implementation of the roadmap in Bangladesh. This entails assimilating the trade roadmap's objectives and goals into relevant national policies and strategies. Furthermore, sector-specific ministries or divisions must allocate adequate budgetary resources towards implementing the trade roadmap. Regarding financial support, the lead ministry/division may contact Finance division, Economic Relations Division and Respective division of the Planning commission.

**Proposed Implementation, Monitoring and Evaluation and Resource Mobilization Arrangement:**

The following diagram depicts the outline of implementation, monitoring and evaluation and resource mobilization arrangement for the proposed roadmap:

*Figure 54: Proposed Implementation, Monitoring and Evaluation and Resource Mobilization Arrangement*



## **Conclusions**

Export is the lifeline of the economy of Bangladesh. Export diversification along with developing sectoral competitiveness will be the fulcrum in sustaining Bangladesh's economic growth during and after the LDC graduation. The study explored the trade performance of the country over the years and outlined potential impediments to LDC graduation. Moreover, updates and actions taken on the interventions on the DTIS 2016 recommended four-pillar strategy to address the trade-related challenges of Bangladesh are delineated in this study. Based on the detailed existing literature review, key informant interviews and stakeholder consultations, The study analyzed trade-related graduation challenges and prospects of the 12 sectors of goods and services, including Readymade Garments (Woven and Knitwear), Pharmaceuticals and API, Leather and Leather Goods, Non-Leather Footwear, Light Engineering including Electronics and Electrical Products, Shipbuilding, Plastic Products, Agro-products and processed foods, Fisheries and Livestock, Software & IT related Services, Tourism, Nursing and Midwifery Services. The study highlights sector-specific strengths, weaknesses, opportunities, threats, and strategies to overcome them to realize the export potential and sustain export-led growth. Also, the study proposed trade roadmaps for each sector that aim to overcome trade-related graduation challenges as well as build sectoral competitiveness for sustainable graduation and economic growth.

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## Annexure- Trade roadmap for sustainable graduation

### 1. Trade Roadmap for RMG sector

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
1. Develop a skilled and industry-ready workforce	Establish industry-based training institute/s	<ul style="list-style-type: none"> <li>Provide incentives in establishing industry-based training institute.</li> <li>Ensure collaboration with RMG manufacturers for setting up modern machinery and technology-based institute staffed with highly qualified trainers.</li> </ul>	Ministry of Industries (MoIND)	FD, MoC, BTEB, NSDA, BGMEA, BKMEA, RMG factories.	12 - 36
2.Improve productivity	Adopt upgraded technologies, production processes including digitization and automation	Make realistic assessment for upgraded technology uptakes in Bangladesh's RMG industry context; assess investment requirements including potential sources of fund; learn best practices from competing countries such as China, Vietnam.	Ministry of Commerce (MoC)	NPO, ICTD, BKMEA, BGMEA	24
	Improve product design locally through Research and Development (R&D)	Provide technical support services such as bringing in international design experts, establish required infrastructure in order to enhance product design capability of local manufacturers.	Ministry of Industries (MoIND)	NPO, BGMEA, BUFT, BKMEA, BGMEA	12
3. Ensure environmental and social compliance	Promote environmentally complied factories	Continue preferential tax facility for the green factories.	National Board of Revenue (NBR)	MoC, MoIND, FD	24
	Introduce safety net program taking collective initiative from public and private sector to establish workers' welfare fund with a proper management system in place.	<ul style="list-style-type: none"> <li>Respective ministry and trade organizations to ensure individual enterprises create welfare funds for workers' wellbeing.</li> <li>Workout the specifics for administration of the fund.</li> </ul>	Ministry of Labour and Employment (MoLE)	MoC, FD, BGMEA, BKMEA	12-36

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
4. Simplify procedure for the bond license holder to release goods, machinery, etc. by full automation.	Ensure effective management of an automated system at customs with right people in place.	<ul style="list-style-type: none"> <li>• Introduce shifting system in customs houses to ensure faster customs assessment.</li> <li>• Introduce Key Performance Indicator (KPI) of relevant staff for their services for processing.</li> <li>• Prioritize releasing of raw materials in the ports.</li> <li>• Arrange separate shed to store the products according to warehouse standard.</li> <li>• Develop zone wise ICD according to density of the industry nearby rail station. For example, an ICD to be set up in Gazipur area to facilitate the industry in Gazipur, Savar, Sreepur, Mymensingh, Tangail.</li> </ul>	National Board of Revenue (NBR)	MoC, FD, Customs Department, BKMEA, BGMEA	06- 12
5. Retain the preferential market access	Negotiate preferential market access with potential countries	Sign Memorandum of Understandings (MoUs), Free Trade Agreement (FTA), Preferential Trade Agreement (PTA), Comprehensive Economic Partnership Agreement (CEPA).	Ministry of Commerce (MoC)	MoFA	Continuous
6. Diversify product basket and market	Take focused efforts for manmade fibre (MMF) and other natural fibre to catch up with the growing market in this space.	Provide incentives in research and capacity building for ensuring faster growth in manufacturing MMF based products	Ministry of Commerce (MoC)	FD, NBR, DOT, BUTEX, BUFT, Relevant Industry Associations and Manufacturers.	12 - 36
		Accelerate R&D efforts to develop jute fibre for industrial usage particularly for RMG.	Ministry of Textiles and Jute (MoTJ)		
		Develop creative design capacity to cater to international markets.	Ministry of Industries (MoIND)		
	Identify promising markets for specific products;	Conduct international market research	Ministry of Commerce (MoC)		

## 2. Trade Roadmap for the Pharmaceutical and API sector

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
1. To develop skilled workforce	Skill and reskill the existing workforce	<ul style="list-style-type: none"> <li>• Conduct technical need assessment</li> <li>• Develop training curriculum</li> <li>• Organize training resources including identification of effective trainers</li> <li>• Schedule training events</li> </ul>	Medical Education and Family Welfare Division (MEFWD)	DGDA, UGC, TMED, NSDA, NPO, DGDA, BAPI and pharmaceutical Manufacturers	36
	Introduce industry oriented practical curriculum at vocational, and tertiary educational institutions	<ul style="list-style-type: none"> <li>• Engage with targeted institutions involving respective ministries or boards, and industry representatives to review current curriculum.</li> <li>• Form a committee of experts to revise the curriculum</li> <li>• Ensure curriculum harmonization for API and pharmaceutical study in tertiary education</li> </ul>			
2. To develop technical know-how	Investment in R&D and API molecules synthesis	<ul style="list-style-type: none"> <li>• Invest in R&amp;D &amp; reverse engineering, technical knowhow of API, lab technicians &amp; accreditation</li> <li>• Exempt tax on R&amp;D investment</li> <li>• Develop new molecules</li> <li>• Incentivize bioequivalence test laboratory, CRO, chemical synthesis, lab technicians and accreditation specialists</li> <li>• Engage BCSIR in Bioequivalence test</li> <li>• Promote common facilities for API synthesis</li> <li>• Raise capacity of Contract Research Organization (CROs) to conduct clinical trials for biosimilar and biotech products.</li> <li>• Establish research institutions capable of undertaking R&amp;D activities like NIPER and CDRI in India (e.g., Bangladesh Institute of Pharmaceutical Education, Research and Development – BIPERD)</li> <li>• Facilitate Technology transfer through FDI</li> </ul>	Ministry of Industries (MoIND)	FD, BB, NBR, NPO, BIDA BSCIC, BAPI, BAB, Pharmaceutical and API industries.	72

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
3. To prepare for LDC graduation	Revise the patent protection act	<ul style="list-style-type: none"> <li>• Embed TRIPS and pharmaceutical waiver elements for LDC in the Patent Act so that no legal issues can be raised now and later</li> <li>• Allow the patent registration of a product after November 2026</li> <li>• Make use of relevant research exemption as per section 38 of Patent Act 2022</li> </ul>	Health Services Division (HSD)	MLJPA, DGDA, MoH&FW, DPDT, BAPI, Pharmaceutical and API industries.	18
4.To ensure quality control of pharmaceutical product	Strengthen the regulatory process of quality control	<ul style="list-style-type: none"> <li>• Ensure quality of pharmaceutical product both for domestic consumption and Export.</li> <li>• Ensure standard API use for manufacturing pharmaceutical products.</li> <li>• Make mandatory registration for pharmacies to sell pharmaceutical products.</li> <li>• Ensure cool chain facilities for export</li> </ul>	Health Services Division (HSD)	DGDA, PCB	36
5.To become self-reliant in API production	Develop all types of infrastructure in API park	<ul style="list-style-type: none"> <li>• Ensure all infrastructure and utilities facilities including uninterrupted electricity, gas connection, common effluent treatment plant (CETP), fire extinguisher, drainage system in the API park.</li> <li>• Establish common facilities for individual research center in API park</li> <li>• Establish common quality control facility in API Park</li> </ul>	Ministry of Industries (MoIND)	MoC, FD, MoPEMR, BSCIC	18
	Incentivize the local API manufacturing sector	<ul style="list-style-type: none"> <li>• Ensure tax break, tax exemption, tax holiday and other bonded ware house related facilities as urged in API policy 2018</li> <li>• Promote investment in R&amp;D for API through tax holiday</li> </ul>	Finance Division (FD)	NBR, DGDA, BAPI, Pharmaceutical & API industries	26
	Facilitate known molecules registration	Get as many innovations and known molecules registration in public domain as possible, before graduation, to avoid implications of patent regime	Ministry of Industries (MoIND)		

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
6. To expand Market access both in traditional & nontraditional market	Promote pharmaceutical products export	<ul style="list-style-type: none"> <li>Promote export through direct communication support by the Bangladesh embassy in foreign countries</li> <li>Arrange study visits to gain knowledge regarding stringent regulatory barriers in destination countries</li> </ul>	Ministry of Commerce (MoC)	MoFA, FTA Wing, Export Wing	Continuous
	Signing FTA and PTA with potential countries	<ul style="list-style-type: none"> <li>Define the strategies for market access after graduation and sign FTA and PTA</li> <li>Expedite registration and marketing authorization of pharmaceutical product in abroad, where the Bangladesh embassy will provide catalytic support role to coordinate with the respective national regulatory authority (NRA).</li> </ul>			
7.To ensure investment friendly environment	Facilitate investment	<ul style="list-style-type: none"> <li>Make regulatory procedure of business easier and reduce policy uncertainty especially for taxation</li> <li>Ensure easier process of BIDA investment policy for foreign investor</li> <li>Activate One Stop service of BIDA and BEZA</li> <li>Activate National Single Window of NBR</li> </ul>	Bangladesh Investment Development Authority (BIDA)	MoC, MEFWD, BEZA, RJSC, NBR, CCI&E, DGDA	36
8.To enable policy environment for patented drug production and accession	Strengthen DPTD (Department of Patents, Designs & Trademarks)	Strengthen DPDT as to disposal of patent issues in terms of pharmaceutical products in favor of Bangladesh.	Ministry of Industries (MoIND)	MoC, LPAD, DPDT	36
	Activate National IP policy 2018	Upgrade National IP policy 2018 keeping in the purview TRIPS flexibilities till November 2026			



### 3. Trade Roadmap for Leather and Leather goods sector

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/ Agency	Supporting Ministries/ Agencies	Timeline (In months)
1.To increase the efficiency and productivity	Develop schemes for enhancing efficiency and productivity of the leather, leather goods and leather footwear manufacturing firms Initiate training programs for enhancing skill of mid-level officials and tannery, leather workers	<ul style="list-style-type: none"> <li>Initiate performance-based tax incentives for manufacturing firms who will demonstrate yearly efficiency and productivity growth.</li> <li>Provide incentives on utility bills for exemplifying higher efficiency in energy usage.</li> <li>Ensure favorable policy support for permit, fees etc.</li> <li>Provide regular training programs for the workers and mid-level officials based on the industry needs.</li> </ul>	National Skills Development Authority (NSDA)	MoC, MoIND, MoPEMR, NBR, BTA, COEL, ILET, KUET, LRI, BCSIR and Business Associations	36
	Source technical know-how and digital technology from abroad and incorporating global best practices.	<ul style="list-style-type: none"> <li>Explore neighboring country and top leather exporter's practices for adoption and replication.</li> <li>Facilitate digital technology adaptation in production and marketing process</li> </ul>	Ministry of Industries (MoIND)	LRI, COEL, BTA, BCSIR	Continuous
2.To ensure proper management for collecting raw hides and increase market efficiency for raw hide collection	Ensure utilization of abundant domestic raw hides Enhance capacity of the raw hide collectors, storer, tanners and merchants Reduce costs and lead time and improve raw material availability	<ul style="list-style-type: none"> <li>Streamline the procurement process by providing funding and developing a more efficient collection, transportation and preservation facilities</li> <li>Establish of modern slaughterhouse</li> <li>Formalize the informal transactions of the small tanners, warehouse service providers, merchants and vendors by incorporating digital payments.</li> <li>Develop schemes for improving storage facilities for the raw hide storers</li> <li>Establish Strong backward and forward linkage industry required in terms of comparative advantage</li> <li>Provide incentives to backward linkage industry like accessories.</li> </ul>	Ministry of Industries (MoIND)	FD, BIDA, LGD, DLS, BB, NBR, SMEF, BTA, LFMEAB, BFLFEA	Continuous

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/ Agency	Supporting Ministries/ Agencies	Timeline (In months)
3. To ensure adequate funds and accessibility of funds and improve financial access for SMEs	Set up special funds by financial institutions to lend at concessional rates as well as explore expanding existing funding sources Developing an SME credit scoring model	<ul style="list-style-type: none"> <li>Establish credit facilities that offer conditional finance at concessional rates for meeting objectives such as compliance, value chain upgradation and promotion of market.</li> <li>Increase fund allocation for the leather sector in Export Development funds.</li> <li>Reduce bank interest rate for the manufacturers.</li> <li>develop own SME credit scoring models by commercial banks based on guidelines.</li> </ul>	Financial Institutions Division (FID)	BB, SMEF, Various Commercial Banks.	12-18
4. To ensure LWG certification for more tanneries	Develop policies, schemes and supporting environment for attaining LWG certification.	<ul style="list-style-type: none"> <li>Target at least 50 tanneries for LWG certification.</li> <li>Give permission for Individual ETP development.</li> <li>Provide Low-cost financial loan facility to tanneries.</li> </ul>	Ministry of Industries (MoIND)	MoC, BB, BTA, BFLFEA	12
5. To improve Compliance across the industry	Develop social, environment, chemical, safety, occupational and health, compliance guidelines and certification schemes for ensuring ESQ and ESG.	<ul style="list-style-type: none"> <li>Create awareness program for 360-degree compliance issues.</li> <li>Develop financial support scheme for factories who are interested and able to improve the ESQ, ESG compliance; particularly for fully compliant factories</li> <li>Establish international accredited laboratory facilities for quality compliance</li> </ul>	Ministry of Industries (MoIND)	MoC, MoLE, BSTI, BAB, BTA, LFMEAB, BFLFEA	24
6. To reduce the cost of imported inputs and components and improve backward linkage in leather footwear	Authorize business associations to review the utilization declarations provided by exporters; Encourage investments in the components manufacturing industry that can cater to the needs of manufacturers in Bangladesh.	Allow Special Bonded Warehouse facility for all export-oriented leather and leather goods manufacturers;	Ministry of Commerce (MoC)	FD, NBR, BTTC, BC, Trade associations	12
		Develop incentives for improving existing backward linkage industries. These incentives can range from tax holiday for the new investments and backward linkage industries.	Ministry of Industries (MoIND)		

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/ Agency	Supporting Ministries/ Agencies	Timeline (In months)
7. Promote Women led entrepreneurship	Special fund and training program for generating women entrepreneurs	<ul style="list-style-type: none"> <li>Identify women entrepreneurs in leather sector and creating a database.</li> <li>Conduct need assessment for training program for women entrepreneurs and initiate training programme</li> <li>Provide special incentives (like tax credit, low interest loan and etc.) for women led leather factories.</li> <li>Reduce corporate tax for women owned enterprises</li> </ul>	Ministry of Labour and Employment (MoLE)	MoIND MoC, MoWCA, BB, NBR BFTI, BWCCI, Business Associations	36
8. Initiating a SME supportive linkage development program	Scheme development and fund allocation for a linkage development program	<ul style="list-style-type: none"> <li>Select at least 10 SME suppliers to work with by top leather goods, and footwear manufacturing businesses</li> <li>work closely with SMEs, share know-how, and standards to improve the SMEs, and include them in the export based global value chain.</li> <li>Provide special financial incentives and Tax rebates to leading firms for collaborating and assisting SMEs</li> </ul>	Ministry of Industries (MoIND)	MoC, FD, BB, NBR	36
9. To encourage high value addition production.	Develop supporting scheme and incentivize the leather goods and footwear manufacturer for producing and exporting high value products	<ul style="list-style-type: none"> <li>Provide financial incentives based on the value addition and production diversification.</li> <li>Initiate special recognition programs for high value leather goods exporters.</li> <li>Promote investment in R&amp;D for new product design through tax holiday</li> </ul>	Ministry of Industries (MoIND)	MoC, NBR, EPB, Business Associations	24
10. To encourage product and Market Diversification	Incentive program for new product development and new market entrance for existing and new exporters	<ul style="list-style-type: none"> <li>Offer special scheme of cash/tax/incentives for exporting existing leather products to new countries up to 2029.</li> <li>Offer special scheme of incentives for new and existing exporters for exporting to new markets.</li> </ul>	Ministry of Commerce (MoC)	MoIND, FD, NBR, BB, EPB, Business Associations	18-24
	Rationalize tariff to minimize anti export bias	<ul style="list-style-type: none"> <li>Provide taxes &amp; duties exemption for the investor</li> <li>Rationalization of value added taxes</li> </ul>	Bangladesh Investment	FD, NBR, BB, Scheduled Bank	24

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/ Agency	Supporting Ministries/ Agencies	Timeline (In months)
		<ul style="list-style-type: none"> <li>Reduce import duty on capital machineries</li> </ul>	Development Authority (BIDA)		

#### 4. Trade Roadmap of the Non-Leather Footwear sector

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
1. To strengthen skills development institutions	Upgrading the facilities at COEL, ILET and other similar institutions to address industry-specific needs	Conduct consultations with ILET, Dhaka University, KUET, BUET, and other similar institutions, including business associations, to assess the status of facilities and equipment and upgrade them accordingly.	National Skill Development Authority (NSDA)	BCSIR, BUET, KUET, SMEs, ILET, LFMEAB, LRI, EWU, COEL	36
2. To develop cluster hub infrastructure for non-leather footwear in different economic zone	Establish cluster hub and common facility center for SMEs	<ul style="list-style-type: none"> <li>Conduct need assessment on establishing Common Facility Centre and establishing common design and pattern, Products, Sample, Testing.</li> <li>Provide access to technology and equipment like 3D printers, computer-aided design software.</li> <li>Monitor and evaluate the success of the cluster hub and facility center, and adjust the program as necessary.</li> </ul>	Ministry of Industries (MoIND)	BEZA, SMEF, BSCIC, COEL, Trade Bodies.	36-60
3. To Increase productivity	Conduct training of the trainer's programme (worker, mid and Top management)	<ul style="list-style-type: none"> <li>Conduct a skills gap analysis to identify the skills that are currently lacking in the workforce</li> <li>Organize long and short-term training programmes for Worker, Mid and Top Management.</li> <li>Evaluate the effectiveness of the training program and adjust it as necessary.</li> </ul>	Ministry of Industries (MoIND)	BCSIR, SMEF, BUET, KUET, SEIP, COEL, ILET	36-60

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
4. To invest in research and development	Provide research and development grants to BUET, KUET, COEL, and similar institutions to undertake applied research while these institutions should also create their own revenue streams	<ul style="list-style-type: none"> <li>Identify areas for research, with practical applications in the non-leather sector.</li> <li>Establish a research center to facilitate research and development</li> <li>Develop training programs to promote innovation and skill development in the non-leather sector</li> </ul>	Ministry of Industries (MoIND)	BESIC, EC4J Project, BSTI, BFTI, ILET, BUET, KUET, EWU, COEL	36
5. To improve interaction between academics and Non-Leather Footwear industries	Setting up a communication channel for regular interaction between industry and academia for Idea Development and Sharing	Organize knowledge-sharing events for non-leather footwear manufacturers to facilitate the sharing of knowledge and ideas.	Ministry of Industries (MoIND)	TMED, SHED, KUET, NSDA, BCSIR, BSCIC, LFMEAB, LRI, COEL, ILET and polytechnic institutes	Periodic
6. To enhance efficiency	Assist in upgradation of technology	Provide risk sharing and investment support in: <ol style="list-style-type: none"> <li>Manufacturing technology upgradation</li> <li>Digital adaptation</li> <li>Adoption of technologies that ensure sustainability</li> </ol>	Ministry of Commerce (MoC)	MoIND, NSDA, DPDT	36-40
7. To improve raw material availability	Improve the supply of raw materials such PU, PVC, Upper Metatrails, Glu and different accessories	<ul style="list-style-type: none"> <li>Establish strong backward and forward linkage industry for PU, PVC, Upper Metatrails, Glu and different accessories</li> <li>Provide incentives to backward linkage industry for PU, PVC, Upper Metatrails, Glu and different accessories.</li> </ul>	Ministry of Commerce (MoC)	MoIND, FD, NBR, BB, LFMEAB, BFLLEA	12-60

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
8. To ensure adequate funds and accessibility	Setting up of special funds by financial institutions or multilateral agencies to lend at reasonable rate and explore expanding existing funding sources	Create a fund for a credit line, especially for the small and medium-sized footwear manufacturers, allocate in Green Transformation fund and lowering bank interest rate for the manufacturers.	Financial Institutions Division (FID)	BB, SMEF, Various Commercial Banks	6-12
9. To improve Access to Finance	Develop an SME credit scoring model	Develop SME credit scoring models based on guidelines.	Financial Institutions Division (FID)	BB, SMEF, Various Commercial Banks,	36
	Develop channels to increase funding for non-leather sector manufacturers investing in new technology or compliance-related initiatives.	Increase fund allocation for the non-leather sector in Export Development funds and lower the Bank interest.	Financial Institutions Division (FID)	MoIND, MoC, BB	12
10. To ensure overall Environmental compliances	Assist manufacturers with better waste management and energy efficiency techniques.	Develop waste management system for plastic recycling and help private manufacturer develop their own energy efficiency techniques	Ministry of Labour and Employment (MoLE)	MoIND, MoC, FD, BSCIC, LFMEAB, BFLFEA	36-60
11. To improve social compliance	Assist manufacturers to improve social compliance	<ul style="list-style-type: none"> <li>• Ensure standard working hours and wage.</li> <li>• Ensure safe working environment for women.</li> <li>• Implement special provisions (like part time working agreements, work from home facility, corporate child care facility) for women employees.</li> </ul>	Ministry of Labour and Employment (MoLE)	MoIND, MoWCA, BAB, LFMEAB BFLFEA	36
12. To ensure quality compliance	Strengthen the institutional capacity of standard testing institutions	Lower the use of harmful substances in consumer products Build capacity of BAB and BSTI for testing parameters of international requirements.	Ministry of Industries (MoIND)	MoC, BSTI, DIFE, BSCIC, SMEF, DCCI, Trade Bodies.	12-60



Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
13. To reduce complications of importing raw materials for re-export	Simplify process of importing raw materials for re-exporting finished product	<ul style="list-style-type: none"> <li>Simplify DoE's rules for clearance of raw materials for re-export and shorten the lead time (Weekend, and Holiday support to be required)</li> <li>Provide bonded warehouse facility for SMEs</li> </ul>	Department of Environment (DoE)	MoC, NBR, BB, SMEF	12-24
14. To improve policy environment for trade and investment	Ensure predictability and decrease planning risk for investments for ODM	Formulate supportive policy for enabling transformation from OEM to ODM.	Bangladesh Investment Development Authority (BIDA)	MoIND, MoC, NBR, FD, BTTC	12-18
15. To improve market access for the non-leather footwear manufacturers	Prepare detailed terms of reference for extensive export marketing.	Strengthen EPB as a center of export promotion and increasing the capacity accordingly.	Ministry of Commerce (MoC)	MOFA, EPB, Business Associations	12
16. To enhance the image of the industry/country in select markets abroad.	Bangladesh should engage country experts and PR agencies for major countries to conduct a year-long publicity through event/expo featuring leading non-leather footwear exporters and their key products.	Support manufacturers regarding advertisement in leading international magazines and electronic media to aid the general product - discovery process of export diversification.	Ministry of Commerce (MoC)	MoFA, EPB, Business Associations	36
17. To attract foreign direct investments from other countries	Improve the business enabling environment	<ul style="list-style-type: none"> <li>Offer tax incentives and exemptions to foreign investors</li> <li>Streamline and simplify the process of starting and running business</li> </ul>	Bangladesh Investment Development Authority (BIDA)	MoFA, MoC, NBR, FD, BB, MoS, BLPA, Relevant business organizations	12

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
		<ul style="list-style-type: none"> <li>Port facilities should be improved to reduce lead time</li> <li>Banking arrangements should be simplified and business friendly.</li> </ul>			
18. To Pursue for different types of agreements with potential countries	Negotiations in various forum	Pursue for different agreements i.e., FTA, PTA, RTA and etc. with potential countries	Ministry of Commerce (MoC)	MoFA, FTA Wing	Continued
19. To improve R&D for product design and development	Establish R&D facilities	<ul style="list-style-type: none"> <li>Identify a set of international institutes for training and collaboration and promoting R&amp;D facilities.</li> <li>Establish R&amp;D facilities within the industry in accordance with market needs.</li> </ul>	Ministry of Industries (MoIND)	MoC, BUET, KUET, ILET, Business Association.	18-24
20. To improve fashion and design capability	Establish Design, Development and Fashion Centers for non-leather footwear sectors.	<ul style="list-style-type: none"> <li>Conduct a feasibility study to identify the requirements of this design studio.</li> <li>Establish design studio.</li> <li>Hire experienced non-leather footwear designers with 3D design software and product development skills.</li> <li>Establish a product development process that encompasses ideation, research, concept development, design, and production.</li> </ul>	Ministry of Commerce (MoC)	MoIND, MoFA, BIDA, EPB, BFTI	24

## 5. Trade Roadmap for Light Engineering Sector including Electronics and Electrical Products

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
1. Improve productivity and processes	Assess skills base of workforce and develop their skills.	<ul style="list-style-type: none"> <li>Develop industry-based training center with highly qualified trainers.</li> <li>Conduct Training for Trainer (ToT) course for trainers; training for all kinds of machine operators.</li> </ul>	National Skills Development Authority (NSDA)	MoIND, FD, NPO, LEISC, BTEB	Continue

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
		<ul style="list-style-type: none"> <li>Bring international training experts for ToT courses</li> </ul>			
	Build R&D capacity to improve product design	Provide technical and financial support to the local machinery manufacturers to invest in R&D for improving their design and production capacity.	Ministry of Industries (MoIND)	BUET, BITAC, Related Associations	12-36
2. Create Export Readiness Fund (ERF)	Provide SMEs with funds to mitigate risks they undertake to enter export markets.	Keep special budget allocation to support SMEs to penetrate export markets and cover the potential risks.	Finance Division (FD)	MoC, BB, SMEF	12-24
3. Improve quality of products adhering to compliance requirements	Establish testing and certification agencies	<ul style="list-style-type: none"> <li>Commission a study to assess the feasibility of and requirements for setting up a testing and certification agency.</li> <li>Develop parameters for national compliance certification, fully aligned with international compliances in collaboration with association members</li> <li>Analyze requirements and approve the setting up of the agency under the manufacturers' associations and Light Engineering Product Business Promotion Council (LEPBPC)</li> <li>Ensure sufficient heat treatment facilities</li> </ul>	Ministry of Industries (MoIND)	BAB, LEPBPC, Related Associations	18 - 24
4. Improve environmental and social compliance	Raise industry awareness regarding compliance, its costs and benefits in accessing local and export markets; enforce existing regulations;	Provide cash and non-cash incentives to compliant factories; Industry association/s to take concrete programs to improve compliance in their member factories	Ministry of Industries (MoIND)	MoC, MoEFC, MoLE, FD BB, Trade Associations	12- 48
5. Develop backward linkage to support the sector and reduce imports of raw materials	Ensure policy support for developing backward and forward linkage industries; Set up Light Engineering industrial parks for the sector	<ul style="list-style-type: none"> <li>Conduct feasibility &amp; location assessment for setting up of Light Engineering Industry Park.</li> <li>Ensure required infrastructures (Water, Power &amp; Fuel, Connectivity).</li> </ul>	Ministry of Industries (MoIND)	MoC, NBR, BIDA, BEZA, BEPZA, Trade Associations	12-36

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
		<ul style="list-style-type: none"> <li>Establish die and mould manufacturing facilities at the Light Engineering industrial parks</li> <li>Rationalize tariff structure for facilitating backward linkage development</li> </ul>			
6. To retain the preferential market access pursue different types of trade agreements with potential countries	Negotiate preferential market access with potential countries	Sign Memorandum of Understandings (MoUs), Free Trade Agreement (FTA), Preferential Trade Agreement (PTA), Comprehensive Economic Partnership Agreement (CEPA)	Ministry of Commerce (MoC)	MoFA, FTA wing	Continuous
7. Promote R&D for new product development	Provide financial support for carrying out R&D	Offer tax holiday for new product development through investment in R&D	National Board of Revenue (NBR)	IAT-BUET, EPB, MoFA, BITAC, Related Associations	Continuous

## 6. Trade Roadmap for Plastic Sector

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
1.To develop a skilled and industry-ready workforce and technical know how	Establish adequate facilities for developing industry specific technical know how	<ul style="list-style-type: none"> <li>Introduce petrochemical-based engineering and relevant programs or courses for developing skilled workforce</li> <li>Establish R&amp;D center</li> <li>Exempt tax on R&amp;D investment</li> <li>Establish design innovation center</li> </ul>	Ministry of Industries (MoIND)	MoC, UGC, BIPET BPGMEA BPFMEA, NSDA, NBR	Continuous
	Establish dedicated technical and vocational institutes to provide specialized trainings to the industries	Existing technical and vocational institutes to review their current curriculum and make necessary revisions to meet the industry needs to develop industry specific curriculum to provide specialized trainings on <ol style="list-style-type: none"> <li>Operation or maintenance of industrial machinery</li> </ol>	National Skills Development Authority (NSDA)	MoC, BIPET BPGMEA BPFMEA, MoE	Continuous

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
		II. Latest plastic production technology III. Quality control IV. Product design V. Die & mould design and preparation of molds			
2. Improve infrastructure	Develop common facility center (CFC) for the industries especially for SMEs to access technologies they cannot afford and also to get works done	<ul style="list-style-type: none"> <li>Equip CFCs with required machinery, tools, (CNC Milling, CNC Turning, Injection Moulding), etc.</li> <li>Develop services packages to offer to the industry</li> <li>Put in place managerial and technical human resources for management and operation</li> <li>Create revenue streams for the CFC to sustain over time</li> <li>Ensure industrial safety</li> </ul>	Ministry of Industries (MoIND)	MoC, BIPET BPGMEA BPFMEA	24-36
	Facilitate bulk import of raw materials	Establish central bonded warehouses.	Ministry of Commerce (MoC)	MoIND, FD, NBR, BB, BPGMEA, BPFMEA	24
3. To set up the proposed industrial park	Relocating the industries to industrial parks/special economic zones	<ul style="list-style-type: none"> <li>Hand over the land for setting up a plastic industrial estate at Sirajdikhan upazila in Munshiganj.</li> <li>Develop required infrastructure to make the park operational for industry to relocate</li> </ul>	Ministry of Industries (MoIND)	MoC, BSCIC, BEZA	12-18
4. Improving product quality	Creating enough facilities for the industry to access their required testing and certification facilities	<ul style="list-style-type: none"> <li>Raise awareness on the costs and benefits of quality products</li> <li>Make an assessment of the services and standards available currently and the kind of support needed, particularly for micro and small enterprises.</li> <li>Collaborate with trade associations- to develop parameters for national compliance</li> </ul>	Ministry of Industries (MoIND)	MoC, BSTI, BCSIR BUET, BPGMEA BPFMEA	18 - 24

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
		certification, fully aligned with international compliances. <ul style="list-style-type: none"> <li>Establish adequate number of accredited testing labs.</li> </ul>			
5. Sustainable Plastic Waste Management	Establish/adopt circular economy	<ul style="list-style-type: none"> <li>Adopt a specific action plan for waste management</li> <li>Implement 3R policy (Reduce, Reuse and Recycle) and prepare a specific action plan for this.</li> <li>Introduce incentives for research and development of new designs and materials of recycle plastic;</li> <li>Reduce health hazards of collecting plastic wastes</li> <li>Provide state-of-the-art recycling facilities in the formal sector</li> </ul>	Ministry of Industries (MoIND)	FD, MoEFC, DGHS, NBR, NPO BPGMEA, BIPET	12-24
6. Reduce costs related to compliance	Extend RMG sectoral incentives on compliance to the plastics industry	Approach responsible stakeholders with the rationale for extending plastic sector compliance incentives (e.g., special funds, GTF, to the plastics industry.	Finance Division (FD)	MoC, MoIND, BB, NBR, MoLE, WTO, BPGMEA, BPFMEA	6
7. Make a strong policy and regulatory environment for the plastic Industry	Simplify cumbersome duty drawback system	5-year tax holiday for all new investments and corporate tax reduction to 10% in case of existing compliant companies as applicable to green garment factories.	Internal Resource Division (IRD)	FD, MoC, NBR	12-18
	Upgrade the Plastic industries to the 'Green Category' from 'Orange Category' in the List of Environmental Rules.	Negotiate for categorizing plastic sector as a green industry with reference to other countries, especially neighboring countries.	Ministry of Industries (MoIND)	MoC MoEFC BPGMEA BPFMEA	12-18
	Incentives for research and development	Incentivizing research and development through investment risk sharing	Finance Division (FD)	BB, Bank & Financial Institutions	12



Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
8. Enhance Market diversification	Identify potential buyers for export and gain market information from established buyers	<ul style="list-style-type: none"> <li>Make a market intelligence platform available for the sector.</li> <li>Gain access to HS Code-wise shipping intelligence</li> </ul>	Ministry of Commerce (MoC)	MoIND, EPB, EC4J Projects, BPGMEA, BFTI, FBCCI	72
9. Boost Brand of Bangladesh and country image	Organise annual fairs and roadshows for showcasing products to local and international buyers	<ul style="list-style-type: none"> <li>Organise annual fairs and invite plastic products exporters to showcase their export quality products to international buyers.</li> <li>Open trade center in different countries for promoting export of plastic goods.</li> </ul>	Bangladesh Investment Development Authority (BIDA)	MoFA, MoC, EPB, BPGMEA	Biannually
	Prepare strong resource pool for branding of the industry	<ul style="list-style-type: none"> <li>Making country showcasing materials for branding (e.g. proper brochures/leaflets for branding purpose, presentation, promotional souvenirs) and digital contents</li> <li>EPB to set budget for country branding and Promotion</li> <li>Associations to provide necessary inputs</li> </ul>	Ministry of Commerce (MoC)	MoFA, EPB, BPGMEA	24
	Promote the industry globally	Promote the plastic industry to the importing countries	Ministry of Commerce (MoC)	MoIND, MoFA, EPB and associations	24
		Develop a plastic industry development centre for supporting information, technology transfer and technical assistance.	Ministry of Industries (MoIND)	MoC, BPC, NPO	24
10. Improve access to finance	Creation of special fund for the sector	<ul style="list-style-type: none"> <li>Increase fund allocation for the plastic sector from Export Development Funds.</li> <li>Extend existing EDF to 100% export-oriented and deemed-export oriented plastic manufacturing companies.</li> <li>Introduce special reward schemes for enterprises engaged in recycling units</li> <li>Provide financial support in R&amp;D, human resource development and employee welfare.</li> </ul>	Financial Institutions Division (FID)	MoC, BB, BPGMEA	12

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
11. Meeting environmental compliance	Introducing Environmental Management System (EMS) for creating awareness	<ul style="list-style-type: none"> <li>Establish CETP for waste management</li> <li>Introduce Environmental Management System (EMS) in all the plastic industries to regulate the industries and the policy support is needed in getting certification on: <ul style="list-style-type: none"> <li>I. ISO 14001</li> <li>II. Business Social Compliance Initiative Code of Conduct</li> <li>III. SEDEX members ethical trade audit</li> <li>IV. Good Manufacturing Practices for the production of food contact plastics</li> </ul> </li> </ul>	Ministry of Industries (MoIND)	BIPET, BPGMEA BPFMEA	12-24
12. To ensure data availability	Inclusion of data related to deemed export of plastic	Introduce a deemed export calculation system for inclusion of data related to deemed export of plastic goods in total plastic export data.	Ministry of Commerce (MoC)	EPB, BPGMEA BGAPMEA	12-18

## 7. Trade Roadmap for the Shipbuilding sector

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
1. To develop skilled workforce	Skilling and reskilling the workforce	<ul style="list-style-type: none"> <li>Conduct technical skills need assessment</li> <li>Develop training curriculum</li> <li>Organize training resources including identification of effective trainers</li> <li>Schedule training events</li> </ul>	Ministry of Industries (MoIND)	TMED, NPO, UGC, NSDA, BSBA, Universities, and different shipbuilding industries	36
	Introduce industry oriented practical curriculum at vocational, and tertiary educational institutions	<ul style="list-style-type: none"> <li>Engage with targeted institutions involving respective ministries or boards, and industry representatives to review current curriculum</li> <li>Form a committee of experts to revise the curriculum</li> <li>Institutionalize compulsory internship for graduate students</li> </ul>			

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
2. To ensure access to finance from formal sources	Introduce long term loan facilities in bank and NBFIs	Fixing long term debt repayment period	Financial Institutions Division (FID)	BB, All public ltd. & private ltd. Bank, and NBFIs	36
	Ensure Bank guarantee for export-oriented shipbuilding sector	<ul style="list-style-type: none"> <li>• Create a dedicated fund for providing bank guarantees at minimal cost</li> <li>• Institutionalize the sovereign guarantee for export-oriented shipbuilding sector</li> <li>• Ensure bid bond guarantees &amp; performance guarantees by bank</li> </ul>			
3. To modernize production process	Ensure technology up-gradation for production process	<ul style="list-style-type: none"> <li>• Use upgraded technology for production process</li> <li>• Innovate and apply the latest modern technology in shipbuilding sector</li> <li>• Invest in R&amp;D and training for technical people</li> <li>• Facilitate transfer of technology attracting foreign direct investment</li> </ul>	Ministry of Industries (MoIND)	TMED, NPO, NSDA, BIDA, BSBA, and other shipbuilding industries	72
4. To make the sector socially and environmentally compliant	Engage with industry, relevant ministry and other key stakeholders to introduce a robust compliance improvement program across the sector	<ul style="list-style-type: none"> <li>• Raise awareness on the importance of compliance including its cost and benefit at all levels – from management to the workforce</li> <li>• Develop effective communication tools/medium for awareness building</li> <li>• Prepare a social and environmental compliance guideline and respective companies to draw a comprehensive implementation plan with specific targets and timeline to achieve them</li> </ul>	Ministry of Labour and Employment (MoLE)	MoEFC, MoIND, BSBA and Other shipbuilding industries	48
5. To improve occupational health and safety (OHS)	Implement OHS program in the sector	Individual companies to identify OHS issues in their respective shipyards and set specific targets and timeline to achieve them	Ministry of Labour and Employment (MoLE)	MoIND, BSBA and Other shipbuilding industries	24

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
6. To develop backward linkage industry	Strengthen the backward linkage industry of the sector	<ul style="list-style-type: none"> <li>Reform Duty structure of imported raw materials, quality steel, machinery and equipment</li> <li>Ensure testing facilities of all plate, grade and other input quality of ship</li> </ul>	National Board of Revenue (NBR)	MoIND, BTTC, MoS, BSBA	25
		<ul style="list-style-type: none"> <li>Promote existing industry to produce IACS Class basic raw materials (steel, plate or equipment) for shipbuilding industry</li> <li>Promote production of Class vessels</li> </ul>	Ministry of Industries (MoIND)		
7. To reduce tax, VAT and duty burden on shipbuilding industry	Reduce tariff on imported raw materials	Allow tax- and duty-free raw materials import facilities	National Board of Revenue (NBR)	MoIND, MoC, BC	18
	Reduce corporate tax for shipbuilding sector like the RMG sector	<ul style="list-style-type: none"> <li>Introduce preferential corporate tax for green and compliant industry like RMG</li> <li>Adopt tax holiday and other non-fiscal support-oriented action plan for backward and forward linkage industries</li> </ul>			
8. To implement National Shipbuilding Policy 2021	Ensure coordination among the stakeholders of the policy	Provide tax holiday and duty exemption from NBR on imported raw materials as urged in the policy	National Board of Revenue (NBR)	MoIND, FD	18
		<ul style="list-style-type: none"> <li>Ensure bank guarantee facilities for bid guarantee, performance guarantee and other guarantee of payment for shipbuilding sector as suggested in the policy</li> <li>Ensure financing facilities from government with low interest rate as mentioned in the policy</li> <li>Create special fund for ensuring guarantee for shipbuilding sector as promised in the policy</li> </ul>	National Board of Revenue (NBR)	FD, BB All public Ltd. & private Ltd. Bank, and NBFi	36
9. To improve market access for domestic entrepreneurs	Define strategies for market access	<ul style="list-style-type: none"> <li>Define the strategies for market access after graduation</li> <li>Provide policy supports for participating various fairs &amp; international events</li> <li>Provide fiscal and nonfiscal support for participating in international tenders and other competitions</li> </ul>	Ministry of Commerce (MoC)	MoIND, EPB, different BSBA and shipbuilding industries	72

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
10. To ensure investment friendly environment in the sector	Attract domestic & foreign investment	<ul style="list-style-type: none"> <li>Reform the regulatory process of investment</li> <li>Activate One Stop service of BIDA and BEZA</li> <li>Activate National Single Window of NBR</li> </ul>	Bangladesh Investment Development Authority (BIDA)	MoC, BEPZA, BEZA, RJSC, EPB	18

## 8. Trade Roadmap for the Agro and processed food Sector

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
1. To ensure human resource development in agro sector	Providing training	<ul style="list-style-type: none"> <li>Provide season-based training to farmers</li> <li>Provide training for women and youth in agricultural food processing, marketing and packaging.</li> </ul>	Ministry of Agriculture (MoA)	MoWCA, DAE MoYS, NSDA, BARI, BRRI, BARC, BWCCI, Trade bodies	24-36
	Strengthening DAE and Plant Quarantine Wing (PQW)	<ul style="list-style-type: none"> <li>Engage more technical personnel in DAE and PQW</li> <li>Provide technical training to DAE and PQW officials</li> </ul>	Ministry of Agriculture (MoA)	DAE, PQW, NSDA	12-24
2. To ensure human resource development in Processed Food Sector	Introducing specialized subjects in educational institutes	<ul style="list-style-type: none"> <li>Establish world class food processing industrial technology institutes with specialized courses in food processing technologies in association with universities and institutions in developed countries and FAO.</li> <li>Update the syllabus of food sciences in the degree and post graduate degree courses</li> </ul>	Ministry of Agriculture (MoA)	DAE, Multilateral agencies (F.A.O.), BAPA.	24
	Establish industry-based training institute	Allocate matching grant for establishing industry-based training institutes	Ministry of Industries (MoIND)	MoC, FD, BB	12 - 36
3. To Improve Access to Finance	Providing venture capital facility	Establish credit facilities that offer long term conditional finance at concessional rates to meet compliance, value chain up-gradation, etc.	Financial Institutions Division (FID)	MoC, BB, BIDA, Commercial Banks	6-12
	Provide credit facility on easy terms with low interest	<ul style="list-style-type: none"> <li>Develop leasing programmes</li> <li>Provide financial support including tax incentives to foreign investors for setting up</li> </ul>			

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
		industrial units for food processing and packaging			
4. To ensure overall environmental compliances	Reduce environmental hazard related to harmful fertilizers and pesticides	<ul style="list-style-type: none"> <li>Establish farmers' school at union level for safe use of chemical fertilizers and pesticides, GAP, competitiveness and etc.</li> <li>Engage scientists in developing knowledge to adjust with climate change, adaptation and disaster mitigation</li> </ul>	Ministry of Agriculture (MoA)	DAE, MoEFC, BFVAEA	36
5. To improve social compliance	Assist manufacturers to improve social compliance	Provide a safe working environment for the workers including standard working hours and wage.	Ministry of Agriculture (MoA)	MoC, BAPA	36
6. To ensure quality compliance	Improve compliance with SPS requirements and traceability of exportable agro products	Create database for traceability of raw materials available with the farmers, pesticides and fertilizers and other hazardous materials (e.g., salmonella-free food products export (e.g., betel leaves)	Ministry of Agriculture (MoA)	MoC, DAE, Development partners, Trade bodies	18 - 24
		<ul style="list-style-type: none"> <li>Training to farmers on Good Agricultural Practices (GAP)</li> <li>Establish accredited laboratory in accordance with ISO/IEC-17025</li> <li>Establish Vapor Heat Treatment Facility</li> <li>Establish laboratories for vegetables and fruits processing.</li> </ul>	Ministry of Agriculture (MoA)	DAE, PQW, BFSA	24
	Extend incentives on compliance	Incentivise industries in adoption of a self-regulatory approach in meeting the requirements on safety and quality.	Bangladesh Bank (BB)	FD, NBR	6
	Update related legislative	<ul style="list-style-type: none"> <li>Update the legislations of Plant Quarantine Act and Rules,</li> <li>Pesticide Act and Rules</li> <li>Bio-pesticide regulations in accordance of IPPC and WTO;</li> </ul>	Ministry of Agriculture (MoA)	MLIPA, DAE, PQW	12 -18
7. Development of farming	Improve pre-harvesting process	Encourage farmers in adopting contract farming and Crop Zone farming.	Ministry of Agriculture (MoA)	DAE	Biannually



Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
	Improve post-harvesting process	<ul style="list-style-type: none"> <li>Development of post-harvest management e.g., packaging and agro-processing</li> <li>Incentivize research on technology development for post-harvest management</li> </ul>	Ministry of Agriculture (MoA)	DAE	12
8. To facilitate product diversification through R&D and technology upgradation	Incentivize R&D for diversification of agro-processed foods	<ul style="list-style-type: none"> <li>Provide incentives in research and development in identifying new kinds of exportable agro products</li> <li>Provide support for technology upgradation</li> <li>Exempt tax on R&amp;D investment</li> </ul>	Ministry of Agriculture (MoA)	MoC, FD, BB, DAE, EPB.	Continuous
	Incentives to set up high-tech machinery	Provide incentives in setting up of high-tech machinery in grass-root level.	Bangladesh Bank (BB)	NBR	6
9. To boost Bangladesh's brand and country image	Organise annual fairs for showcasing products to local and international buyers	<ul style="list-style-type: none"> <li>Shortlist international trade fairs for participation in discussion with association members.</li> <li>Make Country showcasing materials (e.g. proper brochures/leaflets for branding purpose, presentation, promotional souvenirs), visual documentary</li> <li>Set promotional budget for country branding</li> </ul>	Bangladesh Investment Development Authority (BIDA)	MoFA, MoC, MoA DAE, EPB, Trade Bodies	Biannually
	Leverage economic zones	Build a special economic zone (SEZ) for the Agro-food industry for uninterrupted electricity or electricity at low price	Bangladesh Economic Zones Authority (BEZA)	MoC, MoA, FD	24-36
	Bangladesh's missions abroad to promote the industry globally	<ul style="list-style-type: none"> <li>Promote the agro industry to the importing countries.</li> <li>Share the Food standard, import Policy, SPS requirement of the importing countries with the exporters</li> </ul>	Ministry of Foreign Affairs (MoFA)	MoA, MoC, EPB, BAPA	24
10. To prepare for LDC graduation	Initiate negotiation at WTO forums	Negotiate at WTO forums to include Bangladesh in the category of Net Food Importing Country	Ministry of Commerce (MoC)	MoA, BAPA, DAE	24
11. To reduce transportation costs and time	Reducing transportation costs for export of fruits and vegetables, flowers and other agro products by air	Rationalize air cargo fares in line with competitor countries.	Ministry of Civil Aviation and Tourism (MoCAT)	MoC, MoIND, MoA, DAE, CAAB, BBA	24-36

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supporting Ministries/Agencies	Timeline (In months)
12. Developing packaging, storage and standards	Establish multipurpose cold storages	<ul style="list-style-type: none"> <li>Establishment of cold storage system in international airports</li> <li>Establish regional packaging house</li> </ul>	Ministry of Civil Aviation and Tourism (MoCAT)	MoA, MoIND	24-36
	Incentivize integrated cooling chain	Incentivize industries for setting up cooling chain system	Finance Division (FD)	MoC, NBR, Private organizations & trade bodies	6-12
13. To promote new technologies	Promoting emerging technologies for new agro-processed products	Develop centres of excellence for biotechnology-based food production and processing like Central Food Technological Research Institute (CFTRI) of India	Ministry of Agriculture (MoA)	MoC, BSTI, Trade Bodies	24-36

## 9 Trade Roadmap for the Fisheries and Livestock Sector

### 9.1 Trade Roadmap for the Fisheries Sector

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/Agency	Supportive Ministries/Agencies	Timeline (in months)
1. Establish hygiene fish landing center, arat, depot & service center	Upgrading / Modernization of fish landing centers, arat, depot & service center	<ul style="list-style-type: none"> <li>Build required befitting infrastructural facilities</li> <li>Raise awareness on hygienic practices</li> <li>Ensure PPE provisions at the fish landing centers</li> </ul>	Ministry of Fisheries and Livestock (MoFL)	DoF	24
2. Establish an effective supply chain and marketing facilities	Introduce cold chain facilities for all through supply chain, harvesting, transportation & storage of fish.	<ul style="list-style-type: none"> <li>Create investment opportunities for cold chain development</li> <li>Make insulated or refrigerated fish vans available</li> <li>Make required upgradation of fishing vessel (Including artisanal) on board facilities</li> <li>Make availability of safe ice</li> <li>Build adequate cold storage facilities in important fishing hubs</li> </ul>	Ministry of Fisheries and Livestock (MoFL)	DoF BAU, SAU, BMFA, Private Sector, BFFEA	24

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/ Agency	Supportive Ministries/ Agencies	Timeline (in months)
		<ul style="list-style-type: none"> <li>Build/upgrade with cold storage hygiene facilities</li> <li>Effective monitoring tools development to ensure cool chain throughout the supply chain.</li> <li>Train relevant people in cold chain management.</li> </ul>			
3. Develop a skilled and industry-ready workforce	Develop skills development program including product diversification & value addition	<ul style="list-style-type: none"> <li>Assess training needs</li> <li>Develop training curriculum</li> <li>Organize training events for fish farmers, fishermen, processing industries, other supply chain stakeholders &amp; relevant officials.</li> </ul>	Ministry of Fisheries and Livestock (MoFL)	BFFEA, FTA, DoF, BFRI, NSDA	12
4. Leverage marine fisheries	Developing capability of harvesting marine fisheries	<ul style="list-style-type: none"> <li>Ensure availability of deep-sea trawler for marine fishing</li> <li>Provide training to fishermen on marine fish including CCRF (Code of Conduct of responsible fishing) &amp; other international regulations.</li> </ul>	Ministry of Fisheries and Livestock (MoFL)	BFFEA, DoF, BFRI, Trade Bodies	12
4. Build R&D capacity in fisheries sector	Establish state-of-the art R&D lab	<ul style="list-style-type: none"> <li>Create pool of experts for conducting R&amp;D</li> <li>Ensure quality testing of fish feed</li> <li>Develop testing facility for quality of safety of fish, feed &amp; other aqua inputs.</li> <li>Establish mutual linkage &amp; cooperation among DoF, research institute &amp; universities</li> </ul>	Ministry of Fisheries and Livestock (MoFL)	BAU, SAU, DoF, BFRI BMFA	12
5. Ensure quality of end products	Incorporate latest technologies for quality, safety & traceability of fish & fisheries products.	<ul style="list-style-type: none"> <li>Benchmark technologies currently being used.</li> <li>Conduct a pilot project on new technologies.</li> <li>Implement traceability</li> </ul>	Ministry of Fisheries and Livestock (MoFL)	DoF, BFRI	18

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/ Agency	Supportive Ministries/ Agencies	Timeline (in months)
	Establish effective supply chain	<ul style="list-style-type: none"> <li>• Ensure good governance</li> <li>• Minimize post-harvest loss</li> <li>• Accelerate information sharing among stakeholder</li> </ul>	Ministry of Fisheries and Livestock (MoFL)	DoF, BFRI, BMFA, Trade Bodies	12
	Develop fish vaccine and disease management system	<ul style="list-style-type: none"> <li>• Identify major fish diseases</li> <li>• Assess the requirement of vaccines</li> <li>• Ensure availability of required vaccines.</li> <li>• Develop a well-coordinated disease management system</li> </ul>	Ministry of Fisheries and Livestock (MoFL)	DoF, BFRI, Fish farmers	12
6. Ensure access to finance	Increase the availability of finance for SMEs in the sector & make available finance for fishermen, farmers & other value chain actors.	<ul style="list-style-type: none"> <li>• Set up special funds by financial institutions or multilateral agencies to lend at reasonable rates</li> <li>• Provide low interest loan.</li> <li>• Reduce utility charge (such as electricity) for production similar to agriculture.</li> </ul>	Financial Institutions Division (FID).	MoC, FD, BB, DoF	24
7. Increase production & quality of shrimp	Implement zoning system in shrimp production	<ul style="list-style-type: none"> <li>• Identify and demarcate most feasible and dedicated area for shrimp aquaculture.</li> <li>• Ensure necessary logistics required for zoning</li> <li>• Create necessary processing &amp; preservation facility in shrimp zone</li> </ul>	Ministry of Fisheries and Livestock (MoFL)	MoA, MoWR, MoEFC, BEZA, MoC, BB, MoIND, LGED	24
8. Ensure conducive policy environment for the growth of the sector	Make necessary reform of the existing policies and regulations	<ul style="list-style-type: none"> <li>• Adopt relevant policy &amp; regulations in corporation with international regulations</li> <li>• Review Export policy 2021-24 &amp; import policy order 2021-24, The fish &amp; Fishery Product (inspection &amp; quality control) act, 2020, Fish feed act 2011, Marine Fisheries act 2020 &amp; related rules &amp; policies.</li> </ul>	Ministry of Commerce (MoC)	MoFL, BAU, SAU, BMFA	24

## 9.2 Trade Roadmap for the Livestock Sector

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/ Agency	Supporting Ministries/ Agencies	Timeline (In months)
1. Dairy development	Develop smallholder dairy farms	Develop pro-poor models including appropriate contract farming schemes.	Ministry of Fisheries and Livestock (MoFL)	DLS, private sector	12-36
		Promote smallholder farming through integrated supply chain-based production, processing and marketing of milk and milk products	Ministry of Fisheries and Livestock (MoFL)	DLS, NDDDB, private sector	12-24
		Build capacity of the marginal farmers and ensure of high yielding breed to increase productivity	Ministry of Fisheries and Livestock (MoFL)	BLRI, DLS, private sector	12-24
		Ensure healthy housing with adaptation of technologies	Ministry of Fisheries and Livestock (MoFL)	DLS, BLRI	6-12
		Ensure easy access to veterinary services	Ministry of Fisheries and Livestock (MoFL)	DLS	6-12
	Develop pasteurization centres	Conduct need assessment for the pasteurization and mini cold chain	Ministry of Fisheries and Livestock (MoFL)	DLS, BLRI	6
		Allocate fund for the pasteurization centres	Finance Division (FD)	BB, RD CD	6-12
		Establish accessible pasteurization centres	Ministry of Fisheries and Livestock (MoFL)	DLS, private sector	6-12
		Ensure maintenance of cluster based pasteurization plant and mini cold chain.	Ministry of Fisheries and Livestock (MoFL)	DLS, private sector	12-24
	Develop National Dairy Development Board	Make 'National Dairy Development Board' effective as a regulatory body to promote dairy development.	Ministry of Fisheries and Livestock (MoFL)	RD CD BLRI, DLS	6-12
2. Meat production	Improve productivity	Develop cattle breeds for increased productivity at farm level	Ministry of Fisheries and Livestock (MoFL)	DLS	6-24

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/ Agency	Supporting Ministries/ Agencies	Timeline (In months)
		Ensure cross -breed and comfort of the cattle and upgrade the biosecurity of the animal	Ministry of Fisheries and Livestock (MoFL)	DLS	6-24
		Develop backward and forward linkage system to help improvement of existing cattle fattening system into private enterprises.	Ministry of Fisheries and Livestock (MoFL)	DLS	6-24
		Ensure healthy livestock housing with adoption of technologies	Ministry of Fisheries and Livestock (MoFL)	BLRI, DLS	6-12
	Improve establishment of mechanized slaughter houses	Establish mechanized slaughter houses around big cities, districts, municipality and Upazila headquarters, etc. to improve quality of meat	Ministry of Fisheries and Livestock (MoFL)	LGED, DLS and city corporation, Private org.	12-24
		Utilize the by-product like offal and blood	Ministry of Fisheries and Livestock (MoFL)	LGED, DLS and city corporation, Private org.	12-24
		Improve the quality of hides and skins	Ministry of Fisheries and Livestock (MoFL)	DLS	6-24
3. Poultry development	Improve productivity	Develop poultry breeds for increased productivity at farm level	Ministry of Fisheries and Livestock (MoFL)	DLS	6-24
		Ensure cross -breed and upgrade the biosecurity of the poultry birds	Ministry of Fisheries and Livestock (MoFL)	DLS	6-24
		Ensure production and consumption of safe meat and eggs	Ministry of Fisheries and Livestock (MoFL)	DLS	6-12
		Increase promotion of smallholder production and marketing of ducks and minor poultry species (e.g., Quail, Goose, Pigeon, Guinea fowl) in selected areas	Ministry of Fisheries and Livestock (MoFL)	DLS	6-24



Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/ Agency	Supporting Ministries/ Agencies	Timeline (In months)
4. Quality control of feeds and feed ingredients	Ensure enforcement of food safety regulations	Develop capacity of Bangladesh Food Safety Authority (BFSA) for better monitoring and enforcement	Ministry of Food (MoFood)	BFSA	12-18
		Ensure availability of good quality feed raw materials and marketing of the chicks and eggs	Ministry of Fisheries and Livestock (MoFL)	DLS	12-24
5. Marketing of milk, meat and egg	Ensure effective supply chain	Set up mechanisms to ensure production and sale of livestock products	Ministry of Fisheries and Livestock (MoFL)	BFSA, DLS	12-18
		Streamline the supply chain for seamless operation from farm to fork.	Ministry of Fisheries and Livestock (MoFL)	DLS, Private organizations	6
		Establish farmer's information network for trade related information and strengthen internet-based communication system for disseminating trade related information	Ministry of Fisheries and Livestock (MoFL)	DLS, NAB, Private organizations	6-24
		Obtain up -to-date information from different markets and ensure dissemination.	Ministry of Fisheries and Livestock (MoFL)	BLRI, private sector	6-12
6. Product diversification: Value addition in milk, egg and meat	Improve the quality of livestock products (milk, meat, egg)	Develop quality control systems across the livestock value to satisfy product standard requirements of exporting countries.	Ministry of Fisheries and Livestock (MoFL)	DLS	6-24
		Focus on value-added product development such as different kinds cheese, yogurt, butter, milk cream in solid form (dairy), etc; sausage, salamis (meat), Dehydrated chicken soup mix (poultry), etc. conforming to international standards	Ministry of Fisheries and Livestock (MoFL)	DLS	6-24
	Explore halal market	Establish Halal certification procedure and build capacity of enterprises to comply with Halal standards.	Ministry of Industries (MoIND)	MoC, MoFL MoFA, DLS	6-24

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/ Agency	Supporting Ministries/ Agencies	Timeline (In months)
7. Development of industry-ready skilled workforce	Build capacity of livestock workforce, govt. officials and industry experts	Arrange training for the DLS, MoFL and livestock-related industry officials as well as livestock entrepreneurs and workers in the processing industry.	Ministry of Fisheries and Livestock (MoFL)	DLS, NSDA	12-18
8. Market Diversification	Formulate incentive package for ensuring market diversification	Provide incentives for exporting to non-traditional market and exporting new products in existing market	Finance Division (FD)	MoFL, MoC, BB	6-24
	Mobilize Bangladesh missions and commercial counsellors	Mobilize Bangladesh missions and commercial counsellors for providing information of relevant markets	Ministry of Commerce (MoC)	DLS, MoFA	Continuous
9. Access to finance	Improve and ensure access to finance	Create the policy and regulatory framework for a movable collateral registry	Financial Institutions Division (FID)	BB	6
		Ensure adequate funds and accessibility of funds for livestock sector and providing all types of loans on minimal interest rate	Financial Institutions Division (FID)	BB	6
10. Enabling policy, regulations	Ensure policy support	Ensure favourable policy support for livestock sector	Ministry of Fisheries and Livestock (MoFL)	MoC, DLS	6-12
11. Improvement of veterinary services and animal health	Improve veterinary services	Ensure disease prevention, availability of quality bucks and semen for artificial insemination	Ministry of Fisheries and Livestock (MoFL)	DLS, NAB	12-36
		Reduce vulnerability of disease threat, seasonal influence, animal-based pandemics	Ministry of Fisheries and Livestock (MoFL)	DLS, NAB	12-36
	Establish disease diagnosis centres	Establish disease diagnosis centres at livestock clusters/upazila level for prevention and control of disease	Ministry of Fisheries and Livestock (MoFL)	DLS and Private companies	12-36
12. Improve R&D and information management	Improve information management	Introduce a single window depository and dissemination of all required documentation	Ministry of Fisheries and Livestock (MoFL)	DLS, BLRI, NAB	24-60
	Conduct Livestock Research and ensure extension services	Conduct research on animal production and animal health and provide extension services through proper planning, training and technology demonstration	Ministry of Fisheries and Livestock (MoFL)	BLRI, DLS, NSDA	12-24

## 10. Trade Roadmap for the Software and IT-Related Service Sector

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/ Agency	Supporting Ministries/ Agencies	Timeline (In months)
1. Formulate IP laws	Protect trade data secret and protect generic resources, layouts, coding materials, design, protect and locally developed software.	Formulate: <ul style="list-style-type: none"> <li>• Data Protection Act;</li> <li>• Software protection Act;</li> </ul> Seek, if necessary, technical support from WIPO for drafting laws	Ministry of Industries (MoIND)	MoC, ICTD, LPAD, BACCO, BASIS, Business Associations	12 - 24
2. Support local companies and entrepreneurs	Develop conducive business environment	<ul style="list-style-type: none"> <li>• Exempt VAT for E-commerce businesses.</li> <li>• Extend income TAX exemption and functionalize Software Quality Testing and Certification (SQTC) process; exempt duty for IT equipment imports</li> </ul>	National Board of Revenue (NBR)	WIPO, Industry Associations; Development Partners,	12
		<ul style="list-style-type: none"> <li>• Source software and IT services from local market as much as possible by GoB and private sector entities to relieve local firms from stiff competition from foreign companies.</li> <li>• Formulate guidelines to make freelancing easier.</li> </ul>	Information and Communications Technology Division (ICTD)	BPC	12
3. Modify labor law	Introduce flexible working hours for IT sector; reform employee rules to accommodate industry needs	Incorporate night working hour clauses and some special provisions (like part time working agreements, work from home facility, corporate child care facility) for women employees	Ministry of Labour and Employment (MoLE)	PMO, BIDA, BEZA, BEPZA, MoC, MoWCA	12
4. Attract FDI and policy support for joint venture as well as takeover of startups by foreign companies	Formulate appropriate IT policy to attract FDI	Create provisions for joint ventures and merger/acquisition by foreign companies	Bangladesh Investment Development Authority (BIDA)	Business Associations	24
5. Increase BPO market share	Develop awareness and capacity for expanding BPO services	<ul style="list-style-type: none"> <li>• Introduce training programs for improving communication skill.</li> <li>• Develop language courses and negotiation training programs to cater to the international BPO market</li> </ul>	Information and Communications Technology Division (ICTD)	Business Associations	24

Objectives	Recommended Intervention(s)	Specific Action(s)	Lead Ministry/ Agency	Supporting Ministries/ Agencies	Timeline (In months)
6. Utilize 4IR and smart technologies	Introduce smart technologies	<ul style="list-style-type: none"> <li>Promote knowledge and skills on 4IR technologies</li> <li>Focus on Artificial Intelligence, Robotics, Microchip Designing and Manufacturing and Cyber Security.</li> <li>Introduce Smart healthcare, smart transportation, smart utilities, urban administration, public safety, agriculture, internet connectivity and disaster management</li> </ul>	Information and Communications Technology Division (ICTD)	DSA, BCC, CCA, IT Park Authority, Engineering/Technology, Universities/faculties, BUET, e-CAB	24
7. Create IT entrepreneurs	Establish nationwide IT incubator centers	Develop complete innovative eco-system for start-ups which will provide entrepreneurs, trainees, freelancers and potential startups with financial and logistical services, alongside mentorships. Establish effective linkages with academia and industry	Information and Communications Technology Division (ICTD)	e-CAB, BCC, BACCO, BASIS	24

## 11. Trade Roadmap for the Tourism Sector

Objectives	Recommended Intervention (s)	Specific Action (s)	Lead Ministries/ Agencies	Supporting Ministries/ Agencies	Timeline (In months)
1. To develop skilled workforce	Skilling, reskilling and upskilling the existing workforce	<ul style="list-style-type: none"> <li>Provide technical training for skilling and reskilling the workforce</li> <li>Provide service-specific training program to develop required skills</li> <li>Strengthen internship system to create a cadre of tourism professionals</li> <li>Provide scholarship facilities for students in the tourism and hospitality management discipline</li> </ul>	Ministry of Civil Aviation and Tourism (MoCAT)	BTB, BPC, NSDA, UGC, Public and private universities	36

Objectives	Recommended Intervention (s)	Specific Action (s)	Lead Ministries/ Agencies	Supporting Ministries/ Agencies	Timeline (In months)
2. To promote new Market Access	Promote easy access to Visa for foreign tourists	<ul style="list-style-type: none"> <li>• Increase list of Visa on arrival (VOA) countries</li> <li>• Allow tourist for VoA for all directly connected countries</li> <li>• Allow VoA in all land port</li> <li>• Implement easy e-Visa service</li> <li>• Visa access in River and Sea Port</li> </ul>	Ministry of Civil Aviation and Tourism (MoCAT)	SSD, MoHA	12
3. To promote new Product Development	Invest, facilitate development and training on new Tourist product	<ul style="list-style-type: none"> <li>• Access to marine life and underwater access (Swatch of No Ground, Diving in Island)</li> <li>• Develop infrastructure for sports tourism (e.g., water sports, cycling, trekking)</li> <li>• Develop medical tourism in dental sector, old home and social company, physiotherapy etc.</li> </ul>	Ministry of Civil Aviation and Tourism (MoCAT)	BTB, MoS, FD	24
4. To preserve environment	Promote responsible, environment-sensitive tourism industry	<ul style="list-style-type: none"> <li>• Raise awareness on the negative consequences of environmental pollution of different forms emanating from tourist behavior/practices;</li> <li>• Organize nature conservation campaigns mobilizing different stakeholders including relevant business entities, students, environmental activists, etc.</li> <li>• Organize periodical clean-up events through social mobilization in major tourist spots</li> <li>• Enforce environmental protection laws as applicable for tourism sector</li> <li>• Protect natural resources like rivers, hills and forests</li> </ul>	Ministry of Environment, Forest and Climate Change (MoEFC)	DoE, MoC, Certification authority of MoC, TDAB and Business Chambers	72
5. To increase private sector investment in tourism sector	Facilitate access to finance on easy terms to encourage private sector investment	<ul style="list-style-type: none"> <li>• Arrange Special Fund</li> <li>• Introduce Moratorium Facility and easier process of bank loan</li> </ul>	Bangladesh Investment Development Authority (BIDA)	FD, FID, NBR, BB	36

Objectives	Recommended Intervention (s)	Specific Action (s)	Lead Ministries/ Agencies	Supporting Ministries/ Agencies	Timeline (In months)
		<ul style="list-style-type: none"> <li>Provide cash incentive, reduce duty on transport and communication related vehicles before LDC graduation</li> </ul>			
		Reduce duty on restaurant equipment and alcoholic drinks in hotels, motels and restaurants having legal license	National Board of Revenue (NBR)	FD, BB	
6. To attract FDI	Make one-stop service provision to simplify processes for foreign investors	<ul style="list-style-type: none"> <li>Ease the regulatory procedure of investment</li> <li>Make the regulatory procedure easier and reduce policy uncertainty especially for taxation, VAT and duties.</li> <li>Activate National Single Window of NBR</li> </ul>	Bangladesh Investment Development Authority (BIDA)	NBR, FD, BEZA, RJSC, CCI&E, NBR	36
7. To implement sector specific plan and strategies	Implement National Tourism policy and Tourism Board Act and Strategic plans	<ul style="list-style-type: none"> <li>Update and implement National Tourism Policy 2010 identifying appropriate policy supports</li> <li>Update and implement Bangladesh Tourism Board Act 2010</li> <li>Implement the suggestion of “Tourism Human Capital Development Strategy for Bangladesh: 2021-2030”</li> <li>Finalize draft Tourism Strategic Plan</li> </ul>	Ministry of Civil Aviation and Tourism (MoCAT)	MoC, BPC, BTB, Tourism Association and Industry	72
8.To increase domestic investment	Rationalize taxation and duty structure	<ul style="list-style-type: none"> <li>Provide taxes &amp; duties exemption for the investor</li> <li>Rationalization of value added taxes</li> <li>Reduce import duty on beverage, transport buggies, car, bus, Restaurant equipment and tourism materials</li> </ul>	Bangladesh Investment Development Authority (BIDA)	FD, NBR, BB, Scheduled Bank, BTB	24



Objectives	Recommended Intervention (s)	Specific Action (s)	Lead Ministries/ Agencies	Supporting Ministries/ Agencies	Timeline (In months)
9. To improve infrastructure, security and communication	Strengthen communication system of tourism place	<ul style="list-style-type: none"> <li>• Renovate and develop road &amp; communication system of attractive tourist spots, resorts and tourism places.</li> <li>• Facilitate driving safely on hilly terrains and accommodations with dining options</li> <li>• Preserve and renovate recreational, traditional and archeological establishments.</li> </ul>	Ministry of Civil Aviation and Tourism (MoCAT)	LGED, BTB, BPC, LGD, TNO, UNO and Archeological Department	72
	Strengthen Security system	<ul style="list-style-type: none"> <li>• Ensure cybersecurity and physical security</li> <li>• Improve IT infrastructure such as booking systems, payment gateways, and customer databases.</li> </ul>	Ministry of Civil Aviation and Tourism (MoCAT)	MLJPA, LGED, BTB, BPC, LGD, TNO, UNO and Archeological Department	
10. To create digital platform for tourists' easy access to information	Build a tourism-friendly website that helps easy access to information on Bangladesh's tourism sector.	<ul style="list-style-type: none"> <li>• Develop contents and design layout for the website</li> <li>• Put in place people experienced in managing digital platforms to manage the website with regular updates</li> </ul>	Ministry of Civil Aviation and Tourism (MoCAT)	BTB, BTC, Public, and Different Tourism Private Organizations and Associations	12
11. To ensure sustainable development of tourism	Promoting Boutique Community Tourism	<ul style="list-style-type: none"> <li>• Promote boutique (10-15 guests max) community tourism and accommodation and provide some regulation waiver than that of hotels and rationalizing taxation/VAT.</li> <li>• Reduce VAT on Non -AC hotels &amp; accommodations</li> </ul>	Ministry of Civil Aviation and Tourism (MoCAT)	NBR, BTB, MoHA	12

## 12. Trade Roadmap for Nursing and Midwifery Sector

Objectives	Recommended Intervention (s)	Specific Action (s)	Lead Ministries/ Agencies	Supporting Ministries/ Agencies	Timeline (In months)
1. To increase number of nurses and midwives to conform to the WHO requirement to explore export of nurses and midwives overseas.	Ensure proper implementation of the existing national curriculum.	<ul style="list-style-type: none"> <li>Formulate an implementation workplan</li> <li>Increase the number of seats for enrollment for meeting WHO requirements i.e., 3 nurses per 1000 Population.</li> <li>Increase the number of teachers</li> </ul>	Medical Education and Family Welfare Division (MEFWD)	MoC, DGNM, BNMC, Public and private Nursing and Midwifery Institutes	60
	Implement national nursing service strategy	<ul style="list-style-type: none"> <li>Establish teachers' training institute</li> <li>Ensure continuous training of the teachers.</li> </ul>	Medical Education and Family Welfare Division (MEFWD)	DGNM, BNMC	60
2. To increase knowledge on second/foreign language and communication skills	Improve foreign language skill	<ul style="list-style-type: none"> <li>Develop internal development policies of institutes,</li> <li>Develop own mechanism of learning at the institutes with proper implementation of the communicative English and other foreign languages</li> </ul>	Medical Education and Family Welfare Division (MEFWD)	BNMC, Multilateral donor and technical agencies, Respective Nursing institutions	Continuous
3. To strengthen the educational institutions	Improve infrastructural facilities	<ul style="list-style-type: none"> <li>Ensure adequate faculties wherever necessary</li> <li>Provide facilities necessary such as Simulation lab</li> <li>Ensure sufficient clinical practice for public and private nursing institutes</li> </ul>	Medical Education and Family Welfare Division (MEFWD)	BNMC, DGNM, Respective Nursing institutions	Continuous
4. To harmonize the costs in different educational institutes;	Maintain uniformity of cost of educations in all the institutes	Formulate policies to monitor the academic cost management of institute.	Medical Education and Family Welfare Division (MEFWD)	MoE, BNMC, Nursing and Midwifery Institutes	6 -12
5. To develop skilled nursing and midwifery teaching faculties	Establish the teachers' training institutes	<ul style="list-style-type: none"> <li>Review the existing training module</li> <li>Provide ToT at aboard</li> <li>Provide ToT at home</li> <li>Provide support in terms of teaching and academic equipment or logistics</li> </ul>	Medical Education and Family Welfare Division (MEFWD)	DGNM, BNMC, NSDA Multilateral donor/technical agencies	12-60
6. To improve teaching methodology, and curriculum	Collaborate with foreign universities and institutes	Set up a technical center for nursing and midwifery council in collaboration with international technical institutes.	Medical Education and Family Welfare Division (MEFWD)	MoC, MoE, MoHFW, DGNM, BNMC, Nursing and Midwifery Institutes	12-18

Objectives	Recommended Intervention (s)	Specific Action (s)	Lead Ministries/ Agencies	Supporting Ministries/ Agencies	Timeline (In months)
	Introduce specialized Masters and PhD programme;	<ul style="list-style-type: none"> <li>Introduce specialized post-diploma/post-graduate courses in specialized areas</li> <li>Increase the number of specialized Masters and PhD programme;</li> </ul>	Medical Education and Family Welfare Division (MEFWD)	MoC, MoHFW, MoE,	12-60
7. To harmonize the education standards and licensure examination	Create the regional nursing alliances.	Harmonize the diversity and complexity in nursing and midwifery degree structures and curricular programmes.	Medical Education and Family Welfare Division (MEFWD)	MoHFW, MoE, DGNM	12-60
8. To enhance market access in export destinations	Improve access in global health workforce for Nurses and Midwives.	Identify potential export destinations for nursing and midwifery, focusing on developed countries in Europe and North America, and Consider signing bilateral trade agreements with them.	Medical Education and Family Welfare Division (MEFWD)	MoC, HSD, MoFA, BMET, MoEWOE	12
9. To boost image of the Nursing and midwifery services in Bangladesh.	Organise annual international exposure visit	<ul style="list-style-type: none"> <li>Organise annual international exposure visit to the destination countries.</li> <li>Disseminate the experiences of the visit to the nursing institutes.</li> </ul>	Ministry of Expatriates' Welfare and Overseas Employment (MoEWOE)	MoFA, MoC, BNMC BMET, BOESL, BIDA	Biannually
	Promote the nursing and midwifery sector globally	<ul style="list-style-type: none"> <li>Promote Bangladeshi nurses and midwives in potential destination countries</li> <li>Create an updated data platform on requirements in destination countries, to aid policymakers in making informed decisions on export.</li> </ul>	Ministry of Foreign Affairs (MoFA)	MoC, BNMC, BMET, BOESL	24
10. To facilitate foreign direct and local investments	Facilitate establishment of health care center through foreign investment	Collaborate with stakeholders to identify and approve measures for establishing a single window clearance mechanism for investment approvals and reforming government policies to attract investments.	Bangladesh Investment Development Authority (BIDA)	MEFWD, MoC, Multilateral donor agencies	12-24
11. To build a leadership and guiding strategy for nursing and midwifery resource development	Formulate policy for development of leadership and guiding strategy	<ul style="list-style-type: none"> <li>Develop a clear resource development strategy</li> <li>Establish a coordination committee, and collaborate with external stakeholders to form a strong coalition for shared action.</li> </ul>	Medical Education and Family Welfare Division (MEFWD)	MoC, HSD, Private Health Care centers	18-36

Objectives	Recommended Intervention (s)	Specific Action (s)	Lead Ministries/ Agencies	Supporting Ministries/ Agencies	Timeline (In months)
12. To create a country-wide collaborative effort to advance nursing education	Create policy and strategies for advancing nursing education	<ul style="list-style-type: none"> <li>Assess strengths and weaknesses of capacity at each institute</li> <li>Develop a plan to strengthen the capacity of the existing pool of educators</li> </ul>	Medical Education and Family Welfare Division (MEFWD)	MoC, Private Health Care centers	18-36