

Improving Phytosanitary Trade Compliance in Bangladesh

Life of Project Report

01.01.2021 to 09.30.2022

Submission Date: 10-30-2022

Agreement Number: FX21TA-10960C002

Activity Start Date and End Date: 11-23-2020 to 09-22-2022

Name of Prime Implementing Partner: APAARI

Name of Subcontractors/Sub-awardees: N/A

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Executive Summary

Trade and regulatory capacity building division (TRCBD) of USDA provides capacity building to trade partners of the USA. Capacity building focuses on WTO SPS compliances by its trade partners. TRCBD also supports agricultural development to enable its partners to participate in international trade. In this context USDA/FAS partners with APAARI to assist the Department of Agricultural Extension (DAE), Ministry of Agriculture (MoA), Government of Bangladesh (GoB) and its collaborators to improve compliance with the international phytosanitary system. A project entitled "Improving Phytosanitary and Trade Compliance in Bangladesh" was conceived and activities initiated from November 23rd 2020. The objectives of the projects are to strengthen collaboration and coordination of DAE with its stakeholders, strengthen institutional capacity of NPPO (PQW of DAE), enhance awareness on trade related issues and to assist in boosting regulatory harmonization for the registration of biopesticide. The key achievements of the project from November 2020 to September 2022 are listed below:

In order to strengthen the collaboration and coordination of NPPO with its stakeholders the prerequisite was to bring synergy among the various wings of DAE that are linked to phytosanitary services. An Intradepartmental Community on Plant Quarantine Facilitation (ICPQF) of DAE was necessary. The project facilitated establishment of ICPQF with defined purpose, roles of the community members, frequency, process of conducting meetings and recording of the proceedings. ICPQF met twice during the project period with APAARI participation for initial guidance. A training coordinator and two nodal officers one each from PQW and PPW were also appointed by DAE on the advice of project implementation agency to bring synergy and coordinate within DAE and with its phytosanitary stakeholders. In order to bring closer coordination across the ministries and guide the NPPO for its effective functioning a steering committee was constituted. The steering committee is Okico-chaired by USDA Agricultural Attachee and DG, DAE. Members included are from different ministries and departments relevant to phytosanitary services. A model partnership agreement between the DAE and BARC among the APAARI as facilitator was executed. A stakeholder meeting with DAE officials was conducted to facilitate closer collaboration with private industry (exporters, Importers and seed associations), representatives from Universities and research institutes, Government and non Governmental organizations. Such an interactive diverse stakeholders meeting was organized for the first time with the objective of enhancing exports and facilitating safe imports. IPPC developed several International Standards for Phytosanitary Measures (ISPMs) for various Phytosanitary activities related to trade. However, Bangladesh does not have Standard Operating Procedures (SOPs) to implement ISPM contextually. The project facilitated the development of three SOPs on developing pest free areas for mango nut and pulp weevils, vapor heat treatment facility and packing house facility. Necessary training to develop such SOPs in other areas is also important to the key regulatory stakeholders. Enhancing public awareness among trade related to phytosanitary issues is important. Project activities related to phytosanitary activities were covered in print and online media more than 13 times. Two special articles were published in Bangla newspapers on phytosanitary trade compliance. Two sessions each in TV and radio were broadcasted

enhancing the public awareness in plant quarantine. A whatsapp group was activated including 85 diverse SPS stakeholders. The group is Iactive and consult each other on various SPS issues.

APAARI based on the previous Phytosanitary Capacity Evaluation (PCE) report developed a list of amendments required for the Plant Quarantine Act (PQ Act). The proposed amendments were harmonized with the help of a legal consultant in Bangladesh. These amendments were discussed with the group of technical and legal experts from the Bangladesh Trade Facilitation (BTF) project and presented to DAE at the closing workshop. On request from NPPO the amendments were reviewed by an international phytosanitary consultant. These amendments were expected to strengthen the NPPO. BTF will take forward these amendments in consultation with APAARI. NPPO was further strengthened by establishing a virtual SPS Training Hub of DAE. A total of 17 capacity building programs were conducted during the project period. A special functional capacity building program was also organized in Bangladesh. All the technical training also included one session on functional capacity building. The technical subjects covered are Good Laboratory Practices, SPS Agreement, Pest Risk Analysis, Pest Identification, Pest Surveillance, Pesticide Residue Decline Studies in field and lab, Pest Free Area, Pest Inspection, Pest Treatment, SPS Wrap up, SPS/FCB, Web Portal, Intensive Web Portal trainings. Three workshops were conducted on biopesticide Regulatory Harmonization and Pesticide Residue Mitigation. Exclusive webinar was conducted on Improving Phytosanitary Trade Compliance. Exclusive participants in the training programs are 175. Many stakeholders participated in several training programs. The total list of participants (including multiple participation) is 457 i.e, Male: 286; Female: 137. Six identified key officials had a study cum exposure visit in Bangkok organized as a part of the project. Two of Bangladesh consultants hired by APAARI were also part of the study cum exposure visit. A series of lectures connecting Bangladesh to the international phytosanitary community. DAE participants were exposed to the function of NPPO, Thailand. Field visits, private seed export inspection lab and import inspection facilities, Vapour heat treatment facilities were also exposed to the key officials. A prototype of the Webportal SPS Information Management System was developed and officially handed over to DAE to make it functional and accessible to SPS stakeholders.

Pesticide Residue Decline Studies lab and field were initiated at BARI. Studies couldn't be concluded due to non supply residue data by BARI. BARI couldn't organize permission for signing the letter of agreement with APAARI during the project period. As a result of organizing biopesticides meetings, a task force committee was constituted to develop guidelines for registration of biopesticides harmonizing with existing pesticide registrations. The final document was translated into Bangla and a task force committee will submit it to sub-PTAC for consideration. During the process of deliberations one of the registered biopesticides was shifted to chemical pesticide category on the advice of project consultant on biopesticides. Monitoring and evaluation indicators of the project were harmonized with USDA indicators and reviewed every quarter with satisfactory progress on planned activities. There were no administrative or financial issues in the execution of the project. Progress of the project was achieved in spite of the COVID situation for most of the project period. Though market access issues were covered in SPS wrap up training and functional building training, exclusive Market Access Program couldn't be conducted. Residue Decline Studies couldn't not be

able to conclude due to the factor beyond the control of the project. Women training participation can be improved when the recruitment increases in the stakeholders organizations. Feedback on conducted training programs shall be taken in the SPS wrap up training instead of separate activity. Six success stories were documented during the project period. USDA/ FAS Washington team participation along with APAARI greatly contributed to achieve the objectives of the project period.

Acronyms and Abbreviations

List all acronyms and abbreviations pertinent to the activity. The first time a word requiring an acronym or abbreviation is used in the body of the report, spell out the word in full with the acronym in parentheses. Thereafter, use only the acronym.

ADD	Additional Deputy Director
ALOP	Appropriate Level of Protection
APAARI	Asia-Pacific Association of Agricultural Research Institutions
APPPC	Asia-Pacific Plant Protection Commission
APSA	Asia-Pacific Seed Association
ASEAN	Association of Southeast Asian Nations
BARC	Bangladesh Agricultural Research Council
BARI	Bangladesh Agricultural Research Institute
BCA	Biological Control Agents
BDM	Business Development Manager
BFVAPEA	Bangladesh Fruits, Vegetables & Allied Products Exporter's Association
BRRI	Bangladesh Rice Research Institute
BSA	Bangladesh Seed Association
BSS	Bangladesh Sangbad Sangstha
BTF	Bangladesh Trade Facilitation
CABI	Centre for Agriculture and Bioscience International
CCMC	Commodity Collection and Marketing Center
CPH	Central Pack House
DAE	Department of Agriculture Extension
DAM	Department of Agricultural Marketing
DG	Director General
FAS	Foreign Agricultural Service
GLP	Good Laboratory Practices
GOB	Government of Bangladesh
HSIA	Hazrat Shah-Jalal International Airport (Dhaka International Airport)
ICPQF	Intra-departmental Committee on Plant Quarantine Facilitation
ISO	International Organization for Standardization
ISPM	International Standards for Phytosanitary Measures
LBF	Local Business Facilitator
LoA	Letter of Agreement
MERL	Monitoring, Evaluation, Reporting and Learning
MoA	Memorandum of Agreement
MOA	Ministry of Agriculture
MOC	Ministry of Commerce
MRLs	Maximum Residue Levels

NATA	National Agricultural Training Academy
NGO	Non-Government Organization
NOFO	Notice of Funding Opportunity
NPPO	National Plant Protection Organization
NPQA	National Plant Quarantine Authority
PFA	Pest Free Area
PI	Principal Investigator
PPA	Plant Protection Advisor
PPP	Public Private Partnership
PPW	Plant Protection Wing
PQ Act	Plant Quarantine Act
PQAS	Post-harvest & Quality Assurance Specialist
PQS/PQC	Plant Quarantine Station/ Plant Quarantine Center
PQW	Plant Quarantine Wing
PRA	Pest Risk Analysis
PSO	Principal Scientific Officer (usually work at Research Institutions)
PTAC	Pesticide Technical Advisory Committee
QTH	Quarantine Training Hub
SAU	Sher-e-Bangla Agricultural University
SGS	Standard Global Services
SOPs	standard operating procedures
SPS	Sanitary and Phytosanitary measures
SPS	Sanitary and Phytosanitary
SPSTH	Sanitary and Phytosanitary Training Hub
SSO	Senior Scientific Officer (usually work at Research Institutions)
STDF	Standards and Trade Development Facility
ToC	Theory of Change
ToR	Terms of Reference
TRCBD	Trade and Regulatory Capacity Building Division
UAO	Upazila Agriculture Officer (Sub-district Agriculture Officer)
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
USAID	U.S. Agency for international Development
USDA	United States Department of Agriculture
WFC	Webportal Facilitation Committee
WTO	World Trade Organization

1. Project Overview/Summary

Program Name:	Improving Phytosanitary Trade Compliance in Bangladesh
Activity Start Date and End Date:	11-23-2020 to 09-30-2022
Name of Prime Implementing Partner:	APAARI
Agreement Number:	FX21TA-10960C002
Name of Subcontractors/Sub Awardees:	Nil
Major Counterpart Organizations	Ag Aligned Global
Geographic Coverage (cities and or countries)	Bangladesh
Reporting Period:	07.01.2022 to 09.30.2022

1.1 Project Description/Introduction

*Short and concise introductory section that gives a quick overview of the project, goals/objectives, target beneficiaries, geographical locations, etc. This is a standardized paragraph that can be used in each quarterly report. It should be **BRIEF**, no more than one page*

The United States Department of Agriculture (USDA) Foreign Agriculture Service (FAS)/Trade and Regulatory Capacity Building Division (TRCBD) provides trade partners with the capacity building that enables their adoption and implementation of obligations under the international Sanitary and Phytosanitary (SPS) Agreement of the World Trade Organization (WTO). FAS and the U.S. Agency for International Development (USAID) work hand in hand to increase Bangladesh's ability to improve its institutional regulatory system through the Bangladesh SPS Trade Capacity Building Program. This Notice of Funding Opportunity (NOFO) supports the USDA Foreign Agricultural Service's (FAS) Strategic Plan by supporting the following:

1. Trade policy by pursuing the development of rules-based international systems that facilitate global trade.
2. Trade capacity building and food security by enhancing partner countries' capacity for agricultural development and participation in international trade.

1.2 Overarching activity objectives and expected key result areas

USDA/FAS partners with APAARI to assist the Bangladesh Department of Agricultural Extension (DAE) to strengthen the institutional capacity of the country's plant health system including, but not limited to, strengthening the national pest risk analysis system, national export and import certification system, and the National Plant Protection Organization (NPPO) structure processes. Within these broad areas, specific recommendations are noted in the Phytosanitary Capacity Evaluation Project (USDA-CABI) completed by Dr Ravi Khetarpal in 2019, which will guide the development and implementation of the NPPO Strategic Plan. USDA/FAS also seeks to leverage its resources and collaborate with the STDF/WTO on further underscoring the importance of Maximum Residue Levels (MRLs) in trade and the related capacities that need to be developed with an innovative, cross-cutting approach. Coordination with the relevant regulatory authorities in Bangladesh and at the regional level will be a requirement for mitigating pesticide residues through technical capacity development and evaluation. APAARI works with USDA/FAS and the DAE authorities to implement various prioritized activities (section 2.1) contributing to the following objectives:

1. Facilitate collaboration and coordination within the Ministry of Agriculture, the DAE, Plant Quarantine Wing (PQW), Plant Protection Wing (PPW), and other relevant stakeholders to operationalize the NPPO.
2. Strengthen the institutional capacity of the NPPO to establish a framework for the formation of a National Plant Protection Authority.
3. Increase awareness of trade issues linked to non-compliance with pesticide MRLs and promote an Integrated Pest Management approach for overcoming these trade issues.
4. Enhance the capacity of the Bangladesh plant health system to boost regulatory harmonization for the registration of biopesticides.

The expected key result areas include enhanced market access by strengthening coordination among various SPS-related agencies in Bangladesh, capacity building for developing technical and functional skills (soft skills) on important areas of export and import related to sanitary and phytosanitary measures (SPS), and establishment of an SPS information management system for the country. Also, while complementing and supplementing the ongoing STDF/ 634/ Biopesticides project training, there will be skills developed for detecting MRLs and for enhancing the role of biopesticides for promoting market access and facilitation of trade.

2. Activity Implementation Progress

Progress Narrative

This brief narrative (1 or 2 pages) should highlight key achievements and whether the program is on/off track as far as work plan/targets

Objective 1. Facilitate collaboration and coordination within the Ministry of Agriculture, the DAE, PQW, PPW, and other relevant stakeholders to operationalize the NPPO.

Activity 1.1. Identifying synergies for Inter-departmental linkage (PQW and PPW of DAE) and Linkages with other Ministries, Private sector, Research Organizations and related agencies, and efforts to formalize the linkages.

To accomplish the above activities, some basic work was done to ensure that DAE nominates two nodal officers, one each from PQW and PPW. A Training Coordinator was also nominated from PQW. (Office Orders of Nominations- Y1, Q2, Annex 1). This team of nominated officials are in communication with APAARI on a regular basis.

Role of Nodal Persons is to implement all the project activities by bringing synergy. Liaison with Coordinator, Bangladesh. Coordinate and collaborate with the Project Manager, APAARI, Bangladesh for effective implementation of the project.

Facilitated interactions with the team of PPW and their local collaborators from universities and research institutes to develop the work plan for the next year.

Steering Committee

As a part of the project objectives, formation of a high-level Steering Committee was visualized as a sustainable activity to continue in supporting WTO-SPS Trade Compliance in Bangladesh. Initial draft on the Steering Committee Proposal and the Preparatory Meeting Agenda were made by APAARI and after several rounds of discussion including the input from USAID, USDA and APAARI was finalized Steering Committee Proposal (Y1, Q2, Annex 2) in English and (Y1, Q2, Annex 3) in Bangla, Preparatory Meeting Agenda - (Y1, Q2, Annex 4). The Preparatory Steering Committee was held on June 24, 2021 with ten members of the Steering Committee and ten other high officials from DAE, USAID and USDA.



Figure 1: Some Participants of Virtual Steering Committee



Figure 2: Left Dr Asadullah, DG, DAE; Right Ms Ire Gloria Burgoa, USDA

Details of the Steering Committee preparatory meeting are available in the Event Sheet-2 (Y1, Q2, Annex 5) and additional photos in Y1, Q2, Annex 6. Since it was a preparatory meeting, the following key points emerged through discussions.

1. All the participants endorsed the Steering Committee proposal (Y1, Q2, Annex 2).
2. DAE will issue an office order formalizing the Steering Committee PQW and PPW Directors may submit their budget needs for consideration for both QTH and the Steering Committee.
3. DG, DAE and Agricultural Attache, USDA, Bangladesh, the Chairs of the Steering Committee declared full support to the functioning of the Steering Committee in a sustainable manner.
4. Provision of co-opting more members is possible subject to the approval of

Co Chairs - Director.

5. Director, PQW submitted the need for PRA training on priority.

Detailed Minutes of Meeting of the Steering Committee are provided in (Y1, Q2, Annex 7). Minutes of Meeting (MoM) of the Steering Committee (SC) were finalized on 16th Aug 21 with inputs from USDA (Y1, Q3, Annex 1) which was circulated to all participants. In view of the approval of MoM, the DG, DAE agreed to issue Office Order on the formation of the Steering Committee. Agenda items to be discussed in the next SC meeting were proposed and circulated initially with the USDA team.

A Steering Committee meeting was held on 9th November 21 (Y1, Q4, Annex II: SC Meeting; Event 2). The key point discussed were: linkages formalization within and outside DAE inclusive of key stakeholders; development and hosting of SPS web portal; establishment of a training hub; linkages with Land O'Lakes Bangladesh Trade Facilitation project; establishment of a National Team to facilitate pesticide residue and biopesticide research and regulations; and feasibility of conducting physical trainings. A 'Partnership Agreement' template was provided by APAARI which will be discussed with different sector stakeholders and formal linkages will be established. Initial efforts were made to formalize linkages with the research sector.

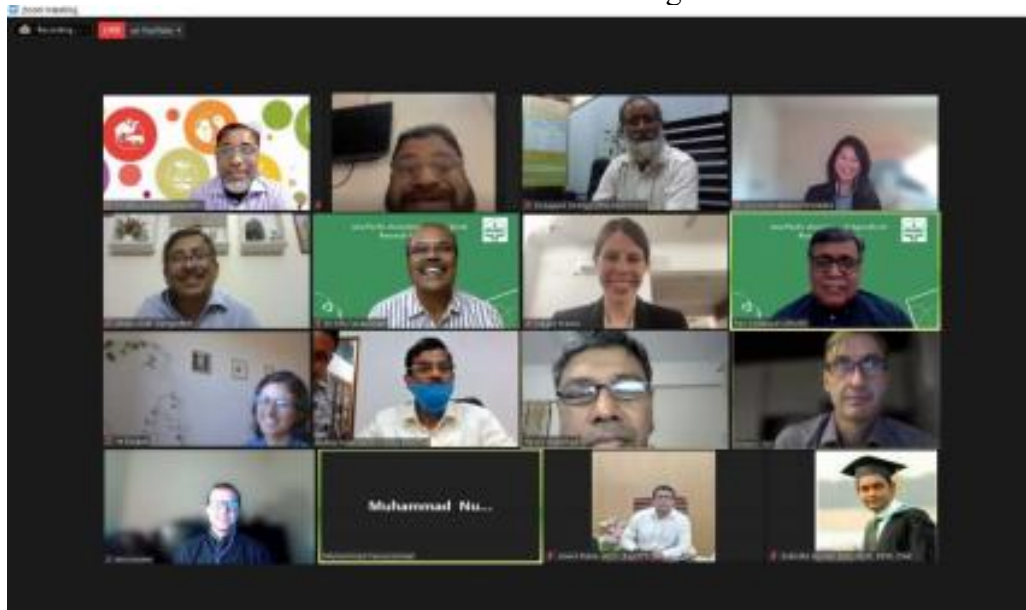


Figure 3: Steering Committee meeting was held on 9th November 21

Partnership Agreement between DAE and BARC along with APAARI was signed (Y2, Q1 Annex 1: MoU). BARI requested for a separate Letter of Agreement (LoA) to conduct field and laboratory research on pesticides residue levels and mitigation with biopesticide. LoA as per terms of BARI was signed by APAARI and submitted to BARI for its signature to facilitate transfer of funds to BARI. However, BARI requested for a letter to sign Memorandum of Agreement (MoA) on broad terms with APAARI. In order to facilitate synergy within DAE two committees were constituted, one on Intra-departmental Committee on Plant Quarantine Facilitation (ICPQF) chaired by Director PQW with nine members and Additional Deputy Director Export, PQW as its Member Secretary (Y2, Q1, Annex 2: The Committee) and the second Webportal Facilitation Committee (WFC) chaired by Director PQW and the Additional Director PQW as its Member Secretary (Y2, Q1, Annex 3: The Committee).

A Project Stakeholders Meeting was held in the Hotel Sarina, Dhaka on June 8th, 2022. Government, Non-Government, Private industry (export/ import and seed associations) representatives participated and excellent feedback was received. Feedback mainly relates to collaboration with various stakeholders and harmonization to enhance trade.



Figure 4: Project Stakeholders Meeting held Hotel Sarina, Dhaka

USDA-APAARI led team consisting of BARC and BSA representatives participated in the meeting with the Honorable Minister of Agriculture, Government of Bangladesh and apprised him of the various activities and contributions made by the organizations participated.



Figure 5: APAARI, USDA and Seed Association had a meeting with the Ministry of Agriculture on June 7th, 2022.

In addition to the above meeting, other meetings held by APAARI with various institutions (BFVAPEA, BTF, BSA, Hortex Foundation and BARC) as part of relationship building, progress review on existing work or future plans and explored possibilities of working with them in WTO-SPS compliant areas in agricultural trade. Results of these meetings are very encouraging and will be taken forward based on Bangladesh interest and mutual interest of APAARI and the respective institutions.



Figure 6: Bangladesh Seed Association meeting on 15th June 2022.

Activity 1.2. Developing guidelines for collaboration and coordination for Pest reporting, PRA and Surveillance. Export promotion and market access and risk communication

An Indian expert, who had served as Plant Protection Advisor (PPA) to the Government of India with experience in developing guidelines on key Plant Quarantine Activities was invited to participate virtually in the Pest Surveillance Training. The expert interacted with the stakeholders to understand the SPS activities mainly on Pest Surveillance status in Bangladesh.

Activity 1.3. Facilitation in undertaking activities to create awareness on importance of plant protection and quarantine activities for civil society (through webinars, radio and television talks, print media etc)

Public Awareness through print media

To focus the SPS International Standards, WTO's specified measures on MRLs for Bangladesh agriculture products and to enhance it's exports at the global market, a Newspaper Article was published in the top national Bengali daily newspaper '*Dainik Prothom Alo*' on June 16, 2021 in it's Business Page (3 col. 8 inches print area) under the Project activities (Y1, Q2, Annex 8).

Inception Workshop coverage: *BSS (Bangladesh Sangbad Sangstha)*, a State owned news agency in the country published the event as a press release in Bengali (Y1, Q2, Annex 9). The news was also published on the Front Page as a National Item in the top English Daily '*The Daily Bangladesh Observer*' Online version. Training Program coverage: The English top newspaper '*The Daily Bangladesh Observer*' Online version published the training news as Latest News in Front Page National item with bold pix (Y1, Q2, Annex 10).

A Radio talk and TV show were planned in the quarter. It aimed to create awareness on the importance of plant protection and quarantine activities to the civil society and general public that include the farming community. Series of discussions with various TV (Ekushey, Jamuna, DBC, 24 News etc.) channels took place on the options to have either several 5-mt programmes or a one time

30-mt programme. A decision was taken (Y1, Q3, Annex 2) to start with a 30 mt TV Show followed by a radio programme with an edited version of TV. Accordingly the TV Show is planned with detailed script both in English and Bangla. USDA not only facilitated participation but also took keen interest in the script finalization both in Bangla and English. Details of participation (Y1, Q3, Event 3) and script are provided in (Y1, Q3, Annex 3). Pre-recording with zoom participation was completed on September 22, 2021.

The TV show on “*Improving Phytosanitary Trade Compliance in Bangladesh: Partners and Roles*”. It was broadcasted on 9 October 2021 (Y1, Q4, Annex III: TV Show event; Y1, Q4, Event 1). The TV show recordings were edited, value added by the APAARI team and aired on 30th November 2021 (Y1, Q4, Annex IV: Radio Show event, link; Y1, Q4, Event 5). This event was published in National BSS coverage (English and Bengali) on 21 December 2021 (Y1, Q4, Annex V and VI: BSS coverage English and Bengali).

9th June Press Coverage: “A task force team led by USDA and APAARI is currently stationed in Dhaka to establish a pest-free safe import-export system in the country considering Bangladesh's potential in world trade in agri-trade. Government officials and the private sector who are engaged in NPPO, Inspection, Treatment, PFA, Surveillance, Pest ID and PRA training and a supervisor from each sector or department will discuss the status of the inspection system in Bangladesh and find solutions”. This event was published as a Headline in National BSS coverage (English and Bengali) on June 9, 2022 (Y2, Q2, Annex 14a: BSS coverage English and Y2, Q2, Annex 14b : BSS coverage Bengali).

A TV talk show on ‘Compliances to WTO SPS Standards by Bangladesh to sustain and increase exports of agricultural products to USA and global markets’ was aired on ETV. DAE and APAARI participated in the TV Talk Show (Y2, Q3, Annex 5: TV Talk Show APAARI - [Part 1](#) and [Part 2](#)).

A Newspaper article entitled “*USDA's Agricultural Trade Improvement Initiative: Strengthening NPPO and its Collaborators' Import-Export Capabilities for Bangladesh* ” was published in Daily Kaler Kantha on 31st August 2022 (Y2, Q3, Annex 2: Article in English and Bengali). A Radio Talk with Promo at Production level was aired on September 4th week 2022 in Radio ABC 89.2 FM. A TV Interview with Promo at Production level was aired on September 3rd week 2022 in Ekushey Television. Detailed report of all the newspaper articles, TV shows, Radio Shows are attached (Y2, Q3, Annex 14: Media Coverage Frequency).



Figure 7: TV Program highlighting the project activities

Objective 2. To strengthen the institutional capacity of the NPPO to establish a framework for the formation of a National Plant Protection Authority.

Activity 2.1 Assessing the capacity on regulatory measures and initiating the process of needful revisions in the PQ Act

APAARI identified potential legal consultant and assessing to move forward. However, due to COVID situation in Bangladesh, engaging a legal consultant is taking more time. However, the phytosanitary capacities of relevant staff has been assessed in a previous project on Phytosanitary Capacity Evaluation (PCE). Information emerged from this project is synthesized and will be discussed with the legal consultant on PQ revisions.

APAARI hired a training consultant and another consultant was also provided by USDA to impart training covering aspects of Pest Risk Analysis (PRA); Pest Risk Communication; Pest Risk Assessment and Pest Risk Management

The proposed revisions/ amendments of the '*Plant Quarantine Act*' (Y1, Q4, Annex IX: Plant Quarantine Act amendments) was discussed and summarized under each section of the PQ Act. Suitable legal consultant to convert the amendments into the legal language is to be identified.

A legal consultant was identified to convert needful revisions in Plant Quarantine Act (PQA), 2011. An interaction meeting was held with the legal consultant and the proposed revision document in the technical context, the PQ Act and Rules & Regulations of the act were provided to the legal consultant. Initiated dialogue on PQ Act amendment proposal with Bangladesh Trade Facilitation Team involving APAARI team including its legal consultant. Views were exchanged and a common draft developed. Points on which discussions were held are highlighted (Y2, Q3, Annex 1: PQ Act Amendments).



Figure 8: Presentation of PQ Act Amendments in the Closing Workshop by BTF Team

A physical meeting was held with APAARI legal consultants to share the technical view points on the PQ Act and final presentation was made by BTF in the Closing workshop (Y2, Q3, Annex 10: PQ Act Revision Presentation).

Second virtual meeting with BTF on PQ Act amendments was held. APAARI and BTF mutually harmonized versions of the PQ Act amendments will be made ready for presentation to DAE.

Activity 2.2. Facilitating the establishment of a Quarantine Training Hub with a specific ToR in PQW by focusing on important aspects of Pest risk analysis; Export certification, Import inspection system and NPPO structure and processes.

Establishment of Quarantine Training Hub

It was planned to develop basic guidelines on establishment of a Quarantine Training Hub (QTH) during the project period to meet the capacity building needs of SPS compliance in Bangladesh. In this connection action points to establish QTH were envisioned as below.

To define the objectives of the QTH to ensure capacity building on SPS related matters in a sustainable manner even after the USDA project is over. To ensure all physical and online resources in the Plant Quarantine Wing to establish the QTH. A lecture room with seating capacity of about 30 with a dedicated desktop, laptop, LCD projector and related accessories.

A good bandwidth standalone internet and facilities to conduct online training courses. - DG, DAE in the Preparatory Steering Committee meeting indicated to provide facilities for QTH in the Training Wing.

Other points of action to be addressed are:

A policy document to be developed on QTH establishment and sustainable maintenance (Training Coordinator in consultation with Country Coordinator and Senior Consultant) Stakeholder and Resource persons (linking with professional subject area) databases to be developed by APAARI and handed over to the identified Training Coordinator for updating every quarter.

Training Coordinator, contacted officials and identified critical mass of staff from PQW and PPW to be trained in functional skills to carry out the training activities on a regular basis. Training schedule to be developed on an annual basis and circulated to all the stakeholders in advance. To provide a budget line to PQW for training activity on an annual basis based on the annual training schedule submitted well in advance. One Interaction meeting to be conducted with trade related stakeholders to update and refine the training modules content.

A three day virtual training on ‘The WTO’s Sanitary and Phytosanitary Agreement: Bangladesh Perspective’ to be conducted in the second quarter and PRA training covering Risk Analysis, Risk Assessment, Risk Communication and Risk Management in the third Quarter of 2021.

The Quarantine Training Hub (QTH) activities, role and establishment were discussed with DAE and USDA teams. In view of scope of training beyond the Plant Quarantine Wing (PQW), the Hub was renamed as ‘*Sanitary and Phytosanitary Training Hub*’(SPSTH) of DAE. The training needs of the Plant Protection Wing (PPW) including pesticide residues and biopesticides research and regulations will also be SPSTH.

Activity 2.3. Training of the trainers by conducting Online training courses on SPS; The SPS Agreement: The IPPC and the Standard Setting Process; Market Access Process; Pest Risk Analysis; Pest Risk Communication; Pest Risk Assessment; Plant Pest Risk Management; Pest Surveillance; Plant Pest ID Systems; Pest Free Concepts; Phytosanitary Certification; Phytosanitary Inspections; Phytosanitary Treatments For Agricultural Commodities; SPS Course Review; and development of related SoPs/Manuals.

Inception Workshop with stakeholders organized (Y1, Q1, Event 1: Virtual Inception Workshop) on February 24, 2021. The following output are listed below:

1. Stakeholders identified from different organizations provided category-wise.
2. Additional Secretary and Senior staff of DAE promised support to the program.
3. Private industry, seed and exporters associations and the marketing department of the government participated in discussion and objectives of the program were updated.
4. Rapport was established between the project staff, DAE and consultants.
5. Way Forward was harmonized with stakeholders.

Implementation Proposal meeting with DAE organized (Y1, Q1, Event 2: Implementation Proposal meeting) on March 23, 2021. The following output are listed below:

1. Common agreement on work 2021 plan.
2. Priorities discussed and DAE initiated action on appointment of Nodal Officers and Training Coordinator.
3. DAE agreed in principle to establish a Program Steering Committee with the assistance of USDA and APAARI.
4. DAE agreed to initiate a prerequisite training program on SPS (online SPS trainings) to the relevant staff.
5. Target periods set for 2021 and mutually agreed among the implementing partners.

GLP training (Y1, Q1, Annex 1: GLP training report) on February 15, 2021-March 11, 2021. . The following output are listed below:

1. 18 Chemists from six countries (Pakistan, Bangladesh, Sri Lanka- Group-1 and Cambodia, Laos and Nepal- Group-2) were trained for two weeks on GLP.

Virtual Training Program on *'The WTO's Sanitary and Phytosanitary Agreement: Bangladesh Perspective'*: To ensure compliance of WTO specified SPS standards and to enhance exports of Bangladesh agricultural products at global market, three-days interactive training sessions were conducted under the project of 'Improving Phytosanitary Trade Compliance in Bangladesh'. As part of ongoing training programs under the project the sessions were organized by APAARI, Thailand and USDA/FAS, USAID and Rutgers University, USA with the cooperation of Department of Agriculture Extension (DAE), Ministry of Agriculture (MOA), Bangladesh. The sessions were held on June 1-3, 2021, remotely via Zoom and are available on YouTube. (<https://www.youtube.com/watch?v=nw71IjEbG80>).

The training was arranged to discuss and share views and opinions with the policy regulators: the GOB (Government of Bangladesh) high officials facilitating exports and imports from plant quarantine angle. Mudjitaba-Fernandez, Jessica, USDA-FAS and Ms Ire Burgoa, Gloria - TFAA-FAS, coordinated and contributed in conducting the training. The keynote speakers and training faculty emphasized the need for synergies- among production, marketing, research and other sectors: prioritizing products for export and the enabling environment; investing in residue and pesticide research; improving surveillance and administration at institutional level; establishing a Training Hub; and the importance of establishing an Information Portal System for grounding technical and functional skills in SPS.

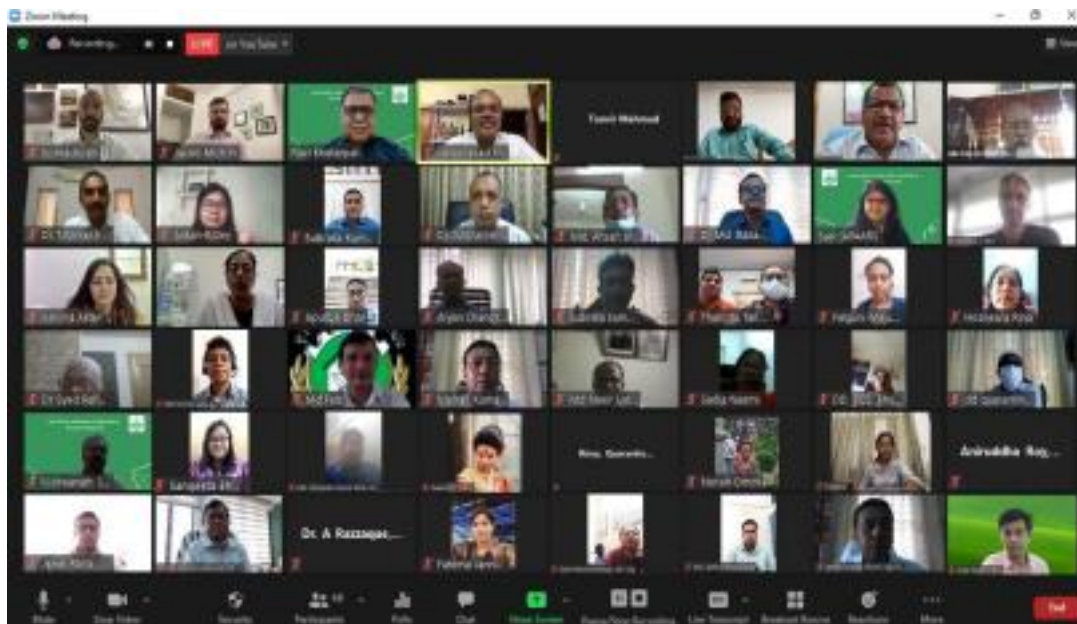


Figure 9: Stakeholders sharing views, opinions on WTO's SPS standards in Bangladesh Agriculture products

Thirty one government high officials of the MOA, DAE, Plant Quarantine Wing (PQW), Plant Protection Wing (PPW) of Bangladesh and others shared their views on enhancing exports of Bangladesh agricultural products in alignment with WTO's SPS measures. The training covered the main principles of the WTO's Sanitary and Phytosanitary Agreement, including Basic rights, Harmonization, Risk assessment, Pest Risk Analysis (PRA), Pest Free Areas (PFA), Appropriate Level of Protection (ALOP), Transparency, and Dispute Settlement. Maximum Residue Limits (MRLs) and Biopesticides and Regulatory Harmonization were key topics during the training sessions. Among the topics mentioned in the discussion section were: lack of proper monitoring on maintaining MRLs; linkages in institutional capacity building; absence of adequate participatory interactions on sanitary and phytosanitary issues among stakeholders; good coordination system for cooperation among different stakeholders, issuing Phytosanitary Certificate; integrated harmonized institutional management; risk assessment and management; adoption of measures to comply with of MRLs; perfecting national guidelines; more training programs at national and international level on SPS issues, to improve inspection; lack of high standard Reference Laboratory. Participants also identified the need to improve diagnostic capabilities for science-based decision making in this regard.



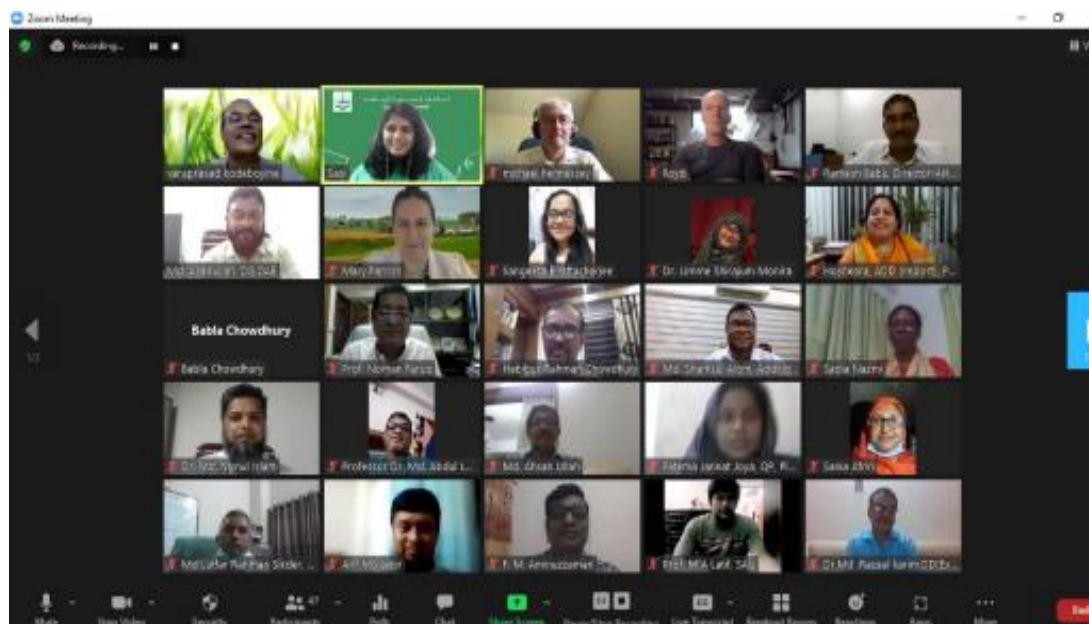
Figure 10: Md Asadullah, DG, DAE, Bangladesh (Left below), Dr Ravi Khetarpal, ES, APAARI, Thailand (Right top), Dr Michael Parr, BTF, Land o' Lakes (Right below) and Dr T Ramesh Babu, Guest Faculty, India (Left top) sharing views and opinions with APAARI and USDA concerned.

The training sessions were coordinated by Dr. KS Varaprasad, Senior Consultant, APAARI, and facilitated by Ms Sasi Rekha, APAARI Associate and Ms Tarathip, Executive Assistant, APAARI. The keynote speakers were Mr. Tyler Babcock, Agricultural Attaché, USDA, Jacob Morrin, USAID and Dr. Ravi Khetarpal, Executive Secretary, APAARI. Faculty that engaged the trainees were Md. Asadullah, DG, DAE; Mr Mohammad Anwar Hossain, Director, PQW; Md. Abu Sayeed Miah, Director, PPW; Dr KS Varaprasad, Project Manager, APAARI; Dr. Md Ahsan Ullah, Project Coordinator, APAARI; Guest faculty engaged from India were Dr J. Alice R.P. Sujeetha, Director (Plant Biosecurity) National Institute of Plant Health Management and Dr. T Ramesh Babu, Former Head, Pesticide Residue Laboratory & Former Dean, ANGR Agricultural University. Ms Rita Dey, Training Coordinator, PQW, Ms. Sangeeta Bhattacharjee, Nodal Officer, PQW and Mr SK Das, Nodal Officer, PPW coordinated and participated in conducting the training effectively. Details of the training agenda (Y1, Q2, Annex 11), The Power Points of experts in the training and test papers (Y1, Q2, Annex 12), photogallery of the virtual training (Y1, Q2, Annex 6) and the Event Sheet - 1(Y1, Q2, Annex 13) are attached in the zip file for further details on this virtual training.

Virtual Training Program on PRA training: An eight day intensive training on PRA was conducted with trainees from DAE, university and research institute representatives (collaborators of DAE) and the Bangladesh Seed Association (potential exporters).

A series of discussions were held with the newly engaged consultants to impart the training virtually in the context of COVID 19. Efforts were made to abridge the planned training course on PRA to be delivered and complete in 8 days including orientation with duration of engaging trainees from three and half to four and half hours each day continuously and engaging the trainees professionally in this short duration (otherwise the physical programme is for over 4 weeks with 6 to 7 hrs each day) was a

challenge and the team of consultants and APAARI made it possible. Training orientation day (Y1, Q3, Annex 4) and other training days agenda are provided (Y1, Q3, Annex 5). Details of the participants are provided in (Y1, Q3, Event 1). Some of the important steps that contributed to training success were: sharing of the Participants Guide and Case Study in advance; suggesting the participants to undergo prerequisite through online training from SPSCOURSES.COM; planning group exercises each day; identification of group leaders and intimation in advance; providing a recap of the subject covered in the previous day; filling a personal logbook; providing opportunity to each group to present their summary on all training days; associating two moderators with each group to facilitate the discussions in right direction; conducting pre and post training tests (Y1, Q3, Annex 6 and Y1, Q3, Annex 7) and evaluation (Y1, Q3, Annex 8) discussion in open forum; providing instant polls on case study; facilitating Bangla translation when ever needed; as well as collecting of systematic feedback (Y1, Q3, Annex 9) contributed to the success of the PRA training programme. Guidelines were issued to the PRA training Moderators (Y1, Q3, Annex 10) There was a quite a demand to join as trainees in this programme particularly from the universities, research institutes and private sector which was encouraged and facilitated by APAARI by allowing most of the request from these sectors. Certificates were issued to all the eligible participants.



Multi-Stakeholder PRA training held from 2nd to 9th Aug 2021

Functional capacities of the trainees were addressed in the PRA training through facilitation of individual and collective reflection of the participants, their active engagement and sharing of issues and knowledge, as well as role play and the use of personal logbooks. This combination of technical and functional training content enhanced the capacity of the participants to think from a broader agricultural innovation system (AIS) perspective, communicate on risk-related matters, negotiate with various types of stakeholders, and deal with complex pest-related issues. It promoted their ability to create and promote innovative processes and ways of thinking in their organizations. Personal log books helped the trainees to record their reflections, commitments and action plans each day after the training. Pre- and Post-Training evaluation of participants was conducted to assess the newly acquired technical and functional capacities. The functional component of the training was facilitated and delivered by the Knowledge Management Team of APAARI (Y1, Q3, Annex 11).

Powerpoint presentations made on orientation day (Y1, Q3, Annex 12 to 16) and the technical presentations of PRA are provided (Y1, Q3, Annex 17 to 26). A brief on PRA Training was provided to USDA (Y1, Q3, Annex 27) to update the Post.

As a part of awareness activities, a webinar on “*Building Capacity to Enhance Bangladesh Agricultural Trade through WTO Standards*” (Y1, Q4, Annex VII: webinar) was conducted with participation of 100 members belonging to key stakeholders, which was published in daily observer online coverage on December 21, 2021 (Y1, Q4, Annex VIII: Webinar daily observer; Event 6).



Figure 11: “*Building Capacity to Enhance Bangladesh Agricultural Trade through WTO Standards*” Webinar held on 20 December 2021.

Six capacity building programmes were conducted virtually through the Sanitary and Phytosanitary Training Hub (SPSTH) of DAE. A Training on Plant Pest Identification Systems was conducted on January 24, 2022 (Y2, Q1, Annex 4: Event 1) organized by APAARI. Training is based upon APHIS / Texas A&M Module. “Participants Guide” was shared with the participants ahead of the training. Topics discussed are Importance of non-technical (functional) capacities in the plant pest identification process, Principles of Taxonomy and Outlining the Identification Process Module. Strengthening the lab facilities, building accredited national and central laboratories with ISO standard and providing training facilities have been identified as the most crucial points in plant pest identification systems in Bangladesh. (Y2, Q1, Annex 5a: Agenda and Y2, Q1, Annex 5b: PPTs). Training was mainly conducted by consultants from APAARI and USDA. Training was evaluated through a pre-test and post-test filled in by the participants (Y2, Q1, Annex 6: Training Evaluation Pre & Post test papers). The Minimum & Average score for the pre test scores are 38% & 69% and the corresponding score for the post test are 38% & 75%. A press release was published on Jan 28, 2022 in Bangladesh Sangbad Sangstha National News Agency of Bangladesh; (Y2, Q1, Annex 7: Pest ID Training coverage) Link: <https://www.bssnews.net/news/41263>.



Figure 12: Training on Plant Pest Identification Systems

A two-day training on “Plant Quarantine Pest Surveillance Systems” was conducted from February 24th to 25th, 2022 (Y2, Q1, Annex 13: Event 3). The APAARI and USDA consultants imparted training to the stakeholders. Participants were trained on Status and Gaps of Bangladesh Pests Surveillance Systems (technical, functional, and organizational), Introduction to ISPM 6, Surveillance and Brief review of Surveillance Concepts. Break-Out Group Activities were also conducted on Pest Surveillance (Y2, Q1, Annex 14a: Agenda and Annex 14b: PPTs). Training was evaluated through a pre-test and post-test filled in by the participants (Y2, Q1, Annex 15a: Pre-Training; Annex 15b: Post-Training Quiz). Pest Surveillance Systems Training by ABC Radio 89.2 FM (coverage on Prime Time, just after main bulletin of BTV news transmission by ABC, coverage time: 3 mins. 13 sec. on Feb. 28, 2022 (Y2, Q1, Annex 16: Radio coverage on Surveillance Training). Pest Surveillance System in Bangladesh, Daily Observer Online, e-paper, Op-ed and page 5 (as By Line Post Editorial on behalf of APAARI, that has mentioned at the bottom of the write-up)), Link : [Daily Observer | 07 March, 2022, monday](#) (Y2, Q1, Annex 17: Surveillance Training coverage)

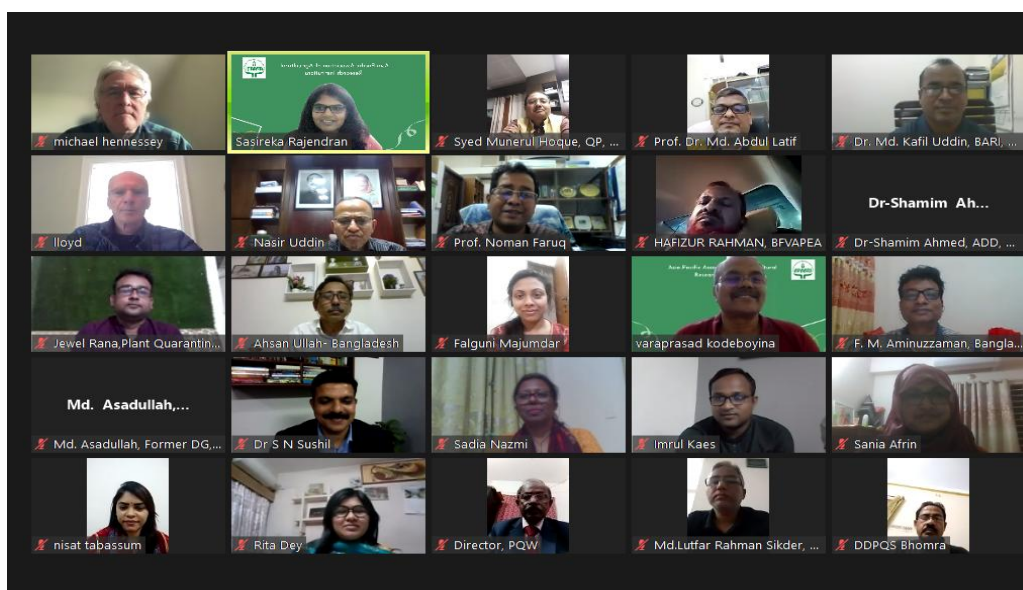


Figure 14: Plant Quarantine Pest Surveillance Systems Training

APAARI and USDA teams were meticulously planned over few Review and special meetings Visit to the Ministry of Agriculture, field visits to practice PFA, fumigation facility and the CPH were planned involving DAE, Nodal Officers Team including (Y2, Q2, Annex 1: Tentative Agenda of USDA and APAARI teams to Bangladesh from June first to 17th June 22).

The three capacity building programs and a few meetings were conducted (Y2, Q2, Annex 2: Training Agenda) jointly by USDA and APAARI at the Hotel Sarina, Dhaka from 8th June to 16th June 2022. All stakeholders and experts participated physically, while Dr. Mike Hennessey and Ms. Martina Spisiakova participated and contributed on-line for the training. Dr SN Sushil, Former Plant Protection Advisor to the Government of India also participated physically from June 4th to 16th, 2022.

A Training on Pest Free Area and Field Activity was conducted on 8th, 9th, 12th June, 2022 (Y2, Q2, Annex 3: Event 1- PFA). Topics discussed are Status of PFA systems, Defining Pest Free Areas, ISPM 4, Compare and Contrast Pest Free Concepts, Modeling Pest Free Area, Importance of Collective Reflection on Bangladesh Pest Free Area Systems, Developing a Capacity Development Strategy plan for the NPPO, Functional Capacity Development Next steps, and also Visit to Local Business Facilitator (LBF) and Baroicha Bazar CCMC, Pest Free Area field training in Phutimara area (Y2, Q2, Annex 4: PPTs- PFA).

Training was mainly conducted by consultants from APAARI and USDA. Training was evaluated through a pre-test and post-test filled in by the participants. The minimum/average scores for the pre test scores were 128/224~57% and the corresponding score for the post test were 146/224~65%.

A Training on Phytosanitary Inspection and the related Field Activity was conducted on, 13th, 15th June, 2022 (Y2, Q2, Annex 5: Event 2- Inspection). Training is based upon Status of Phytosanitary Inspections in Bangladesh and South Asia, Inspection Guidance, ISPM 23, Principles of Inspections and Inspection Station Equipment, Group discussion on Status and Gaps of Bangladesh Inspection System, Commodity and Packing Material Inspection, Introduction to USDA AQIM Handbook, Inspection of Commodities, Phytosanitary Inspection Activity at Shyampur Central Packhouse (Y2, Q2, Annex 6: PPTs- Inspection). Training was evaluated through a pre-test and post-test filled in by the participants. The minimum/average scores for the pre test scores are 159/190 ~ 81% and the corresponding scores for the post test were 161/196 ~ 82%.

A Training on Phytosanitary Treatments and the relevant Field Activity was conducted on 14th, 15th June, 2022 (Y2, Q2, Annex 7: Event 3- Treatments). Topics discussed are Status of Phytosanitary Treatment Team in Bangladesh and South Asia, Treatments Guidance, ISPM 28, Why use Treatments and Types of Treatments?, Treatment Process, Systems Approaches, ISPM 35, with examples: avocado, vegetables, Treatment Schedules Scenarios Pros and Cons, Introduction to USDA Treatment Manual, Mango Treatment, according to the Treatment Manual, Wood Treatments, ISPM 15, Four Highest Priority Export and Import Commodities and Treatment System Overview, Group discussion on Status of Domestic Treatment System and Export/Import Commodities Priorities, Phytosanitary Treatments Activity at Rice Fumigation Facility (Y2, Q2, Annex 8: PPTs- Treatments). Training was evaluated through a pre-test and post-test filled in by the participants. The minimum/average scores for the pre test scores are 117/224~52% and the corresponding scores for the post test are 135/184~73%. A press note was also released on the occasion.

A Training on Phytosanitary Training Series- Concluding Workshop was conducted on 16th June, 2022 (Y2, Q2, Annex 9: Event 4- Concluding workshop). Topics discussed are Recap of SPS Trainings and activities: Compare and contrast, Lessons Learned, Linkages Created and Proposed

Next Steps, Functional Capacity Presentation, Expert – NPPO Leadership Panel Discussion and Next Steps, Presentation of Certificates (Y2, Q2, Annex 10: PPTs- Concluding workshop and Y2, Q2, Annex 11: Certificates- examples). A Press release of the above phytosanitary training series was published on Monday, 13 June, 2022, in the ‘Observer Online Desk’ (Y2, Q2, Annex 12: Observer Online Desk, link: <https://www.observerbd.com/news.php?id=370202>), and a translated copy, news aired in Bengali 2 min, 3 sec at Radio 89.2 FM (Y2, Q2, Annex 13: Radio MP3).



Figure 15: Phytosanitary Training Series, taking place at Central Pack House, Dhaka and Rice fumigation facility at Bombay Sweets and Company Ltd, Narayanganj District, Bangladesh.

Physical meetings and trainings were conducted jointly by USDA and APAARI with Bangladesh Phytosanitary Stakeholders for about 10 days in Dhaka, Bangladesh. Physical meetings consisted of DAE Capacity building on Web portal maintenance and updating; SPS Overview; Functional Capacity building; Steering Committee meeting; PQ Act Revision meeting with BTF and APAARI Consultant and Pre-Closing workshop. DG, DAE and his key staff of PQW and PPW were updated on various physical programmes to be conducted and requested for necessary logistic arrangements (Y2, Q3, Annex 6: Bangladesh and Bangkok program agenda).

APAARI Executive Secretary as Member Secretary of the Steering Committee convened the Steering Committee and made a brief presentation (Y2, Q3, Annex 8: SC Presentation) on the Action Taken on the previous decisions along with agenda to be taken up (Y2, Q3, Annex 7c: Steering Committee Meeting Event Sheet). MOA officials, Co-Chairs (DG, DAE and representative of USDA), USAID representative, Joint Secretary, MOA, Director, WTO Cell, Ministry of Commerce, Directors, PQW and PPW, representative from BARC, Training Coordinator and PI, BTF project as observer participated in the meeting and contributed. Suggestions made by the SC members were considered for action in the Closing workshop to be held in Bangkok (Y2, Q3, Annex 9 Action Planning).

SPS Training Wrap-up (Y2, Q3, Annex 7d: SPS Training Wrap-up Event Sheet) was held with diverse stakeholders deputed by the DAE USDA and APAARI Consultants/ experts conducted the Wrap-up training (Y2, Q3, Annex 11: SPS Training Wrap-up Material).

An Intra-departmental Committee on Plant Quarantine Facilitation (Y2, Q3, Annex 7f: ICPQF Meeting Event Sheet) was constituted to develop synergy among the various wings of DAE for plant quarantine collaboration. Objectives, Roles and Process was defined and familiarized to the group headed by the Director, PQW. Chairmen and the members of ICPQF found it as a very useful activity and wanted to continue with more vigor and purpose. A Pre-closing workshop (Y2, Q3, Annex 7g: Bangladesh Closing Workshop Event Sheet) was held with all senior management of DAE. Excellent feedback was received on the progress of the project and suggestions to be included in the Closing workshop to be held in Bangkok.



Figure 16:: Pre-Closing workshop

Activity 2.4. Developing functional capacity of those acquiring technical capacity

Functional capacity building approaches and plans as developed by the Knowledge Management Coordinator were shared with the stakeholders in WTO-SPS Training. Accordingly the first functional capacity building is being planned to be conducted with PRA training.

Functional capacity component was integrated into the capacity building programmes. APAARI Knowledge Management Coordinator or representative enhanced the awareness of workshop participants on key functional capacity needs in the context of SPS activities. A pre-training evaluation was conducted prior to the Pest Identification Training, which served as a basis for consequent capacity development programmes. Firstly, the expectations of trainees were assessed against the delivered objectives, with the focus on knowledge application. Various actors currently involved in the Pest Identification System and their role were identified, as a basis for a map of system actors. The participants also indicated their current role in the country's pest identification system and how they envision an ideal system to be – in other words, what current processes need to change to strengthen the pest identification system. This was explored also during the workshop itself according to both technical and functional aspects that need to change. The role of functional capacity development in the pest identification system was presented and discussed during the

workshop through an interactive presentation that integrated the survey results and on which the discussion with participants was based. The consequent Plant Quarantine Pest Surveillance System training was also conducted in an interactive manner with facilitated discussions around the status of the current surveillance system in the country. Both events provided sufficient opportunities for the participants to engage, get to know each other, and exchange experiences as a basis for future national networks around the surveillance system in Bangladesh. Both events were also documented for reference and follow up through more functional aspects to be integrated in future learning programmes of the project.

Based on the protocols explained to the pesticide residue decline study team, the research team under the physical guidance of the Indian expert and under the supervision of Ag Aligned Global team selected pesticides were sprayed pesticides were sprayed in the field and samples were collected for analysis as per protocols.

Functional Capacity: APAARI has contributed to the design and delivery of the SPS and Biopesticide training in Bangladesh in two ways. Firstly, on 9th June 2022, it organized and delivered the whole afternoon session devoted to the development of functional capacities of the participants, particularly in Introductory of the session, Definition of the vision of the new NPPO, Galvanizing commitment and defining operational arrangements, capacity development strategy and their next steps and Action Planning: Establishment and Management of new NPPO in Bangladesh (Y2, Q2, Annex 20: Action Planning with background and Y2, Q2, Annex 21: Updated Action Planning- Vision statement), together with a detailed summary of the functional sessions, it will serve as a base document for the planning and establishment of the new NPPO in Bangladesh (Y2, Q2, Annex 22: Functional Capacity). Based on the above outcomes of these sessions, APAARI developed a draft action plan (Y2, Q2, Annex 23: Action Planning), which was discussed and elaborated during 16th June 2022 sessions (Y2, Q2, Annex 24: Bangladesh Functional Capacity progress report). From all the above training conducted from 1st June to 17th June 22, the photos in different folders are attached here (Y2, Q2, Annex 25: Photo Gallery).

Functional capacity development to arrive at an empowered NPPO was discussed (Y2, Q3, Annex 7e: Bangladesh SPS/FCB Final Training Event Sheet). Key PQ functions were identified and group discussions were held on the status and way forward. APAARI Coordinator and its team conducted this session. Executive Secretary, APAARI made a presentation to higher officials of DAE on the need for National Plant Quarantine Authority. Way forward perceptions of the Director, PQW and other senior officials was taken as part of the Panel discussion. Key points emerged.

The Key learning lessons from this multi-stakeholder capacity building are 1. Consider involving the private sector in National Teams (PRA, bio-pesticide, IPM etc.) 2. Provide a platform for regular interactions between the regulatory team and private sector 3. Involve members of Export Associations also in addition to the seed sector in all future capacity building programmes of the project. Pictures of the events are attached (Y1, Q3, Annex 37). Press coverage (Y1, Q3, Annex 38 to 40).

Activity 2.5. Imparting Training/exposure of some key officers in PQW in the region

Eight Officials including DAE staff and APAARI local staff were invited to an Exposure cum Study Visit to Thailand for a duration of eight days. USDA FAS and APAARI meeting was held on the final day. Exposure cum study visit included various lectures and visits. Special lectures were

extremely thought provoking and the presentations were oriented to Bangladesh highlighting next steps and action points based on the current status of phytosanitary trade compliances and emerging trade opportunities and challenges for Bangladesh. (Y2, Q3, Annex 12 DAE and APAARI Presentations). The Lecture from Dr. Kravchenko, Economic Affairs Officer, Trade, Investment and Innovation Division, UNESCAP highlighted the role of Non-Tariff Measures and agricultural trade with the specific context of Bangladesh. Lecture from Dr. May Chodchoey, Executive Director, APSA introduced the activities of APSA and the huge opportunities and challenges of seed trade for Bangladesh. Lecture from APPPC was Alexey delivered by the Executive Secretary, APAARI and highlighted the non-communication of Bangladesh, which was later addressed by the Director, PQW. Lecture from Dr. Prachathipat Pongpinyo, Department of Agriculture, Thailand highlighted the Biopesticide Regulations in Thailand and status of their use and discussed them in the Bangladesh context. The Lecture from Ms. Roshan Khan, Economic Affairs Officer, WTO/STDF highlighted the opportunities for Project Preparation Grant for Bangladesh as a country that graduates to Developing Country status shortly. (Y2, Q3, Annex 13: Special Lectures)

Visits were very highly relevant to the Bangladesh needs, educative and thought provoking with intense participation in discussion by the Bangladesh NPPO officials. Thailand NPPO visits to their Headquarters and Laboratories were very useful. Bangladesh NPPO realized the need to revamp their export and import laboratories. Visit to the classical and first Vapour Heat Treatment facility was very interesting and Bangladesh NPPO made several pertinent queries as it is shortly establishing the facilities in Dhaka. Visit to a private industry member of APSA was absolutely astonishing to learn about the systematic sequence of seed testing facilities as an ISTA approved laboratory. Equipment, the precision and the technologies used were very interesting. Method of export processing as a packing house facility coupled with seed health testing was very interesting. Seaport facility and import inspection process was also visited with several queries from NPPO of Bangladesh.



Figure 17: Special lectures provided during the exposure visit to Bangkok

Reflections of the senior officials of Bangladesh NPPO during the lectures, visits and in the closing workshop touched various action points. Some of the highlights that discussed as action points as expressed by the NPPO Bangladesh are: converting web portal prototype in to functional SPS Information Management System; Constitution of PRA, Surveillance and PFA teams; updating/ revising the existing PRAs developed; establishment of a physical SPSTH of DAE; follow up of Revised Biopesticide Regulations/ Guidelines by the Sub PTAC and PTAC committees; approval of draft SOPs on Inspections, PFA for mango nut and pulp weevils, Vapor Heat Treatment facilities and Packing House; improving communications with international bodies such as WTO, IPPC,

APPPC etc.; initiation of Market Access in association with WTO cell of Ministry of Commerce; and harmonising various projects in operation in DAE.



Figure 18:: Exposure visit to Bangkok

Some of the potential areas prioritized by the NPPO for the next phase reflected are steps and strategies towards autonomous and effective functioning of Plant Quarantine in compliance with WTO standards; Developing a registration tool kit for Pesticides including biopesticides; strengthening biopesticide development in collaboration with research sectors both in private and public, large scale manufacturing, quality monitoring and regulation; strategies for effective implementation of PRA, PFA and Surveillance following ISPMs; Training of Trainers specifically for laboratory and field staff.

Considering the above feedback and the felt need of Bangladesh NPPO staff, USDA FAS and APAARI discussed the key activities that could make difference to agricultural trade of Bangladesh towards safe imports and enhanced access to exports. USDA FAS and APAARI agreed to continue the positive relationship developed with various Phytosanitary stakeholders of Bangladesh including DAE to strengthen Bangladesh in improving agricultural trade to its advantage following global norms and standards. From the above trainings, meetings conducted from July 2022 to August 2022, the photos in different folders are attached here (Y2, Q3, Annex 15: Photo Gallery).

Activity 2.6. Capacity development for developing some SPS related key technical documents on issues of Export and Import (SOPs, Manuals, Factsheets, Diagnostics, Treatments, PFAs, etc.)

Draft SOPs developed and officially handed over to DAE. These SOPs are listed below

1. Vapor heat treatment (Y2, Q3, Annex 4a: SOP for VHT)
2. Mango nut weevil and pulp weevil (Y2, Q3, Annex 4b: SOP for MNW & MPW-PFA)
3. Packing House Facility (Y2, Q3, Annex 4c: SOP Packhouse, Export Inspection etc.)

SOPs were prepared for Bangladesh. Stakeholder capacities were built on developing SOPs in general with the examples of three developed SOPs.

Activity 2.7. Creating a portal for Information management on SPS and value chain related issues to relevant organizations (stakeholders, input suppliers, research organizations, customs, ICD, export – import databases, rejections, interceptions, etc, Documenting Success stories of exports, National standards and best practices, etc)

SPS web portal planning

A consulting team to develop a web portal on WTO-SPS information was finalized by APAARI.

1. Development of a webportal for supporting the SPS Information Management System for Bangladesh preferably to a standard CMS (e.g. Word press, Drupal or Joomla) and implement new features that add value.

2. Webportal developed, as may be approved by PQW/DAE will be incrementally populated with information and data and functionality is demonstrated. SPS Webportal will be linked to the PQW of DAE website if approved by the DAE.

3. Simple, cost-effective techniques to test designs with representative users before implementation of major features such as restructuring the main navigation menu.

4. The web portal will be optimized for low bandwidth users.

5. A basic “blog” function with integrated twitter and facebook posting if agreed upon by DAE.

6. Browser compatibility. The site must be compatible with the current versions of the following browsers (Firefox, Safari, and Chrome).

7. Support the data entry at least for a month to ensure the functionality, and for gradually populating the website.

A web portal for SPS information management was initiated. Discussions were held through meetings and mails between the Knowledge Management Team of APAARI and the web portal consulting team. An initial demo of the web portal was conducted and based on the feedback received, the team is working on the final version (Y1, Q3, Annex 28) of the web portal.

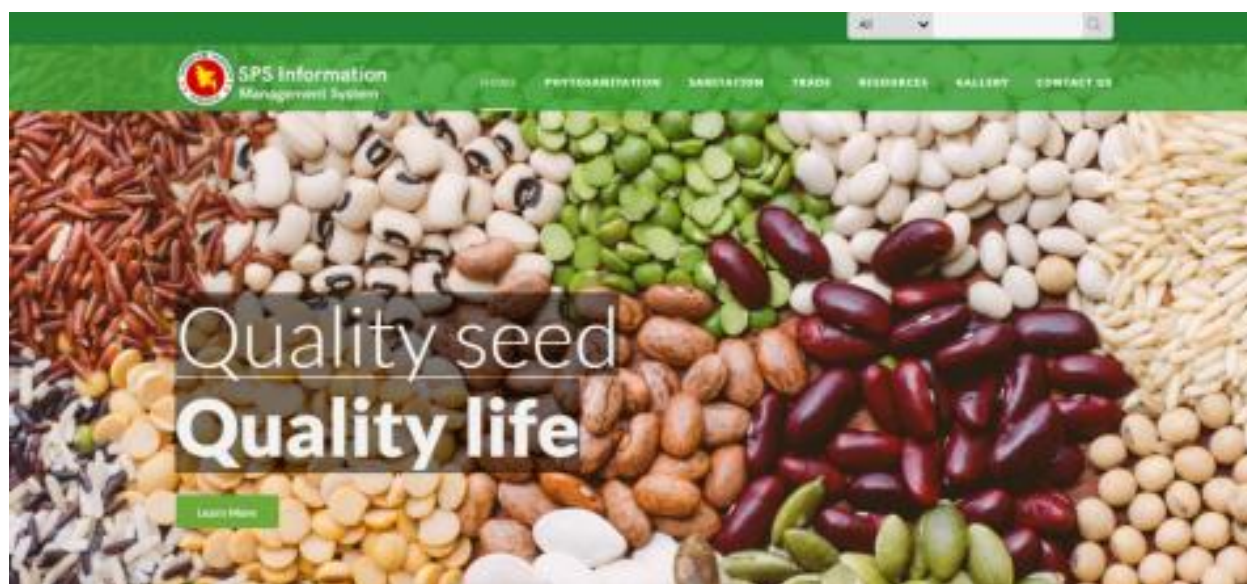


Figure 19: Bangladesh SPS Information Management System - A Banner

A Prototype of web portal “*Bangladesh SPS Information Management System*” (<https://spsg.annainfotech.com/>) (Y1, Q4 Annex X: Report on web portal) with main tabs Home, Phytosanitation, Sanitation, Trade, Resources, Gallery, and Contact Us was developed and shared with APAARI and USDA teams for their input. The web portal will be introduced to the committee constituted by DAE for their technical input and translation into Bangla.

A Web Portal Prototype on “Bangladesh SPS Information Management System: An Introduction to DAE” session was conducted on February 28, 2022 (Y2, Q1, Annex 18: Event 4). This was organized by the APAARI webportal consultants’ team with DAE to discuss the hosting by DAE, process of translation into Bangla, training needs of DAE and converting or updating the portal with relevant data (Y2, Q1, Annex 19: Agenda). Decision on these issues will be taken in the next webportal meeting with regular ADD taking over the charge of webportal.

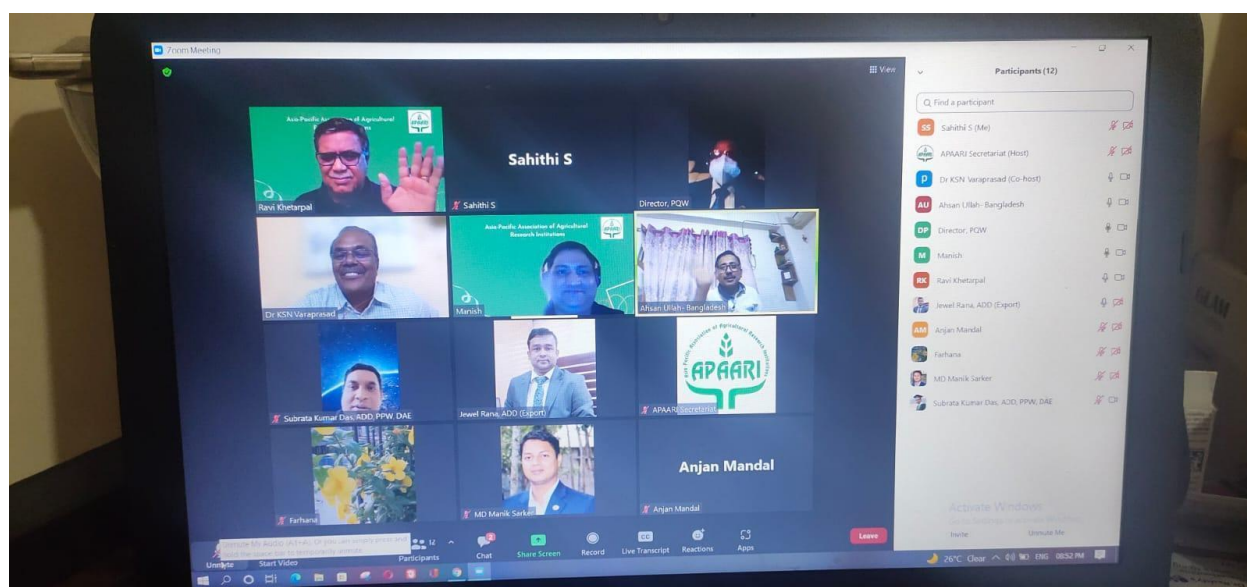


Figure 20: *Bangladesh SPS Information Management System Prototype*

SPS Information Management Web Portal prototype training (Y2, Q3, Annex 7a: Web portal Training Event Sheet) was conducted to the deputed staff of DAE on populating with data and information, editing and maintenance. A special training to the ICT team of DAE along with representative Regulatory staff representing the PQW and PPW was conducted on backend editing to maintain the website (Y2, Q3, Annex 7b: Intensive Web portal Training Event Sheet).

The prototype of the web portal was officially handed over to DAE for updating, editing and hosting.

Objective 3. Increase awareness of trade issues linked to non- compliance with pesticide MRLs and promote an Integrated Pest Management approach for overcoming these trade Issues.

Activity 3.1. Residue decline studies to be conducted on leafy green vegetables in Bangladesh-for problems with residues. Most of the pesticides do have MRLs. Therefore, decline studies will be conducted to understand the relationship between days from last application to harvest and residue levels.

Activity 3.2. Based off these studies, a risk analysis profile will be established. Depending on the length of time required to reach acceptable MRLs a subset will be selected. Selection will be based on those that have a dissipation rate conducive to mitigation. As a benchmark, the target goal will be that they can attain a level below the MRL within 35 days.

Activity 3.3. A subsequent study will be a residue decline study coupled with the inclusion of biopesticides to help manage the late season pests.

Bangladesh Pesticide Residue Decline Study Training was held on March 6, 2022 (Y2, Q1, Annex 20: Y2, Q1, Event 5). Project Team APAARI, USDA, Ag Alined, BARI team, DAE team, Field Research Investigator participated in this training (Y2, Q1, Annex 21: Agenda). Classroom Training includes the Protocol and Field Data Book Review – Synchronization of the two documents and Hands-On Field Training includes Sprayer examination/check; Sprayer calibration; Speed calibration and training on Sample collection, sample preparation and freezing (Y2, Q1, Annex 22: Report on Program).



Figure 21: Training on Bangladesh Residue Decline Field Study

Bangladesh Laboratory Refresher Training was conducted on Wednesday, March 9 (Y2, Q1, Annex 23: Y2, Q1, Event 6). Important training topics included Good Laboratory Practices (GLP) vs GLP-like; Laboratory Protocol Review, Sample arrival, storage, Analytical methods and Lab Demonstration: Sample Grinding; Sample Extraction; Cleanup; Instrument analysis for the participants (Y2, Q1, Annex 24: Agenda). Feedback and test results of pesticide residue decline study are available in Y2, Q1, Annex 25.



Figure 22: Bangladesh Laboratory Refresher Training on pesticide residue decline study

Series of meetings held initially among the APAARI leadership, Ag Aligned Global and STDF country partners facilitated by USDA. These efforts led to understanding the roles and budgets of partners avoiding duplication and bringing harmony with details of Field Supply List (Y1, Q3, Annex 29), calendar of activities (Y1, Q3, Annex 30) and a ppt on Biopesticide mitigation (Y1, Q3, Annex 31). Later a separate meeting was held with PPW of DAE, which was addressed by the DG, DAE to pull together all the key collaborators and develop a plan to implement the activities under the project.

Residue decline study could not be concluded as permission to BARI to sign LoA was accorded after the project period.

Objective 4. Enhance the capacity of the Bangladesh plant health system to boost regulatory harmonization for registration of biopesticides.

Activity 4.1. Provide strategic expertise and co-ordination of the harmonization of policies and strategies to accelerate regional integration and sustainable development between ASEAN and South Asia. The following is an outline of what a proposed workshop between ASEAN and South Asian countries for regulatory harmonization. It is based off the ASEAN Workshop “ASEAN Guidelines on the Regulation, Use, and Trade of Biological Control Agents (BCA) The Regional BCA Expert Working

Groups on Application and Regulation”. The following is an outline of the workshop, which follows:

- Biopesticide regulatory framework and potential impact for trade cooperation.
- How to conduct Efficacy Studies –Successes with Biopesticides
- How to conduct and evaluate toxicology studies for microorganisms

APAARI, PPW of DAE and USDA discussed finalizing the agenda for a meeting planned with the Ag Aligned Global team and invited all potential collaborators in the areas of fixing MRLs. A

meeting was conducted with all these collaborators, partners and implementing officials (Y1, Q3, Event 2).

Several meetings were held to discuss pesticide residue decline studies both in laboratory and field. The biopesticide efficacy research and harmonization of regulations were also discussed. A workshop '*Biopesticides Regulatory Workshop: An Overview*' conducted on November 17th, 2021 (Y1, Q4, Annex XI: Biopesticide workshop; Y1, Q4, Event 3) and Pesticide MRL meeting '*Pesticide Residue Mitigation through the utilization of Biopesticides: Next Steps*' held on Nov 24, 2021 (Y1, Q4, Annex XII: Pesticide Residue Mitigation; Y1, Q4, Event 4). As the need was felt to involve the universities and research organizations, PPW of DAE constituted a National Team (Y1, Q4, Annex XIII: Residue & Biopesticide National Team) with 4 committee each on field residue research, laboratory residue research, biopesticide efficacy research, and biopesticide regulatory harmonization to coordinate with the International Team (Y1, Q4, Annex XIV: International Team) consisting members of Ag Aligned Global.

As part of this for the first time in Bangladesh a Training Series for 10-days on 'Pesticide Residue Analysis' for BARI (Bangladesh Agricultural Research Institute) Scientists and DAE (Department of Agriculture Extension) officers was held from March 02 to March 11, organized by Entomology Division, BARI, DAE of Bangladesh and Asia-Pacific Association of Agricultural Research Institutions (APAARI), Thailand. The training was also technically and financially supported by USDA. The training sessions were held at the Seminar Room of BARI, Gazipur at indoor level and virtually were connected at the same time by video conferencing from fields and laboratory of BARI.

2nd Bangladesh Biopesticide Regulatory Workshop was held on February 15th, 2022 (Y2, Q1, Annex 8: Event 2). Basic Components of a Biopesticide Regulatory Framework and Proposed Next Steps in the Upgradation of Biopesticide Regulation in Bangladesh were discussed (Y2, Q1, Annex 9a: Agenda and Y2, Q1, Annex 9b: PPTs). Pesticide Act, Rules & Regulations were also discussed (Y2, Q1, Annex 10a: Pesticide Act, 2018- original in Bangla language; Y2, Q1, Annex10b: Pesticide Rules, 1985). It was decided to constitute a Taskforce Committee to prepare a draft on upgraded biopesticide regulations for Bangladesh (Y2, Q1, Annex 11: Taskforce). A press release was published on Feb 17, 2022 in Bangladesh Sangbad Sangstha National News Agency of Bangladesh both in English and Bangla Language; Link: <https://www.bssnews.net/news/45277> (Y2, Q1, Annex 12a: 2nd Bio-pesticide BSS Coverage English; Y2, Q1, Annex 12b: 2nd Bio-pesticide BSS Coverage Bengali)



Figure 23: Biopesticide Regulatory Workshop

A Biopesticide Task Force (BTF) Workshop was conducted from 6-8th, June 2022. Topics included, the Regulatory Justification, Authority and Scope, General Registration Requirements, Selection of 5 categories of Biopesticides (Microbials, Biochemicals, Semiochemicals, Macrochemicals, PIPs), Biopesticide Data Requirements, Labeling Requirements, Types, Approval Process, Import and Export Approval, Suspension and Cancellation Procedures, Enforcement and Application Forms and their next steps (Y2, Q2, Annex 15: Presentation on Biopesticide Task Force (BTF) Workshop). The East African community “Biopesticides and Biocontrol Agents Guidelines” (Y2, Q2, Annex 16: Guidelines of Biopesticides and Biocontrol Agents), The South African “Guidelines for Registration of Biological Remedies 2015 Registrar of Act 36 of 1947” (Y2, Q2, Annex 17: Registration of Biological Remedies guidelines), and the ASEAN Guidelines on “Regulation, Use, and Trade of Biological Control Agents (BCA)” (Y2, Q2, Annex 18: ASEAN Guidelines) were also considered, discussed and used to develop a draft final Working Document for Bangladesh (Y2, Q2, Annex 19: Final working document).



Figure 24:: Biopesticide Workshop from June 6th to 8th, 2022 in the Hotel Sarina, Dhaka

A working group cum Task Force Committee for the purpose of harmonizing the Biopesticide Regulatory Framework was developed. The Committee conducted its group meetings with the assistance of Ms Ire from USDA Team. A good working document was developed as an output of

these meetings which will be taken forward to submit the final draft to PTAC (Y2, Q3, Annex 3: Task Force final draft on Biopesticides Regulations 2022)..

The Task Force Committee on Biopesticide Regulatory Harmonization completed the draft revised Regulations/ Guidelines. It is also translated into Bangla. The Task Force shortly will validate the translation and submit it to Sub PTAC in the next month (November).

2.2. Implementation Status

This should consist of a narrative of activities implemented per result area. Please include NPPO and MRL related Activities.

Objective	Activities	Status
1. Facilitate collaboration and coordination within the Ministry of Agriculture, the DAE, PQW, PPW, and other relevant stakeholders to operationalize the NPPO.	Activity 1.1. Identifying synergies for Inter-departmental linkage (PQW and PPW of DAE) and Linkages with other Ministries, Private sector, Research Organizations and related agencies, and efforts to formalize the linkages	Various agencies listed in the activity column participated and discussed linkages and synergy needed among them. Intra-departmental linkages formalization discussed Nodal officers and Training Coordinator appointed to facilitate synergy within DAE and high level steering committee formed and preparatory meeting held. The steering committee constituted stakeholders from Ministries of Agriculture and Commerce and research sector stakeholders to bring synergy. Steering Committee preparatory meeting minutes circulated and approved by the members. A meeting with PPW officials; universities and research institute stakeholders; Ag Aligned Global consultants; USDA and APAARI team organized to develop linkages. A partnership agreement was signed between DAE and BARC along with APAARI. LoA/ MoA with BARI is under process. Two committees constituted (ICPQF & WFC) to enhance synergy within DAE to implement Plant Quarantine activities and convert webportal prototype into information management system.

	Activity 1.2. Developing guidelines for collaboration and coordination for Pest reporting, PRA and Surveillance. Export promotion and market access and risk communication	Two committees namely Intra-departmental Committee on Plant Quarantine Facilitation (ICPQF) and Web portal Facilitation Committee (WFC) were formed. DAE and APPARI are negotiating for holding the first meetings with these committees. Two meetings of the Intra-departmental Committee on Plant Quarantine Facilitation (ICPQF) were held (one in person and the other virtual). A Roadmap was developed to make ICPQF effective and sustainable. Awareness generation, higher level meetings with Ministries and Steering Committee Meeting conducted. Identified the primary stakeholders within DAE (different wings) and other external agencies for collaboration and coordination: BARC, Agricultural Universities, BVFEA, BSA, MoC. A template of Partnership Agreement proposed by APAARI to DAE for further consultation with collaborators. An Indian expert experienced in developing guidelines on key Plant Quarantine Activities was invited to participate virtually in the Pest Surveillance Training. An Indian expert was appointed, and the country status on Pest Free Area, Pest Inspection, and Pest treatment were collected for documentation. The expert developed SOPs/ Guidelines harmonized
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	Activity 1.3. Facilitation in undertaking activities to create awareness on importance of plant protection and quarantine activities for civil society (through webinars, radio and television talks, print media etc).	with few relevant examples from ISPMs Three draft SOPs one each on PFA for mango nut weevil and mango pulp weevil; vapor heat treatment facility and Packing house facility were handed over to DAE for further refinement and approval. A training session was also conducted on the process of developing SOPs/ Guidelines. Communication consultant identified and ToR is finalized. An article in popular Bengali Daily ‘Prothom Alo’ published under the title ‘New Project to Maintain the Phytosanitary Standards’(translated)Radio and TV Talks are being planned in the third quarter. After a series of meetings and consultations with TV and Radio Channels by APAARI team taking USDA team into confidence, A TV show was pre-recorded virtually. It was also decided that the same programme with suitable edits will be used for Radio Programme as well. Press and media covered the PRA training conducted to a wide range of stakeholders. A virtual webinar on “Building Capacity to enhance Bangladesh Agricultural Trade through WTO Standards’ conducted on 20 Dec 21
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2. To strengthen the institutional capacity of the NPPO to establish a framework for the formation of a National Plant Protection Authority	Activity 2.1 Assessing the capacity on regulatory measures and initiating the process of needful revisions in the PQ Act Activity 2.2. Facilitating the establishment of a Quarantine Training Hub with a specific ToR in PQW by focusing on important aspects of Pest risk analysis; Export certification, Import inspection system and NPPO structure and processes	APAARI identified potential legal consultants and assessing to move forward. However, due to COVID situation in Bangladesh, engaging a legal consultant is taking more time. A legal consultant was appointed and shared the ToR draft along with relevant information. Efforts are underway to harmonize the BTF and APAARI efforts. Legal consultants' output based on PCE of Bangladesh from BTF and APAARI were harmonized and a common draft was presented to DAE. NPPOs request to get it reviewed by an international consultant was taken up by the BTF project. BTF arranged a review by an international expert, BTF will take forward the PQA revision proposal. Virtually Quarantine Training Hub establishment process is initiated. Quarantine Training Hub of PQW is renamed as SPS Training Hub of DAE. This Hub will facilitate fulfilling the training needs of PPW and various other stakeholders. Virtual Hub is in operation. A new Nodal Officer, Mr Jewel Rana is nominated in place of Ms Sangeeta Bhattacharjee. A draft annual training plan developed, which is under revision to ground the remaining trainings. Five capacity building programs were conducted through the virtual SPSTH of DAE. Annual training plan is finalized except for the last
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	Activity 2.3. Training of the trainers by conducting Online training courses on SPS; The SPS Agreement; The IPPC and the Standard Setting Process; Market Access Process; Pest Risk Analysis; Pest Risk Communication; Pest Risk Assessment; Plant Pest Risk Management; Pest Surveillance; Plant Pest ID Systems; Pest Free Concepts; Phytosanitary Certification; Phytosanitary Inspections; Phytosanitary Treatments For Agricultural Commodities; SPS Course Review; and development of related SoPs/Manuals.	quarter. SPS Training Hub facilitated and contributed to the physical training conducted in this quarter SPS Training Hub of DAE is made functional by the Project. Several training programmes and meetings/ workshops and webinars (virtual and in person) were conducted with facilitation from a Training Coordinator appointed by the DAE and APAARI Coordinator.. WTO-SPS Training held. PRA Training Capacity is planned . An eight day training (2nd to 9th Aug 21) covering aspects of Pest Risk Analysis; Pest Risk Communication; Pest Risk Assessment and Pest Risk Management was conducted successfully. Remaining modules are planned for the next year. Elaborate preparations including a mock training was conducted. Practical exercises in four groups with identified group leaders within the group and competent Moderators were attached to each group for guidance and effective participation. A training on Plant Pest Identification Systems is planned to be conducted on Jan 22 including functional capacities. Capacity building program on Pest Identification, Pest Surveillance, Regulatory harmonization of biopesticides, Pesticide residue decline studies in field & laboratory and awareness on webportal prototype were conducted. Capacity building programs on Pest Free Area, Pest Inspection, and Pest Treatment in field &
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	Activity 2.4. Developing functional capacities\ (soft skills) of the participants in technical training programmes e.g. pest risk communication, engagement with farmers and policy makers, documentation and development of key technical documents on issues of export	laboratory were conducted. Training programmes planned in the project were conducted either virtually or in person. Some of the gaps and the next level of training needs to be planned in the next phase. Functional capacity approaches presented in WTO-SPS Training. Functional Capacity training is planned with PRA training in functional capacities of the trainees were addressed in the PRA training through lectures and practice. Pre and Post Training evaluation of participants for the technical and functional capacities was done. Feedback from the participants was systematically collected. Functional capacity building was integrated into the training programmes. Status of functional capacity assessed through feedback mechanism and online google sheets. Developing a Functional Capacity development strategy for the NPPO, and their next steps were discussed and a tentative plan was also developed. Functional capacities were integrated with all the training programmes conducted during the quarter. In the pre closing workshop also one exclusive session was conducted reviewing the previous exercise. Key phytosanitary functions were identified and related functional capacities were discussed in break out sessions and internalized to put to practice. A joint action plan was developed.
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	Activity 2.5. Imparting Training/exposure of some key officers in PQW in the region Activity 2.6. Capacity development for developing some SPS related key technical documents on issues of Export and Import (SOPs, Manuals, Factsheets, Diagnostics, Treatments, PFAs, etc.) Activity 2.7. Creating a portal for Information management on SPS and value chain related issues to relevant organizations (stakeholders, input suppliers, research organizations, customs, ICD, export – import databases, rejections, interceptions, etc, Documenting Success stories of exports, National standards and best practices, etc)	Eight Officials including DAE staff and APAARI local staff were invited to an Exposure cum Study Visit to Thailand for a duration of eight days. USDA FAS and APAARI meeting was held on the final day. Exposure cum study visit included various lectures and visits. Three draft SOPs were developed (Vapor heat treatment, Mango nut weevil & pulp weevil- PFA and Packing House Facility) officially handed over to DAE. Stakeholder capacities were built on developing SOPs in general with the examples of three developed SOPs. Web portal team is selected and engaged. Work initiated and components are being discussed. A web portal for SPS Information Management was initiated and the first demo was given. Input from the team was taken and improvements are in progress. Home page and other key buttons were discussed Documents were downloaded from the literature and PRAs done by PQW of DAE were also accessed. Keywords for each document are under preparation A prototype of web portal on “Bangladesh SPS Information Management System developed and under circulation with key Stakeholders The Web portal prototype was revised based on the
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		feedback received from the USDA, APAARI and DAE teams. The prototype was introduced to the WFC of DAE. The Web portal committee is formed and planned for the first meeting. Positive remarks were received on the SPS Information Management system or web portal from the NPPO staff. Web portal prototype handed over to DAE after training.
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3. Increase awareness of trade issues linked to non-compliance with pesticide MRLs and promote an Integrated Pest Management approach for overcoming these trade issues.	Activity 3.1. Residue decline studies to be conducted on leafy green vegetables in Bangladesh-for problems with residues. Most of the pesticides do have MRLs. Therefore, decline studies will be conducted to understand the relationship between days from last application to harvest and residue levels Activity 3.2. Based on these studies, a risk analysis profile will be established. Depending on the length of time required to reach acceptable MRLs a subset will be selected. Selection will be based on those that have a dissipation rate conducive to mitigation. As a benchmark, the target goal will be that they can attain a level below the MRL within 35 days. Activity 3.3. A subsequent study will be a residue decline study coupled with the inclusion of biopesticides to help manage the late season pests.	USDA and APAARI team worked together to identify the alternative team for IR4 that was withdrawn unexpectedly. Several meetings were held with the potential partner Ag Aligned Global Team Leader and the Team. Meetings were also conducted to harmonize the activities of the STDF project with this project. Key players from Government of Bangladesh (PPW of DAE, universities, research institutes) and the team of Ag Aligned Global interactions were arranged. An International Team and corresponding National Team constituted with 4 sub teams on field residue research, laboratory residue research, biopesticide efficacy research, and biopesticide regulatory harmonization. Two training sessions (field and lab) were conducted on protocols and field notebook to facilitate pesticide residue decline studies. Pesticide sprays were completed and samples collected for laboratory analysis. Residue decline study training and the program was conducted both in field and laboratory at BARC with relevant participants from DAE and BARC. Next steps on MRLs could not progress as the BARI Letter of Agreement is delayed.
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4. Enhance the capacity of the Bangladesh plant health system to boost regulatory harmonization for registration of biopesticides	Activity 4.1. Provide strategic expertise and co ordination of the harmonization of policies and strategies to accelerate regional integration and sustainable development between ASEAN and South Asia. The following is an outline of what a proposed workshop between ASEAN and South Asian countries for regulatory harmonization. It is based off the ASEAN Workshop “ASEAN Guidelines on the Regulation, Use, and Trade of Biological Control Agents (BCA) The Regional BCA Expert Working Groups on Application and Regulation”. The following is an outline of the workshop, which follows: • Biopesticide regulatory framework and potential impact for trade cooperation. •How to conduct Efficacy Studies –Successes with Biopesticides • How to conduct and evaluate toxicology studies for microorganisms	A two-week virtual laboratory training on GLP was conducted A ‘Biopesticide Regulatory Workshop: An Overview’ was conducted. Key points on the definition of biopesticides and harmonization issues highlighted Second workshop on Biopesticides was conducted. Key inconsistencies and facilitation to upgrade the biopesticide registration process was discussed. Among the next steps, the key decision was to constitute a Task Force Committee to draft the upgrade regulations and share with all the relevant stakeholders for their input. A working group cum Task Force Committee for the purpose of harmonizing the Biopesticide Regulatory Framework was developed. The Committee conducted its group meetings with the assistance of Ms Ire from USDA Team. A good working document was developed as an output of these meetings which will be taken forward to submit the final draft to PTAC. The Task Force Committee on Biopesticide Regulatory Harmonization completed the draft revised Regulations/ Guidelines. It is also translated into Bangla. Task Force shortly will validate the translation and submit to Sub PTAC in the next month (November)
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2.3. Implementation Challenges

The key implementation challenges faced by the project team during the reporting period include:

- Establishment of communications between the national and international teams. Communication was mainly an issue because PPW of DAE are partners, while the research is to be conducted by PPW collaborators from research and university sector scientists. PPW's main role is regulation of pesticides and biopesticides registration and is not related to the objective of residue decline studies. There is a knowledge gap between the collaborators and the project partners. Further, as of now there are no formal linkages between the project partners (DAE) and Research Sector USDA and APAARI .
- Conducting virtual trainings and meetings in times of COVID 19 closure of most of the organizations including universities and research institutions in Bangladesh, require special attention and planning. Many trainees who are now working from home, do not have proper electricity/ internet connectivity at their residences. Ensuring individual attention and encouraging the participants in the meeting or training to actively engage is a challenge.
- Request for per diem payment to the trainees was made from the officials of PQW/PPW in the WTO-SPS Training. This is to compensate for the amount spent on attending the training (electricity, internet connection etc). However, as per USDA norms it was told categorically that it was not possible to pay per diem to the trainees.
- Harmonizing long training material to be covered in over 4 weeks of physical training to 8 days of virtual training. Diverse stakeholders harmonized into one group and paid compensation to the trainees for participation in an 8 day training continuously to hold their interest in future trainings by giving equal opportunities for interaction.
- Change of senior DAE staff (DG and Directors) led to communication gaps and consequent delays in decisions.
 - Web portal team constitution and hosting
 - Partnership Agreements
 - Intra-departmental committee constitution
- The process of entering into agreement (LoA/ MoA) with BARI was not clear even to BARI probably due to change of rule position. The position taken on LoA even after agreement based on several discussions, BARI stand was constantly changing. As a result, APAARI signed LoA is still pending with BARI for signature.
- Committee meetings of ICPQF and WFC are delayed in spite of constant followup by the local coordinator.
- Following hierarchy protocols and at the same time to retain focus to extract technical input.
- Relevant DAE Staff vacancies particularly arising out of transfers, promotions and deputations

- PQW has no administrative responsibility or formal linkage with the other wings of DAE with absolute dependency on plant quarantine activities related to pesticide residues, biopesticide regulations, pest surveillance, IT and Knowledge management etc.
- PQW linkage with private industry is nominal and weak. As a result, feedback and planning to enhance the exports and executing safe imports suffers.
- Existing arrangement of DAE staff training either in NATA or in the Training Wing of DAE does not have competency or plan to enhance SPS capacities and integration with SPS Training Hub is difficult.
- Addressing gender and youth enhanced participation has to come basically right from Recruitment to retention within DAE which is beyond the scope of the project. Hence the women and youth participation is often meager.
- Government approvals for officials nominated by DAE for the Exposure and Study visit were delayed and partly deviated from the programme participation by the high official.

2.4. Monitoring & Evaluation Plan

In this section, include information on the Monitoring & Evaluation Plan, such as theory of change, indicators, data collection/quality issues; staff and sub-partner training on data quality protocols/methodologies; anticipated revisions needed to indicators and/or out year target

Monitoring and evaluation meetings conducted on a fortnightly basis (every second Tuesday) by USDA with the following members. A draft Monitoring, Evaluation, Reporting and Learning (MERL) plan is attached (Y1, Q1, Annex 2: MERL plan).

Members

USDA

- Ms. Jessie Mudjitaba-Fernandez
- Ms. Ire Burgoa, Gloria
- Mr Eric Brownstein

APAARI

- Dr Ravi Khetarpal
- Dr KS Varaprasad
- Mr. Manish Rai
- Dr Ahsan Ullah
- Dr Norah Omot
- Ms Martina Spisiakova
- Ms Sasi Rekha
- Ms Tarathip Sanboonkrong

Steering committee recently constituted will also review and monitor the progress periodically.

An M&E plan and TOC diagram developed for the project (based on the implementation approach and timeline of activities in the project document). There are 4 key result areas (refer TOC diagram-Y1, Q2, Annex 14). The project has been contributing on various levels of activities to these areas. 100% achievement was achieved in following activities: in publishing newspaper articles, press

releases, SPS training and the steering committee preparatory meeting in Quarter 2. Various stages of achievement of activities towards the result areas are reported in a table format (Progress Monitoring Table- Y1, Q2, Annex 15). Monitoring and Evaluation plan is further improved and the details are in (Y1, Q2, Annex 16). Details of the M&E Plan and Progress are available in (Y1, Q3, Annex 32).

A number of activities were implemented during the reporting period (Jan 2021 to September 2022) including capacity building events, workshops and working group meetings and especially 8 day long Exposure and Study Visit of NPPO officials to Thailand. These activities are contributing to address project objectives. Facilitating collaboration/coordination within government and other stakeholders to operationalize NPPO, Strengthen institutional capacity of NPPO towards empowerment as Authority, Increase awareness on importance of harmonization of biopesticide regulations/ guidelines, harmonization of SOPs/ guidelines with ISPMs, and enhance capacity of SGoB's plant health system. The results will in turn contribute to addressing the foundational and intermediate results of the Bangladesh SPS Trade Capacity Building Program as highlighted by the TOC/Results Framework. The Monitoring and Evaluation (M&E) plan (Y1, Q4, Annex I: M&E FY22) of this project was harmonized with USDA's M&E indicators.

Data was collected and tabulated for 5 performance indicators for the 17 capacity building events over the last one and half years. A summary with disaggregated details and metrics for the completed quarters of 2021 and first three quarters of 2022 are given below. Exclusive participants in the training programs are 175. Many stakeholders participated in several training programs. The total list of participants (including multiple participation) is 457 i.e, Male: 286; Female: 137.

Project impact assessment pathway with MERL indicators specific to objectives are presented below by harmonizing with USDA's monitoring indicators:

Objective 1. Facilitate collaboration and coordination within MoA, DAE, PQW, PPW, and other stakeholders to operationalize the NPPO.

- **NM 1a** – Finalization of signed partnership agreements between two or more agencies
- **PM 1b** – Completion and distribution of a quarterly media awareness building activity
- **PM 1c** – Completion and adoption of planned SPS guidelines, with capacity built to implement guidelines
- **NM 1d**- Roadmap was developed to make Intra-departmental Committee on Plant Quarantine Facilitation formed
- **PM 1e**- Training session conducted for process of developing SOPs/ Guidelines

Objective 2. Strengthen the institutional capacity of the NPPO to establish a framework for the formation of a National Plant Protection Authority.

- **NM 2a** – Establishment of the SPS Training Hub (virtual)
- **NM 2b** – Final drafting and submission of the needful PQA revisions
- **PM 2c** – Final drafting of planned SPS import/export guiding documents
- **NM 2d** – Establish and train host organizations in maintenance and regular updating of the portal
- **NM 2e**- Legal consultants' output based on PCE of Bangladesh from BTF and APAARI harmonized

Objective 3. To increase awareness of the importance of harmonization of pesticide MRLs with CODEX and the United States for trade; and promote an Integrated Pest Management approach.

- **PM 3a** – Completion of planned GLP Trainings

- **PM 3b** – Finalization of study and creation of risk management profile
- **NM 3d** – Finalization and publishing of studies and GAP documents

Objective 4. Enhance the capacity of the GoB's plant health system to boost regulatory harmonization for registration of MRLs and biopesticides, including linkages with international standard setting bodies such as Codex.

- **NM 4a** – Finalization of training/webinar series
- **NM 4b** – Finalizing a guidance document for the regulation and registration of pesticides
- **PM 3c** – Formation of a national team for regulatory harmonization and establishing of working relations.
- **NM 4d-** Task Force Committee on Biopesticide Regulatory Harmonization completed

Performance Indicators	Disaggregate	Metrics 2021							Metrics 2022								
		Q1	Q2	Q3	Q4			Total	Q1				Q2	Q3			TOTAL
		1) A3.1	2) A2.3	3) A4.1	4) WSBio	5) PRM	6) BCW		7) A2.3	8) A4.1	9) A2.3	10) R.T; L.R.T	11) IPT CB-PFA; PIT, PTT, PTS	12) SPS TW-U; SPSFC B FT	13) Web PT	15) IWB T	
EG.3.2 Number of Individuals participating in USG food security programs (SPS projects)	Total	1	34	37	53	18	116	259	48	13	26	15	33	39	19	5	198
	Male	1	27	25	3	16	94	166	37	13	20	12	26	30	12	4	120
	Female	0	7	12	50	2	22	93	11	0	6	3	7	9	7	1	44
	New	1	26	19	25	14	62	147	4	2	1	3	7	7	2	2	28
	continuing	0	8	18	28	4	55	113	44	11	25	12	26	32	17	3	170
Eg.3.2-24 Number of individuals in the agriculture system who have applied improved management practices or technologies with USG assistance (Gathered yearly -Survey planned to be initiated in the next quarter)	Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Male	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Female	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EG 5.1 Number of institutions/organizations undertaking capacity/competency strengthening as a result of USG assistance	Total	1	3	8	17	4	32	65	7	4	4	2	7	9	1	1	35
	Private Sector	0	0	4	0	0	21	25	3	0	1	0	2	4	0	0	10
	Government	1	2	3	14	2	8	30	2	4	2	2	2	2	1	1	16
	University	0	0	1	3	2	2	8	1	0	1	0	2	2	0	0	6

Performance Indicators	Disaggregate	Metrics 2021							Metrics 2022								
		Q1	Q2	Q3	Q4			Total	Q1				Q2	Q3			TOTAL
	Civil Society	0	1	0	0	0	1	2	1	0	0	0	1	1	0	0	3
	New	1	0	4	10	0	18	33	0	0	0	0	0	0	0	0	0
	continuing	0	3	4	7	4	14	32	7	4	4	2	7	9	1	1	35
CUSTOM. Percent change in knowledge by Participants of SPS technical areas, after USDA training.	Average pretest score (% correct)	0	59.60 %	80.30 %	0	0	0		63.50 %	0	74.50 %		57%	0	0	0	
	Average post-test score (% correct)	0	61.30 %	86.00 %	0	0	0		75.00 %	0	87.50 %		65%	0	0	0	
	Change between average pre-test and post-test score (% correct)	0	1.70 %	5.70 %	0	0	0		11.50 %	0	13.00 %		8%	0	0	0	
EG.3.1-d Milestones in improved institutional architecture for food security policy achieved with USG support	Total Milestones (List)	1	1	1	1	1		3	1	1	1	1	1	1	1	1	8
	Progress Milestones	1	0	0	1	1		1	0	1	0	0	0	0	0	0	1

Performance Indicators	Disaggregate	Metrics 2021							Metrics 2022								
		Q1	Q2	Q3	Q4			Total	Q1				Q2	Q3			TOTAL
	Narrative Milestones	0	1	1	0	0		2	1	0	1	1	1	1	1	1	7

Table showing % change in knowledge is in the appendix and torah details are provided in Y2, Q1, Annex 26: Y1-Y2 Governance and Outreach Activities MERL Data and Y2, Q1, Annex 27a and 27 b: Y1-Y2 Technical Activities MERL Data.

An Assessment Survey Questionnaire on capacity building as part of MERL activity was developed for trainings conducted in 2021 (Y2, Q3, Annex 16: Assessment Survey Questionnaire), which was shared with approx. 45 trainees/ participants for their response to assess the extent at which improved knowledge and practices gained from the capacity building activities had been applied. SPS and PRA training is more beneficial to the trainees, which help them with practical issues in import and export certification requirements, strategy for the management of risk associated with target crops for safe trade and also some are benefited with workshops for harmonization of revised list of existing registered Biopesticides list and guideline

3. Integration Of Crosscutting Issues and USAID Forward Priorities

Address each where applicable and appropriate; mark N/A if needed.

3.1 Gender Equality and Female Empowerment

Women played an important role in this project to the extent of 75% from USDA team (3 out of 4), 50% from APAARI Team (4 out of 8), 67% from DAE nodal team (2 out of 3), 32.4% from PRA trainees is (12 out of 37) and 16.3% of MRL meeting team (7 out of 43). Participation in all Capacity building includes the 'WTO's Sanitary and Phytosanitary Agreement (6 out of 34), Steering Committee preparatory meeting 7 out of 2-0(), Webinar (29 out of 133), Biopesticides Regulatory Workshop (3 out of 55), MRL meeting team (7 out of 35), Radio and TV show (1 out of 5), Steering Committee Minutes of Meeting (3 out of 16), area of Plant Pest Identification Systems (11 out of 48), 2nd Biopesticide Regulatory Workshop (0 out of 15), Training on Pest Surveillance (6 out of 26), Bangladesh Residue Training (4 out of 15), Bangladesh Laboratory Refresher Training (4 out of 15), Pest Free Area, Phytosanitary Inspection Training and, Phytosanitary Treatments Training and related Field Activities including Concluding Session (7 out of 35), Web portal training, SPS Overview- Wrap Up training including Functional Capacity, Steering Committee meeting, Pre Closing workshop and Exposure Study and Visit to Thailand (28 out of 96).

The Training Coordinator Ms Rita Dey is holding key responsibility in establishing Quarantine Training Hub and also in conducting the recently completed training on WTO's Sanitary and Phytosanitary Agreement: Bangladesh Perspective'. Similarly, the Nodal Officer Ms Sangeeta Bhattacharjee is geared up to serve from PPW of DAE in bringing synergy and other project activities. Senior level officials from USDA and the Ministry of Agriculture, Government of Bangladesh and the Moderators of the meeting from APAARI are female members and the rest 13 are government officials. Their leadership and technical roles have played a crucial role in the delivery of the project success. Efforts will be made in future activities to involve more women stakeholders from different organizations. Women participation in capacity building activities is low as per the available permanent staff and nominations received from the respective stakeholder organizations.

It may be noted that this project focused on the existing staff of DAE, PQW and PPD and of certain stakeholder organizations, and the staff recruited and nominated by the government and other relevant agencies for participation in the project activities was the sole discretion of the government and beyond the control of project implementation agencies.

3.2 Sustainability Mechanisms

Efforts initiated for establishing a SPS Training Hub in PQW of DAE will lead to a system of capacity building even after the project term is over. A knowledge portal on

SPS being envisaged will serve as a long-term source of information and decision making by the DAE.

The Steering Committee constituted is functional and will be guiding and monitoring the progress.

3.3 Environmental Compliance

COVID 19 situation in Bangladesh led to conduct of all the meetings and the trainings were virtual thus avoiding international travel and most of the local travel as well including no accommodation and food arrangements thus contributing to environmental compliance. Environmental compliance by discouraging the use of chemical pesticides at pre-harvest stage by promoting use of biopesticides and Integrated Pest Management.

The project activities mainly to facilitate collaboration and coordination within and outside the Ministry/ DAE and its collaborators; strengthening NPPO's institutional individual capacities; SPS awareness on pesticide residues and harmonization of biopesticide regulations which have no direct compliance issues on the environment. However, the promotion of biopesticides in the project would contribute towards environmental concerns in coming years.

3.4 Global Climate Change

The project activities are designed to discourage the pesticide use and promote green cultivation suitable to export compliances. The project concept is contributing towards minimizing the impact of climate change on agriculture. Besides, by default carbon footprints were minimized due to travel bans for all the stakeholders for the major project period.

3.5 Policy and Governance Support

Governance support was extended to DAE by bringing various wings of DAE for their linkages and coordination among them to effectively implement plant quarantine activities. Further through establishment of a Steering Committee, policy level decisions could be taken involving high level officials from various departments of Ministry of Agriculture and other ministries easing the implementation of plant quarantine activities supported by various ministries.

Creation of SPS Training Hub would bring policy level support and governance for a systematic capacity Building on plant quarantine for all the stakeholders. Training needs related to agricultural trade enhancement, including PPW of DAE and other stakeholders, will be planned and conducted by SPSTH. An Intra-departmental Committee on Plant Quarantine Facilitation was recommended by the Steering Committee to DAE for effective linkages within different wings of DAE.

DAE's request to host the web portal was accepted by the Steering Committee. Accordingly, the committee constitution is under process, which will eventually host and

maintain the web portal on 'Bangladesh SPS Information Management System' complemented by training from APAARI.

The Ministry of Agriculture, the Ministry of Commerce, and the private industry (Bangladesh Vegetable and Fruit Exporters Association and Seed Association) are participating in capacity building activities and plant quarantine governance issues for improvement.

A Whatsapp group is created for all stakeholders of agricultural trade that include regulators, academicians and private industry.

The project besides building capacities of the stakeholders, it is also facilitating sustainable policy development by formalizing the collaborations through partnership agreements and by bringing synergy within the DAE through ICPQF and WFC. These local official committees will help in governance support in the field of plant quarantine implementation. Collaborative needs of the DAE will be discussed in ICPQF followed by the Steering Committee for further actions.

First such partnership agreement was signed between Bangladesh Agricultural Research Council (BARC) and DAE. In order to bring synergy within DAE to support NPPO (PQW) two DAE level committees namely ICPQF and WFC were instituted as a policy from DG, DAE. These local official committees will help in governance support in the field of plant quarantine implementation. Collaborative needs of the DAE will be discussed in ICPQF followed by the Steering Committee for further guidance and action.

A major breakthrough during the last quarter was the Executive Secretary, APAARI have a one to one meeting with the Honorable Minister of Agriculture, Government of Bangladesh. He brought key issues to the notice of the highest government officials and paved the way for moving forward in enhancing the agricultural trade with compliance of WTO. Having established, this communication channel will help Bangladesh in the long run to enhance safe imports and value of exports as per the current needs of Bangladesh. The policy and governance support from the Government was very much visible. This is mainly due to many awareness programme that were carried out on the importance of the SPS and trade.

3.6 Local Capacity Development

Project principally focuses on local capacity building. Accordingly, capacities of the Bangladesh stakeholders from plant quarantine facilitating officials of DAE, collaborators from universities and research sector and even the private sector involved in the exports have been built in the most important area of Pest Risk Analysis including Pest Risk Communication; Pest Risk Assessment and Pest Risk Management

Pest identification, pest surveillance, regulatory harmonization of biopesticides, webportal facilitation committee meeting, pesticide residue decline study training in the Field and Laboratory have enhanced the knowledge of the local stakeholders and significantly contributed towards capacity development of both the individuals and the institutions.

NPPO is dependent on diverse collaborators for various plant quarantine activities within DAE, MOA and various other ministries, NGOs and private industry (exporter and importer associations). Considering this dependency, APAARI planned to invite a wide range of stakeholders to the capacity building programmes focussing on local capacities that have relevance to SPS awareness and skills. Institutional and individual capacities of several research, academia, commercial or private industry participants are part of the training programmes that are directed to help functions of NPPO. Details of diverse stakeholder participation are available in Item 4: Stakeholder participation and involvement. Apart from technical capacities that were developed, attempts were also made to blend technical capacity with functional capacities that will go a long way in getting tangible outputs of the technical capacities built.

3.7 Public Private Partnership (PPP)

Potential private partners identified and invited for stakeholders meetings and interacted with them for future participation. Participation of the Seed sector industry is planned in the PRA Training planned.

Private industry participated in the Webinar conducted on 20 December 2021. Some of the SPS related trade issues are being discussed with them and appropriate linkages with DAE will be established that may lead to partnerships in addressing WTO-SPS compliances. Exporters Association and Seed Association sponsored companies as stakeholders of agricultural trade are being included in the capacity building programmes. Enhanced relationships and interactions between the government sector and private industry is facilitated through Social Media, virtual meetings. Public- Private Partnerships are being promoted in research and development in the area of Global Phytosanitary Trade Compliances.

Seed Industry (Bangladesh Seed Association) representatives have been provided the opportunity of presenting their issues and lead themselves in the groups organized for practical exercises. DAE has also been advised to include their representatives in the National Teams (PRA, MRL etc.).

There was an opportunity to interact directly with select organizations to initiate and take forward the PPP. Discussions were held with Bangladesh Fruits, Vegetables & Allied Products Exporter's Association (BFVAPEA), Hortex Foundation and also selected private industry participants to explore PPP. It was evident during the various project activities that the public sector and private sector showed a great willingness to collaborate as both found that they were indispensable for each other for boosting export.

3.8 Science, Technology, and Innovation Impacts

University and research sector stakeholders are involved in the Steering Committee and are invited to the work plan meetings to keep the DAE staff updated in the science and technology related matters of plant quarantine. Advanced technologies in field and laboratory residue estimation, biopesticides efficacy and integration with IPM technologies are planned to be included.

DAE is the government regulatory agency of Bangladesh dealing with phytosanitary compliances for agricultural trade as per WTO standards. The project is mainly building capacities of regulatory staff of DAE and its key collaborators including exporter and seed companies associations. Science based and technology intensive training programmes are being imparted to these stakeholders facilitating enhancement of phytosanitary trade compliances. Innovative approach of mitigating pesticide residues is by introducing biopesticide at a defined preharvest interval. Field and Laboratory training is imparted to DAE and its key collaborator BARI. Initial study is also taken up in BARI fields. The Project is also facilitating regulatory harmonization of biopesticides.

4. Stakeholder Participation and Involvement

Government, regional organizations, NGOs, private sector, academia, civil society, other donors, etc.

Stakeholders' participation list of Government

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5. Management And Administrative Issues

Project Manager represented APAARI to make the presentation in the USDA FTF meeting with the guidance of PI of the project and contribution from the USDA team (Y1, Q3, Annex 33). A proposal was made for approval of the Public Affairs Committee (Y1, Q3, Annex 34). Dr Michael H was recruited as consultant and contributed to PRA training from APAARI as APHIS Coordinator was not available as originally planned in the project. Dr Lloyd K an USDA consultant participated and significantly contributed in conduct of PRA training.

Coordination between STDF and this project was sorted out through meetings facilitated by USDA, involving CABI, APAARI and Ag Aligned Global. Budget issues, avoiding duplication of work, bringing harmonized approach in conducting training, pesticide residue decline research, and regulatory harmonization were prioritized and planned to bring harmonized approach across the STDF and these USDA projects.

USDA and APAARI conducted interaction meetings between PPW, their collaborators from universities and research sector, USDA, APAARI and Ag Aligned to facilitate conducting of pesticide residue decline studies both in lab and field leading to MRL fixation, regulatory harmonization and biopesticide efficacy research. Ag Aligned constituted an International Team with distinct responsibilities. A Bangladesh National Team was constituted by PPW, which facilitated planning various activities.

The overall management of the project was done to the best of potential of APAARI despite some unexpected, unavoidable local issues and responses at certain stages in the running of the project. In order to conduct training activities smoothly.

6. Lesson Learned

This section can highlight examples of project learning where applicable. These can either be successes or failures, but show how adaptive learning is used in the program to improve implementation.

Virtual meetings are focused and disciplined. Though physical meetings are missed, more can be achieved if planned well through virtual meetings also. Advanced planning is a must in order to comply with existing official norms in Bangladesh. Implementation of training programmes require additional and special skills for online zoom training to become interactive and productive.

Pre and post training tests and instant polls on technical issues were the methods applied to understand and address individual attention based on the individual responses on a regular basis.

A need was felt that there should be frequent interactions between the commercial exporter and importer associations and trade facilitating government staff (Ministry of Agric including DAE, Min of Commerce including WTO Cell).

Training of collaborators and research should be initiated soon after the signing of agreement by collaborating institutes, specially when finances are involved and relying on oral commitments or agreements need careful consideration and rather be avoided in future.

Government stakeholder enthusiasm is often linked with the training perks provided. Number of training programmes needs to be planned considering the external factors also (festivals, elections, other projects activities for the same group of trainees etc.).

Establishing harmony with diverse projects even if funding from the same source, requires support from the key leadership.

1. In-person training was highly effective compared to virtual training.
2. Cultural diversity was better experienced that would help in planning the future activities.
3. On ground field activity was highly helpful in understanding the capacities of field staff, supply chains and gaps in best practices to promote safe exports.
4. Access to non-chemical appliances for safe pest management was limited and needs to be addressed.
5. There is a need to encourage private industry participation in plant quarantine facilitation following the ISPM guidelines. Such a policy will help in effective implementation of plant quarantine activities limiting the role of NPPO to approval, monitoring, and evaluation.
6. Frequent interaction with all the stakeholders will significantly improve in achieving the enhancement of safe agricultural trade as evidenced by the input received from the Project Stakeholder meeting conducted in this quarter.

Some of the lessons learnt are similar to the last quarter. Few of the experienced lessons are included and listed below.

1. Institutional memory promoted through web portal updating
2. Cultural diversity was better experienced that would help in planning the future activities.
3. USDA and APAARI teams working with synergy and harmony led to effective implementation of the project. Quality and interactivity of stakeholders participation significantly improved due to active participation in addition to monitoring by the USDA Team.
4. Proposals that require government approvals need to be planned much ahead and also to be followed up with a strategy so that right officials are involved in the activities planned.

7. Next Steps

Project came to an end by 30 September 2022. However, USDA and APAARI in consultation with DAE agreed on the following activities.

1. To move forward on PQ Act amendments in association with BTF.
2. To provide needed technical support to DAE in the constitution of Committees (PRA, PFA etc.).
3. To provide technical and IT support needed to make the Web portal functional on the SPS Information Management system.
4. To provide support if needed on technical aspects of developed Biopesticide Regulatory harmonization guidelines developed during the project for approval.
5. To maintain and continue relationships built with DAE and other Bangladesh Phytosanitary stakeholders
6. To sustain and improve the relationship with the highest officials of Government of Bangladesh to pave the way for future work.
7. Draft SOPs submitted on VHT, PFA and Packing house may be taken forward for approval of the Government.

8. How Implementing Partner has Addressed Comments

If issues were raised please describe how you addressed them specifically.

Comments received on the MERL plan were well received and APAARI organized interactive meetings with the Policy and Knowledge Management Coordinators to revise and improve the MERL plan. Looking for the right time for physical trainings which will be more effective than virtual.

Opportunities for interactions were enhanced during the trainings through selection of different group leaders every day for comprehension and presentation by them. Bangla translation was provided with key inputs on each day of the Training. Internal discussions within the group can be encouraged in Bangla.

APAARI as an implementing partner is in regular touch with the USDA Team and participates in all Review meetings. Comments and suggestions made in these meetings are discussed internally in APAARI and implemented following a positive and persuasive approach and with specific strategies by understanding the local culture to achieve the objectives of the project.

The major request from the stakeholders was to conduct the capacity building program in-person as the COVID situation improved. APAARI and USDA considered the suggestion seriously and meticulously planned 3 physical training programs and several meetings (in-person) with participation of a wide range of stakeholders. All these capacity building programs and meetings were conducted successfully in the month of June 22. Ample opportunities were provided to the stakeholders to have technical and functional interactions with the experts. Cultural gap between the stakeholders and

experts was also addressed during these physical training sessions. Field visit provided an opportunity to interact with the private industry stakeholders, farmers and the general public on SPS awareness.

An Exposure cum Study Visit was planned in Thailand for the NPPO including two women officials. Ample opportunities were provided to the stakeholders to have technical and functional interactions with the experts. Cultural gap between the stakeholders and experts was also addressed during these physical training sessions.

9. Financial Management

Discuss issues such as: unexpected expenditures, material changes in costs due to considerations outside of the control of the project, cost savings and cost savings plans.

The budget for in-person training, workshops, meetings and travel was not utilized due to the global COVID-19 situation which is reducing expenses. APAARI utilized the budget of travel for additional activity and implementing the communication plan. APAARI Budget Sheet BD PS Trade Compliance (Y1, Q1, Annex 3: APAARI Budget Sheet) and Federal Financial Report (Y1, Q1, Annex 4: Federal Financial Report) are attached.

APAARI Budget Sheet BD PS Trade Compliance (Y1, Q2, Annex 18: APAARI Budget Sheet) and Federal Financial Report (Y1, Q2, Annex 17: Federal Financial Report) are attached.

Unexpected expenditures, material changes in costs due to considerations outside of the control of the project, cost savings and cost savings plans. New Training Consultant has been proposed by USDA and the cost of his consultancy for the year 2021 will be paid from the savings of Year 1. The consultancy cost of Communication Specialist and the related services (Radio and Television transmission costs) will also be borne from the existing budget.

Dr Michael H nominated by USDA was accommodated as Consultant from APAARI out of savings, while USDA contributed to the consultancy of Dr Lloyd K to conduct the PRA training in place of APHIS Coordinator originally planned. The staff time of Dr KS Varaprasad exceeded as initially planned. Additional consulting costs for 2021 will be paid out of the consultant's travel and contingency costs for 2021. The details of Financial Management are available in the (Y1, Q3, Annex 35 and Y1, Q3, Annex 36) as per the prescribed formats.

The additional time spent by the consultant during the last quarter on project management and training was adjusted from the consultant's budget and contingency fund.

Federal Financial Report in the prescribed proforma of SF 425 (Y1, Q4, Annex XV) and an Invoice for USDA-FAS for the Quarter 4 (Y1, Q4, Annex XVI) are attached as part of Annex Zip file.

The Finances of the project are regularly reviewed and USDA is kept well informed with justification for extra expenses, if any, and claims made on Reimbursement details (Y2, Q1, Annex 28) and the Federal Financial Report are provided (Y2, Q1, Annex 29).

Request for advance or reimbursement (April- June) (Y2, Q2, Annex 26: Reimbursement Report), An invoice for reimbursement (Y2, Q2, Annex 27: Invoice for reimbursement) and Federal financial Report (Y2, Q2, Annex 28: Federal financial report) are attached as annexes with details. The total amount of federal funds authorized for the project is USD 595,076.00 and federal share of expenditures is USD 417,020.05 leaving an unobligated balance of federal funds to the tune of USD 178,055.95.

Request for advance or reimbursement (Aug- Sept) (Y2, Q3, Annex 17: Reimbursement Report), An invoice for reimbursement (Y2, Q3, Annex 18: Invoice for reimbursement USD) and Federal financial Report (Y2, Q3, Annex 19: Federal financial report) are attached as annexes with details. The total amount of federal funds authorized for the project is USD 595,076.00 and federal share of expenditures is USD 595,076.00 leaving an zero unobligated balance of federal funds.

Request for the Federal financial Report (Y1 & Y2, Annex 1: Federal financial report) are attached as annexes with details. The total amount of federal funds authorized for the project is USD 595,076.00 and federal share of expenditures is USD 595,076.00 leaving an zero unobligated balance of federal funds.

10. SUCCESS STORY

Partners are encouraged to submit at least one (1) success story (with a picture) per quarter; however, partners are welcome to submit more than one story each quarter. Please see Annex for a Success Story Template.

1.Title: Commitment by DG, DAE for total support to implementation of the Project.

Headline: DG, DAE committed to provide additional financial resources for implementation of the project if needed.

Pullout Quote: ‘DG, DAE extends full support the project implementation’

Body Copy (maximum 5,000 characters):

APAARI is implementing the project mainly on capacity building and as per other project objectives. However, there are several complementary needs by PQW and other related wings to achieve the project objectives. APAARI’s initiative of establishing a high level Steering Committee with the DG, DAE and USDA Attachee, Bangladesh as Co Chairs led to a very

promising development in the form of announcement by the DG, DAE in his closing remarks. DG, DAE greatly appreciated the project efforts leading to improve the phytosanitary trade compliance in Bangladesh. He was in favor of two sustainable project activities initiated, one being the establishment of a Quarantine Training Hub and the other being the formation of the Steering Committee itself. He announced that he extends full support to establish QTH and a more important success story-part is that he would positively consider supporting budget needs of PQW and PPW to push the project activities to achieve the objectives of this USDA project. This is a first sign of success of the project at the management level.

2.Title: ‘Building Capacities of Multi-Stakeholders on PRA’

Headline: ‘Building Capacities of Multi-Stakeholders on PRA’ in the project on Phytosanitary Trade Compliance in Bangladesh

Pullout Quote: ‘Building Capacities of Multi-Stakeholders on PRA’

Body Copy (maximum 5,000 characters): Focus of the project was to build capacities of staff of different wings of DAE involved in plant quarantine activities. However, the importance of multiple stakeholder involvement even in capacity building activities was felt during interactions with the multiple stakeholders right from the Inception Workshop. It was clear that the multiple stakeholders involvement is essential in carrying out the plant quarantine functions. While DAE staff is competent as regulatory authority and knowledgeable in practical applications, advanced scientific knowledge on areas of pest risk analysis, risk assessment, risk management with various treatment options and others and risk communication are important. In view of the type of job involved in teaching and research, university and research sector staff have updated knowledge on these aspects. It could be clearly seen that the participants from universities and research institutes readily came forward to lead the groups and make presentations which was then followed by most of the DAE staff directly involved in regulatory duties. Further, the experience and knowledge of private sector staff is altogether a different ball game. Questions and contributions from the private sector were quite practical and oriented to exports and imports facilitation. Private sector was given an opportunity to present their view point and issues on regulatory activities of exports and imports. This multiple stakeholder involvement gave an opportunity to interact for almost 8 days and we sincerely hope more cooperation and public private partnerships are likely to emerge in the interest of enhancing the exports of Bangladesh and also protecting the domestic agriculture sector from the risk of introduction of exotic pests.

3.Title: Prototype of web portal on “Bangladesh SPS Information Management System”

Headline: A Sustainable Knowledge Sharing Approach initiated in USDA Bangladesh Phytosanitary project

Pullout Quote: “Thank you for the thorough responses to our feedback. Next

steps would be to consult with the nodal officers, ICT wing, and all the relevant stakeholders who would be responsible for managing/maintaining the web portal” - *USDA Team*

Body Copy (maximum 5,000 characters):

Developing a prototype web portal was visualized as one of the project activities at the very initial stages of the project implementation. A web portal team was constituted by APAARI to execute the development under the leadership of the Project Manager. The team consisted of software developers, content manager and an assistant for execution to develop along the lines guided by the PI of the project. APAARI’s Knowledge Management Team provided review and comments during the development process.

The Web portal "Bangladesh SPS Information Management System” was designed with Home, Phytosanitation, Sanitation, Trade, Resources, Gallery, Contact Us buttons as given in the below picture. Details of the portal developed are briefly described.

Home Page contains five high quality images which includes: 1. About Seed (Quality Seed, Quality Life), 2. Fruit Export (Enrich Nutritional Security), 3. Vegetables and Fruit (Vegetables and Fruit: Boost Immunity), 4. Fruit (Crop of Export Potential) and 5. Vegetable Export (Vegetable Export: A boon to Bangladesh) to explore more click ‘Learn More’ about each banner.

After a brief note on the Welcome to SPS web portal, the Stakeholder Organizations, Regulatory Stakeholders, Research Stakeholders, University and Academia, Sanitation & Food Safety, Pest Surveillance, Commerce Sector (WTO), Private Industry and Secretaries of MoA and MoC are introduced. Metrics on Bangladesh imports, exports, import permits and Phytosanitary Certificates will be dynamically displayed. DAE Team is introduced. Recent News and contact details of DAE and important links of SPS information is also provided.

Home button consists of introduction to all stakeholder organizations. Phytosanitation is divided into four divisions 1. Quarantine 2. Pest interception 3. Pest risk analysis, and 4. Global development. Quarantine is subdivided into process of import, export certification, pests (Bangladesh and exotic), pest surveillance and treatment. Brief details are provided under each head and links provided for detailed information. Sanitation is divided into Codex Alimentarius commission, organization for animal health and pesticide residue (MRLs). The Codex Alimentarius Commission is subdivided as Bangladesh food safety authority. Trade is divided into Product Codes Export And Import, Non Traffic Barriers, National Enquiry Point, Sps Enquiry Point, Bangladesh Trade Portal And Customs. The export and import is subdivided into export and import data and their procedure and forms.

Resources are divided into Global instruments Bangladesh SPS and trade policies SPS publications training material reports and documents and FAQs. Global instruments are sub divided into SPS agreement trade facilitation agreement TBT agreement international standards. Bangladesh SPS and trade policies are subdivided into Plant Quarantine Act, Plant Quarantine Rules and Regulations and Trade Facilitation Agreement. SPS publications were divided into two levels: Global and Bangladesh. Globally, all the world-wide publications related to SPS were uploaded. In the Bangladesh subdivision, all the national publications related to the SPS were uploaded. In training material PPTs and Training videos related to Bangladesh are uploaded. Reports and documents were divided into ongoing and completed projects. In ongoing projects, Improving phytosanitary Trade Compliance and BTF projects are included. In completed projects, 'Phytosanitary Capacity Evaluation of Bangladesh' along with its final project report is uploaded. Frequently asked questions about the SPS information management system or any questions and answers related to SPS are uploaded.

Functionality on browsers (Firefox, Internet Explorer, Safari, and Chrome) is compatible, including low bandwidth users. Facebook and Twitter were integrated in SPS Web Portal as guided by DAE, which will be activated once we receive credentials from the host organization. SPS Web Portal is populated with all the relevant information and data (till date) in each provided button and subheadings and relevant staff will be trained on information uploading and maintaining the web portal once the DAE web portal team takes the charges shortly.

The web portal is expected to be a one stop shop for all SPS-related information and trigger the enhancement of Bangladesh Agricultural Trade by serving the stakeholders information needed and linking to the Regulators and Regulations of import and export countries.

4.Title: Bangladesh SPS National Teams constitution and formal collaborations- A necessity: Key finding from capacity building programmes

Headline: Formalize multi stakeholder collaborations with National SPS Teams for enhancing trade compliances.

Pullout Quote: SPS National Team crucial for enhancing agricultural trade of Bangladesh: Echoed by stakeholder participants in the capacity building programmes.

Body Copy (maximum 5,000 characters):

Phytosanitary trade compliance capacities of DAE, the key regulatory stakeholder and the NPPO (PQW of DAE) Bangladesh enhanced in the project. Status of competence in the areas of pest identification, risk analysis was reviewed through interactions in the capacity building activities. It was found that the technical capacity in the areas of pest

identification and risk analysis is largely outside of DAE and mainly within the research and academic sectors of Bangladesh. Surveillance is a collaborative effort and currently the Field Service wing of DAE is significantly contributing and facilitating export production sites of Bangladesh. However, it was found during interaction with the stakeholder organizations that there is a weak linkage between the Field Service Wing and PQW, the NPPO of Bangladesh. In order to improve this relationship with various wings of DAE, the project facilitated the formation of the Intra-departmental Committee on Plant Quarantine Facilitation (ICPQF). There is a need to develop a linkage with research and academic sectors having core competence in conducting national surveillance programmes to strengthen the efforts of NPPO to prevent exotic pests and to facilitate pest free exports. Currently, there is no formal system of surveillance or guidelines complying with relevant ISPMs as approved by WTO.

Similarly, there is no NPPO approved system of pest identification process involving competent national and international organizations to take quick quarantine administrative decisions to facilitate safe import and export trade. Risk analysis has several components and DAE needs to be strengthened in these areas including negotiation and communication skills relevant to agricultural trade. The key findings of the project through various formal and informal meetings and capacity building programmes with diverse stakeholders will help in building the roadmap for enhancing the agricultural trade as pointed above. The project will bring to the attention of the Bangladesh Government through NPPO to strengthen the Phytosanitary Trade System by formalizing the collaborations and formation of Key SPS National Teams.

5.Title: Planned field-based activities enhanced practical SPS skills of participants

Headline: USDA and APAARI introduces field based SPS activities in Bangladesh

Pullout Quote: USDA and APAARI Experts bring out suggestions to improve Phytosanitary Inspections, Treatments and export supply chains to enhance safe Bangladesh agricultural trade.

Body Copy (maximum 5,000 characters): USDA-APAARI team meticulously integrated field activities with all three physical trainings. Pest Free Area, Phytosanitary Inspections and Treatments are key gap areas to build stakeholders capacity so as to promote WTO-SPS compliant agriculture trade in Bangladesh. There is no Pest Free Area declared in Bangladesh. Participants were very enthusiastic to learn theory and practice of identification, notification and maintenance of Pest Free Area. After intense discussions with the Bangladesh APAARI coordinator and using local intelligence provided by the DAE Nodal Officers team, field visit locations, crop(s) and activities were planned. Important activity planned was to fix Pest Traps a week in advance in the field location, having selected vegetables and fruit crops. Three visits were made to each site to judge accessibility, select and confirm availability of crop and appropriate stage; fixing traps and final assessment of traps. Different types (sticky, pheromone based) of local traps and US based traps were placed as per international standards. Huge insect population was trapped and the stakeholders had great learning time inspecting and assessing the insect diversity including fruit flies on spine gourds. Central Packhouse House visit was part of the Inspection training. All the participants were exposed to the

entire process of inspection including attached laboratory facilities. Experts made few suggestions for improvement of Packhouse activities. Visit to the rice fumigation facility at Bombay Sweet House executed by the Regulatory authority was experienced by the participants. Experience and exposure of these field visits were greatly valued by the participants and experts as well. New insights and action plans suggested to cope with safety and increased trade load by following Guidelines/ SOPs developed based on ISPMs. One of the key suggestions was to engage private industry in a big way keeping the power of approval, De-notification, monitoring and assessment with the Regulatory Authority. Inclusion of field visits as part of capacity building was appreciated equally by the experts and master trainees.

6.Title: Vision of Bangladesh NPPO Officials changed positively with the Exposure cum Study visit to Thailand

Headline: USDA and APAARI conducted an 8 day long Exposure cum Study visit of Bangladesh NPPO.

Pullout Quote: “The project on “Improving Phytosanitary Trade Compliance in Bangladesh” greatly helped Bangladesh particularly to DAE in brining synergy and action on WTO Compliances by building stakeholder capacities” - Director, PQW in Concluding Workshop

Body Copy (maximum 5,000 characters):

USDA and APAARI regularly monitored the activities on a weekly basis and sometimes in less than a week. Meticulous planning was done to conduct the ‘Exposure cum Study visit of Bangladesh NPPO’ along with the Closing Workshop. USDA and APAARI teams had a wonderful opportunity to get realistic feedback on the project activities from the NPPO. Action points to realize the efforts of the project and proposed next steps were discussed at length. These points were presented summarily by the Director, PQW in the closing workshop. Lectures and visits were highly relevant, productive and thought provoking to the NPPO and thus all sessions were beyond the time allocated due to inquisitive points raised by the NPPO. Lack of communication by the Bangladesh NPPO with international agencies clearly came out during interactions with APPPC, WTO/IPPC, UNESCAP presentations, which motivated the Director, PQW to initiate communications. Lack of declared PFAs to enhance exports of fresh fruits particularly mango and vegetables was highlighted. Need to revise the PRAs and lack of National Committees on PRA, PFA and Surveillance was highlighted during the project. DG, DAE responded to this need and the Director, PQW was activated to propose the national committees. In the closing workshop, Director, PQW greatly appreciated the formation of the Intra-departmental Committee on Plant Quarantine Facilitation and a roadmap developed to continue the activity after the project also. Need for revision of Plant Quarantine was felt and the Director, PQW requested for a review by an international expert of BTF-APAARI jointly proposed amendments. SOPs on key activities of PFA, Packing House and Vapour Heat Treatment Facilities handed over to NPPO by APAARI and on Inspection protocols proposed by BTF and reviewed by APAARI were very timely and helpful to Bangladesh NPPO. Prototype of a web portal on SPS Information Management System handed over to DAE was described as a National Resource and will serve as a

single window for SPS information and guidance. Exposure cum Study visit consolidated the learnings during these two year projects and motivated the NPPO officials to take forward the initiatives and visualized the next steps to improve the agricultural trade.

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