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1st DRAFT Training Needs Assessment (TNA) report

1. Introduction

Food waste or food loss is food that is not eaten. The causes of food waste or loss are numerous and occur throughout the food system, during production, processing, distribution, retail and consumption. Losses during the consumption stage are predominant in developed countries, whereas in developing countries losses occur in the production, handling and distribution and marketing stage. The Dhaka food market size for fruits and vegetables amounts to BDT 1,174 crore/month or 299,185 tonnes per month [source: Hortex foundation, BBS]. What is concerning is that an estimated 25-30% of the total food produced is lost or wasted. However, interventions to reduce food loss and waste in retail and fresh markets are limited.

2. Background

The aim of the Dhaka Food System (DFS) project is to contribute to the development of a safe, sustainable and resilient food system for the Dhaka Metropolitan Area. It is understood that interventions to reduce FLW at earlier stages of the supply chain can result in greater impacts. The DFS project's activities are executed within the boundaries of the four city corporations; fresh markets (retail and wholesale) fall within the working area. The DFS project aims to raise awareness on FLW amongst fresh market stakeholders and provide them training on how they can reduce FLW at their stage of the supply chain.

3. Objective

The key purpose of the TNA report is to help to the project team to identify and prepare the best possible training manual that will be used for capacity building of stakeholders in 130 fresh markets in the four city corporations of the Dhaka Metropolitan Area

3.1. Specific objectives

- To identify the training requirements/needs of the beneficiaries
- To select training topics after consultation with relevant stakeholders

4. Methodology

The DFS team arranged meetings with the participants to conduct the informal interviews as per the guiding questions. The objectives were shared with the participants and their views were recorded. This initial findings and recommendations were then shared and discussed via bilateral meetings amongst the project team.

4.1. Project team

The training manual is being developed jointly by members from the DFS project and WUR. The Key Informant Interviews (KII) in Dhaka were conducted by the Seyam Mohammed (Waste Management Specialist) and Md. Zahangir Alam (Sustainable Agriculture Specialist). The WUR team consists of Bob Castelein, Melanie Kok and Vera Vernooij.

4.2. Design tools

The DFS team supported by the WUR team prepared the KII questionnaire (Appendix A) to address the objectives of the Training Needs Assessment. The questionnaire was prepared in order to:

Commented [MS(1)]: We are trying to conduct one more interview with a post-harvest management expert on from the Department of Agriculture Extension (DAE) next week (Monday). You have already mentioned some questions in your previous email; however, you can add more that we can ask him if you think it is necessary

- Identify and understanding existing skills, knowledge and practices
- Identify skills and abilities that are required

4.3. TNA target group

Market management committee (MMC), vendors, government officials, and local experts. Refer Appendix B for participants list

5. Reflections from KII

This section summarises the salient points of discussion from the interviews conducted.

5.1. Current scenario/practices

- **Transport and handling:** Goods are bought from the biggest wholesale market (Kawran Bazaar), where they arrive from outside the city, at dawn/early morning by the retailers. The produce is transported back to the market in vans or open trucks using sacks or baskets. Crates are not used. Transport is organized by the vendors themselves. The vendors may also buy in bulk to reduce daily trips to the markets and minimise transportation costs. The wholesale markets are extremely busy in the morning and vendors have the perception that they will gain economically if they can buy and carry more items per trip



Kawran Bazaar in the morning

(More pictures with captions available in https://drive.google.com/drive/folders/1_G0WmMfQroQ1n0SoNux_tLFRN6J-ZajP?usp=sharing . This is from “DNCC” folder)

- **Roles and responsibilities:** Fresh markets are either government or privately owned. The market management committees are responsible for the management of markets, coordination with City Corporation and stakeholders, collecting rent etc. The city corporations are the governing bodies of the markets. Market monitoring, including any infrastructure upgrades, improvements in the markets fall under their jurisdiction. For any infrastructure upgrade in privately owned markets, the costs are borne by the management committees (and vendors), but the respective city corporation is informed of these changes and permissions are sought from other relevant government departments and agencies

- **Storage and display:** There are no storage facilities within the markets. The vendors leave the unsold goods within their stalls and cover them with tarpaulin sheets. Fruits and vegetables are watered regularly by vendors at the stall, but a lot of markets do not have a source of potable water and the quality of water is questionable. Water is sprayed (manually by hand) without a sprayer



Views from within fresh markets

- **FLW:** Vendors claim that none of the goods get wasted; however, this seems optimistic. The unsold goods are usually mixed with the newer produce the next day; consumers usually tend to neglect the items from the previous day. Also, in some cases the price of unsold products are lowered in the evening to minimise losses.

6. Training manual components

The training manual that will be prepared by the project team for execution by the implementing partner (IP) will consist of the following:

- Training schedule and session plan (time allocation)
- Topic – what topics must be addressed to achieve the goal of the training
- Module objective and learning outcome
- Content – specific information under the module that will be provided during the training
- Training method – how will the information be transferred
- Materials required – laptop, projector, flipchart, marker, poster, tools etc.
- Facilitators guideline – step by step guide for trainer to facilitate training

Commented [MS(2)]: Some examples below

6.1. Training topics

After completing the TNA, the following training topics are proposed by the project team after consultation with stakeholders and as per their expert recommendations

- i. Awareness on FLW
 - Getting the participants to actively think about FLW
 - Increasing self-awareness amongst participants, ensuring that they do not contribute to FLW by being negligent. Highlighting the importance of collective efforts to tackle the problem
 - How and why FLW occurs at retail and wholesale markets (diseases, bruises etc.)
- ii. Record keeping (Forecasting)
 - Simple template to keep a record of items bought and sold
 - Identify peak/lean times, seasonal variations, amount of customers etc.
- iii. Transport and good handling practices
 - Current handling practices such as over packing etc. which is done to save costs is a misconception. Food items (fruits and vegetables) will continue to lose their quality, due to compression, heavy impact, bruising and rough handling etc.
 - Invest in (and use) plastic crates and avoid bamboo, jute containers. Initial costs are high but cost effective in the long run.
 - Disadvantages of bamboo, jute containers
 - Good handling practices
 - Avoid heavy stacking of delicate items i.e., fruits and vegetables
 - Do not sit or leans on stacks of fruits and vegetables
 - Handle crates with care - crates must be handled with care during loading, stacking and unloading. They must not be dropped or used as seats
 - Clean crates after use - plastic crates must be thoroughly cleaned with soap or detergent after use
 - Storage – crates must be stored in a clean area that will prevent infestation by insects, rodents and anything that will cause contamination. Crates should not be left exposed to the external environment. Crates used to transport produce must not be used as storage containers for chemicals
 - Don't throw food items on stack
 - Instructions (signage) for consumers to be careful while inspecting items i.e., "Do not throw food (items)
- iv. Grading and sorting
 - Benefits of grading and sorting for different standards
 - How to do it?
- v. Display, storage and treatment methods
 - How to display? Which items should not be displayed together?
 - How to store?
 - Which items should be sprayed with water? How often? Which shouldn't?

6.2. Training methods

- Presentation (video, slides, flip charts, poster etc.)
- Participatory discussion, Q/A
- Hands on demonstration

Commented [MS(3)]: Including ideas for content. We discussed some more during the meeting. Please add those and feel to restructure/edit as you see fit

Commented [MS(4)]: Also, first in first out? @Bob suggestion

Commented [MS(5)]: Some ideas

- Group work

6.3. Images/illustrations

- **Existing photo library (has fresh market related photos):**
https://drive.google.com/drive/folders/1_G0WmMfQroQ1n0SoNux_tLFRN6J-ZajP?usp=sharing
- **Specific photos and illustrations for training materials:** Can be taken by DFS photographer or prepared by graphics designer if briefed/supplied with design brief

Appendix A

Questionnaire for Key Informant Interview (KII)

Date:

Name of the respondent:

Mobile number:

Name of the Market:

City Corporation:

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1. Can you please tell us the present situation of the market in terms of food loss and waste?
 2. What are the problems?
 3. How to solve those problems?
 4. Are any agencies working to reduce food loss and waste in fresh markets?
 5. What are role of MMC to reduce food loss and waste?
 6. If we organize training on food loss and waste, what topics should be included in the training manual?
 7. What do you need to improve FLW?
 8. Do you know the benefits of reducing FLW?
 9. How do you carry the goods?
 10. How do you store?
 11. How do you display?
 12. Do you use clean water (potable) for cleaning the fruits and vegetables?
 13. What happens to unsold goods?
 14. How much is wasted?

Appendix B

Participants list

	Name	Organization	Designation	Contact
1	Samrat Nasser	Bonolata market management committee	President	01717463383
2	Shomir Ghosh	Bonolata market management committee	Secretary	01627306351
3	Vendor	Bonolata Market	Vendor	-
4	Vendor	Bonolata Market	Vendor	-
5	Vendor	Bonolata Market	Vendor	-
6	Vendor	Bonolata Market	Vendor	-
7	Touhid Md. Rashed Khan	Department of Agriculture Marketing (DAM)	Assistant Director	01770551237
8	Md. Faiz	Department of Agriculture Marketing (DAM)	Assistant Director	01924444284
9	Dr. Rafiq Sarker	Matrix Business Development Ltd (MATRIX)	Managing Director	01711762925