

Urban Agriculture and climate adaptation Programme

Proshika Perspective

Proshika involved rural farmer for safe and fresh crop production through imparting training and technology dissemination under ecological agriculture programme since 1980. The programme covered both field crop and homestead garden. Proshika has started working in urban areas since 2010 in a smaller scale and acquired a lot of experiences. Based on that experiences Proshika implemented two projects with the collaboration of Food and Agriculture organization of the United Nation.

Promotion of rooftop gardening in DMA for improved nutrition project was implemented in the main urban areas in Dhaka North and South city corporation, Narayanganj and Gazipur City Corporation. **Promoting urban gardening by the urban poor in four cities were implemented in peri-urban areas.** The duration of the projects was one year, from may 2022 to June 2023. Proshika successfully implemented both of the project within the time period. Immediate effect of the projects was noteworthy. It was found from the rooftop garden project beneficiaries were enriched with knowledge and put their knowledge in practice and made a mentionable progress in safe and fresh fruit and vegetable production. Participants perceived the economic, social, environmental and mental benefit of rooftop gardening. They produced diversified safe and fresh vegetables in their garden. On an average 18 kg leafy vegetables 21 kg seasonal vegetables and 5 kg fruit produced in a garden and included with their family consumption. With the demonstration established with different organization under both projects had a positive and motivational impact among students, teachers and enthusiastic gardener. Similarly with urban gardening project, small peri-urban and slum dwellers involved positively with project activities. Different agricultural approaches were practiced by the gardener and made a good harvest from their garden. Local facilitators were developed by the project for longer support for the gardener. On average 25kg/decimal vegetables were produced in a garden. 10 % of their production was sell by them.



From the experiences Proshika mainstreaming the urban garden activities within the organization and started a programme namely “**Urban Agriculture**”. The purpose of the expansion and mainstreaming of urban agriculture to support food security and environmental improvement for a livable city.

The objectives of the activities are;

- To create awareness among the city dwellers on urban agriculture
- To promote agriculture in urban and peri-urban areas
- To improve knowledge on urban agriculture among the beneficiaries
- To diversify crops in target areas
- To improve access to nutritious food in target household
- To improve the heat island effect in city areas

Urban agriculture model

Proshika has planned to follow some of urban agriculture models have implemented and developed in many countries like vertical farming, community garden, rooftop garden, and metropolitan food cluster etc. .

For urban agriculture extension Proshika will be followed the following model;

1. Demonstration garden for Technology demonstration and Inclusion of different stakeholder

Demonstration set-up is a good way to show the smart agricultural practices in rooftop garden. More people can learn about different technologies and explore the potential technology for their own garden.

The practice will be included different stakeholder like students, teacher, enthusiastic gardener, practitioner, researcher in a same platform form sharing and exchanging learning with each other. It may help the policy maker to prepare a guideline for extension of urban gardening in different cities.



2. Vertical Gardening for urban and peri-urban areas for Growing more in less space, Diversity of plants, insulate people building

A vertical garden uses a very limited space for planting. You can even experiment with growing diversity of plants like decorative and vegetable plants row by row to give aesthetic to the garden. Comparatively the vertical garden is easier to grow and maintain as well. Green living wall do not only absorb the air pollutant but also the heat, noise, harsh weather and UV (Ultraviolet Radiation) rays. It regulates temperature through transpiration and gives you cooling.

3. Rooftop garden for urban and peri-urban areas for economic and environmental benefits

With rooftop gardens comes another environmentally friendly and booming initiative – urban agriculture. This involves using green roofs as miniature farms that actually produce fresh food. Probably one of the most impressive and important benefits of rooftop gardens is how they positively affect the Urban Heat Island effect. The insulation provided by rooftop gardens not only can be applied to temperatures but also to noise. Other than the different types of bushes, trees, plants, and invertebrate's rooftop gardens can harvest, they can also be a perfect habitat for many birds, and act as a stopover for migrating species, allowing two different type of these to come into contact.



4. Space planning for urban and peri-urban areas for Utilization of all small spaces for crop production and building resilient food system in uncertain time

Food system stressors are taking a toll on vulnerable groups who are often left out of decision-making, but are hit by the severe impacts of such crises. Engaging the urban dweller and small farmer, the small and underutilized space for production will be helpful to build resilient food system in uncertain time. By using small and different shapes container gardening can produce two to three types of vegetables in their terrace, patio and near by wall. So small and unfavorable land could turn into a production unit. People residing in slum areas could be making plan for utilization of wall, space adjacent to wall, slopy roof, rooftop, land, balcony, fellow land, backyard and homestead for short life cycle vegetable production.



Implementation Strategies;

Area Selection: All big cities for urban agriculture extension.

Beneficiary selection: Having potential available spaces (Rooftop, backyard, homestead, balcony, patio etc.) and ownership on it to involve/improve or establish urban garden.

Demonstration: Demonstration will be established as a technology hub.

Training: All beneficiaries will come under a comprehensive training programme. Training will be designed to enhance participants knowledge and skill.

Extension materials development: Different types of materials will be prepared and published for different activity execution. Festoon, poster, banner will be prepared and use in the training and awareness campaign programme

Training materials: A handbook on urban agriculture will be developed and published and will be distributed among the beneficiaries.

Field day and awareness campaign materials: Demonstration signboard will be prepared and hang on the demonstration site. For field day observation and awareness campaign organization different posters, festoons and banner will be prepared and use for effectiveness of the events. Project central team will be responsible for preparing the relevant document

Input support: Environment friendly input (Geo-bags, Coco dust etc.) will be demonstrated among the beneficiaries

Awareness campaign: Awareness campaign is important to increase enthusiasm, stimulate self-mobilization and action, and to mobilize local knowledge and resources. Awareness campaign can be a great way to educate people and get them to take action. Proshika will organize awareness campaign in city areas.

Field day: The day will be organized to witness the activity , outcome, sharing of result, and disseminating technologies.

Peoples' theater: Peoples' theater is an effective, popular and important tools to dissemination of new technologies. The dwellers can easily understand the facts and can realize the idea. A total of XX peoples theater will be organized at city level

Follow-up monitoring: During the programme implementation process follow-up and monitoring will be continued to guide project beneficiaries and field staff on a regular basis for successful implementation of the action. A common monitoring formats will be prepared for timely monitoring the programme activities. Follow-up and monitoring will help assess the smooth operation of the project.

Programme Progress during the year of 2023-2024: In the year of 2023-2024 Proshika has been implementing the urban agriculture activities in Dhaka North City Corporation, Dhaka South City Corporation, Gazipur City Corporation and Narayanganj City Corporation. Mainly the 6500 urban beneficiaries who were participated with FAO-Proshika Urban agriculture extension activities have involved with the urban agriculture activities , among them a total 2227 got different support from the programme. Proshika has planned to provide;

- Technical Support: On farm technical support through technical camp
- Motivational visit: Organized motivational visit for young school children/adolescence on urban agriculture
- Refreshers course: Organized Refreshers courses for the interested gardener
- Logistic support: Provided some seasonal seeds to the beneficiaries.



Urban Agriculture Activities

SI no	Activities	Main objectives	Number	Beneficiaries		
				Female	Male	Total
1	Technical Camp	To provide on farm problem solution	35	1239	159	1398
2.	Motivational visit	To encourage new generation on importance of urban agriculture	05	123	113	236
3.	Refreshers Course & Seed distribution	To increase knowledge on safe food production	29	430	163	593
		Total	69	1792	435	2227

Impact of technical Camp:

Proshika conducted an evaluation on technical camp to see the impact of the activity. A total of 184 beneficiaries who received the service were selected randomly. The outcomes are;

- Thinning and fertilizer application made a good impact on leafy vegetables and help to increase production.
- Leaf curl and stem rotten disease of green chili and egg plant were control by applying bio-pesticide
- Three D and hand pollination technic increase the bottle gourd production
- Home made organic pesticide help control the pest attack on country bean
- Bio-pesticide had a good impact on bitter gourd pest management
- De-potting had good impact on fruit tree management
- Fertilizer management has a good impact on mango, Guava, lemon, Malta and Dragon fruit management